

PAINLESS DETOX

- Lose Weight
- Regain Youth
- Think Clear
- Look Great
- Feel Great



Reveals the
Secrets of
Effortless
Detoxification
FAST RESULTS
of Painless
Health & Energy!

The Lazy Way to Perfect Health!

Over 30-Years of Research in Many Continents Brings you Simple
Solutions to Some of the Most Troublesome Health Issues!

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We'd also like to acknowledge Dr. Toshiko Yamazaki for her extensive research on the therapeutic uses of far-infrared (FIR) heat. Thanks to her research at her clinic in Japan, the world has realized a new, powerful way to Painlessly detoxify the body at *the cellular level* and thus gain a whole new level of vitality and longevity.

The future of our health depends on our ability to eliminate the influx of potential disease-causing toxins in our body by focusing on natural, safe and non-toxic methods of healing. Thanks to the pioneering spirits of health-oriented doctors such as Dr. Rogers and Dr. Yamazaki, we are heralding a new era of revolutionary innovations in wellness.

PREFACE

How much is your health worth to you? How much would you be willing to give for eternal youth and vitality? If a price could be put on those very qualities in today's time, then the price would be \$50 million. That's exactly what the infamous magician, David Copperfield, recently paid for a cluster of four tiny islands in the Southern Bahamas. Why? Not for the abundance of vitamin D he could attain soaking in the sun on the vast sandy beaches, not for the privacy, not for the crystal blue waters. He paid this astonishing sum of money because he is purportedly convinced that this exotic location holds the key to eternal life – the legendary 'Fountain of Youth' (Sutton).

While few of us will ever amass that kind of wealth in a *lifetime* let alone have the means to make a one-time purchase of that size, we all have the ability to live longer and healthier lives – naturally.

Did you know that people are designed to live healthy, disease-free lives well past our 90s? It's true! Yet the median *survival* rate in the US is just 74 years – and this is only accomplished with the help of specialists, surgeries, and a multitude of drugs that ultimately add to a life of lethargy, sickness, premature aging and expedite our demise.

The single most important step you can take down the long road to recovery and a lifetime of optimal health, short of finding a mythical, magical bubbling brook in the midst of a tropical island, is to reduce the chemical load in your body and eliminate the already existing load of disease causing toxins, acids and unnatural chemicals. This book will show you how. While excising your body of disease causing toxins is THE critical equation in getting a fresh start; biologically speaking, the next and equally critical step is to enhance the fresh, clean cells in your body with vital, life giving nutrients. But there is a painless, simple and step-by-step methodical way of going about all this and it will be explained later. Basically, the think to remember is that there are essentially 9 things you need to be cognizant of to create the ideal, healthy, vibrant, energetic person you (perhaps) used to be.

The term "Painless" is used to contrast the typical lethargy, nauseating and sick feeling you experience, particularly for the first 3 days when you commence a detoxifying fast regimen or any other rapid detoxifying procedure. If you haven't already experienced this act of purging the body of toxins, you'll first feel the omnipresent hunger pains after the first several hours, well into the second day, whereupon you'll experience an excruciating head ach, especially if you're a coffee drinker. Then, total fatigue, nausea, sometimes vomiting, diarrhea and other healing crisis's that at the moment would leave you convinced you're dying. Sounds awful doesn't it? Well it doesn't have to be that way any longer.

This book will take you through various techniques to accomplish a detoxification of your mind and body using new tools that only now will render your experience as painless and effortless as possible. At the nucleus of a powerful detoxifying and healing strategy is to use; every single day and two or even three times a day while detoxifying, if possible, a far infrared LuxSpa sauna. A fairly new discovery, the far infrared sauna is

what many highly experienced and educated health practitioners consider the most profound and perfect health tool for our times. It's actually a duplication of the amazing healing power of the far infrared energy that is emitted from the sun. This far infrared energy has been reproduced in special far infrared yielding ceramic heaters as part of a sauna room. This heat measures 7 to 14 on the micron level with 93% to 97% matching the human micron (energy) level. You will observe sweating far more profusely while sitting in the far infrared sauna with far infrared heat penetrating into your body far deeper and far quicker than any other modality. Contrary to overheated hot rock or steam saunas producing convection heat that boils your eyeballs, heats the air, the wood, and penetrates only skin deep producing a fraction of the sweat volume of a far infrared sauna.

This Far Infrared heat helps melt the very deep fat that provides storage for the years of toxins and acids you accumulate on a daily basis. When this fat melts at 103.5 degrees Fahrenheit allowing for the release of toxin and acid buildup, suspended so they can be carried out of your body through sweat you're not going to re-experience toxins as painfully the way you would by fasting. They are rapidly expelled out of the body eliminating unnecessary and painful exposure to your brain.

By implementing some of the advice, techniques and strategies outlined in this book you'll be able to experience a whole new level of vitality, energy and a more youthful physical appearance and vastly improved mental function and clarity of thought.

After many years of experimenting and researching, there has never been one simple cure-all as many products advertised promise. In fact very often the opposite is true. Some products taken in excess alone can actually do more harm than good.

For once, however I have to say that the use of a far infrared sauna, combined with a requisite supplementation program, sufficient aerobic cardiovascular stimulating and a predominantly raw diet with plenty of hydration will produce an immediate, life changing.

There are too many dramatic stories to be ignored of people overcoming some of the most extreme health challenges simply by eliminating the acidic internal environment in their body. It's sad that so many are still inclined to first run to a traditional medical doctor to get a magic pill that will further plague your system with acidic toxins. For some, even common sense requires thorough medical study and verification.

INTRODUCTION

“NEW DISCOVERY Triggers Your Own Body To Detoxify, Melt Fat, Even Heal Itself”

**WHILE LOSING WEIGHT, ELIMINATING PAIN and
GETTING A CARDIOVASCULAR WORKOUT...**

Without lifting a finger!

Dear Health Conscious Reader,

Of course, you want to keep that youthful glow and that energetic spring in your step and look and feel better than you’ve ever felt before. But you've tried so many remedies, exercise machines, pills and all the quick fix gimmicks - you don't know who or what to believe anymore. You just want the painful aging process and the never-ending excess weight gain to stop more than anything else... and you should!

That's where I come in. My name is David Floyd and I’m author of “Painless Detox – the Lazy Way to Perfect Health” and I have some great news about a revolutionary product that I guarantee will outperform in all areas for improving your health, appearance, and energy level.

Does this sound familiar?

Your best friend comes down with (what the doctors say is) an incurable disease. They treat it with the typical drug or chemotherapy procedures. They may or may not make it, but the process seems worse than the (supposed) cure. You share many things in common: age, diet and maybe exercise routines, so you get concerned.

And you should be.

After a few tests you discover something’s not quite right. It happens to millions, but why me you say. You start to question the wisdom of pursuing the exact same ineffectual path. But where do you go, what should you do? Who has the “correct” answers? You start thinking about what you know you should have done, or should NOT have done in the past.

Take this test to see if YOU are toxic:

<input type="checkbox"/> Overweight	<input type="checkbox"/> Depression\Dark Circles Under the Eyes
<input type="checkbox"/> Frequently ill	<input type="checkbox"/> Inability to Gain or Lose Weight
<input type="checkbox"/> Brain Fog/Poor Concentration	<input type="checkbox"/> Acne
<input type="checkbox"/> Muscle and Joint Pain	<input type="checkbox"/> Burning Skin
<input type="checkbox"/> Candida	<input type="checkbox"/> Joint Pain
<input type="checkbox"/> Digestive Problems	<input type="checkbox"/> Chemical Sensitivities
<input type="checkbox"/> Insomnia	<input type="checkbox"/> Rashes
<input type="checkbox"/> Fibromyalgia	<input type="checkbox"/> Allergies
<input type="checkbox"/> Chronic Fatigue	<input type="checkbox"/> Tremors
<input type="checkbox"/> Chronic Headaches	<input type="checkbox"/> Poor Dexterity
<input type="checkbox"/> Anxiety	<input type="checkbox"/> Burning Skin
<input type="checkbox"/> Cold Hands & Feet	<input type="checkbox"/> Memory Loss
<input type="checkbox"/> Night Sweats	<input type="checkbox"/> General Malaise / Feeling Sick All Over

Many of these symptoms can turn into more serious conditions if toxicity is left untreated. **Eliminate them now.**

It's not too late.

On the other hand after using the LuxSpa sauna for 3 months, Paul in PA had this to report: "I was advised to get a sauna for my own use after experiencing the LuxSpa sauna at Issels Medical Center in Southern California, (*a world renowned cancer treatment Clinic*). Although it was a challenge financially, I had little choice but to focus 100% on regaining my strength and stimulating my immune system to lose the heavy load of toxins that the Doctor informed me was the major cause of this prostate problem. I just hoped it would help quickly, as I was told by other (traditional) MDs that I had less than a year.

I'm now feeling better than I have in years and thoroughly on course to my second half of life with great respect for the body's ability to heal itself – if given the chance! The LuxSpa sauna definitely helps eliminate the clogging, immune stifling acids and toxins that are known to cause many health problems."

Yes, that's all it took!

And...it worked for me.

I discovered the far infrared sauna when I most needed it. It saved my life. And it could save yours. At the very least, it will make you feel and look better than ever before.

I was diagnosed with COPD or emphysema some years ago. Being the health fanatic I was known to be, this made no sense to me. But there it was, the x-ray in front of me told the story. My lungs were massively enlarged. My breathing test revealed lungs

of a 68-year-old man with emphysema. As you can imagine, being 39 years old, I was a bit stressed out about this, so I spent the next couple of months in the library, devouring everything in relation to lung disease.

What a waste of time! I quickly changed direction and ended up in the health nutrition category. There I devoured hundreds of books on health, nutrition, and finally found the answers in some new books on detoxifying.

Here's what REALLY works!

I immediately took the advice offered in these books, finding and using (*rare at that time*) infrared saunas and drinking lots of alkaline, nutritified water. Healthy eating and exercise were already a solid habit which made this illness all the more peculiar.

After 30 days I returned to the same doctor who so smugly gave me the initial blow. I took the breathing test again. "Wow!" he exclaimed. "Can't imagine what went wrong. I mean this machine cost us over \$10 million dollars. It's never screwed up like this. Last time you were here you had COPD symptoms and your lungs showed 58% breathing capacity. Today your lungs are those of a 25-year-old tri-athlete with 125% capacity! Maybe we should get some more x-rays," he said. "No thanks", I replied.

Bottom line, I resolved my own problem thanks to detoxifying, drinking a ton of alkaline water, and using the infrared sauna. And I quickly turned my physical and mental health around a full 360 degrees. I felt, and still feel amazing. My energy level, attitude, and focus are performing consistently at a peak performance level at which I'm convinced I've NEVER REALLY EXPERIENCED before.

Everything works better and I like it. I'm thinking clearer, better and faster. And my skin is smooth and clear. Even my hair is thicker and believe it or not, no longer thinning and not turning gray as fast as it should nearly 14 years later. Hard to measure, but I actually think its turning back to its original color. I recently went to my 30-year high school reunion and people expressed amazement, saying I looked 30... I really liked that part! Maybe they were just being kind, but I have to say it was the incentive I needed to write this letter...

To Let Everyone Know The Secret I Have Discovered For Myself and I have had the benefit of sharing with others

My enthusiasm for this little known healing tool has prompted me to develop the best far Infrared sauna at the best price, and make them available to everyone I know and everyone who wants one or needs one!

AND At the most affordable price possibly!

It can work for you too...

I know, because it has worked for me as well as thousands of people just like you. However, I don't expect you to believe me until you see even more proof.

Don't just take my word for it - check out these real-life examples:

- Hundreds of clients of the world famous **Hippocrates Health Institute** in Palm Beach, FL have the privilege of experiencing the use of the LuxSpa saunas while participating in a sophisticated real-life detoxification program and becoming educated on how to eat for health, not for comfort. Thousands have been able to eliminate or significantly overcome every kind of health obstacle you can imagine: obesity, diabetes, cancer etc... with the help of the LuxSpa sauna.

Here's some of what Dr. Joseph and at Hippocrates Health Institute had to say:

We use LuxSpa sauna as an integral part of health maintenance and recovery. You need to remove toxins and the skin is the largest organ of the body and that's where toxins can be eliminated so helping to eliminate toxins thru the skin is one of the benefits of using the LuxSpa sauna

Your overall health, your body wants to heal and if you have toxins in the body you're going to be fighting an uphill battle. So you need to clean your system out. You're lymphatic system, your colonic system, your skin, which is the biggest organ of the body.

- **Tree of Life** in Patagonia, AZ run by the world famous **Dr., Gabriel Cousins** utilizes the LuxSpa sauna with their own similar and amazing positive results. The LuxSpa sauna has become an integral part of their prescribed therapy.

Gabriel Cousins, MD has a lot to say on the subject...

“At The Tree Of Life - Were moving people from culture of death to culture of life. A lot of people come from the world with mental, emotional and physical toxicities and the LuxSpa sauna we like for two particular reasons: it's the highest grade at the best price. No small deal, this is important. We encourage people to buy these when they go home. So they can continue an ongoing detox program because we're always accumulating toxins in the world. The food we eat. The water we drink and the air we breathe. Filled with toxins continuously. And this is a continual way to undo this.

Toxins also affect the mind and emotions. And as people are here just on the spiritual fast, we accelerate that so there's often a little bit of an emotional release, mental release and last couple days people get an incredible amount of creativity, openness, spiritual joy. Well, it's probably because we're releasing the toxins, on the physical plane.

Toxins are like driving in life with your brakes on. They slow and disrupt your mental functioning. They throw off your emotional experience and they really; they weaken the body in many, many ways. So if you want to have optimal functioning, you have to get the toxins out of your body. Toxins are real

things. They're not metaphors. They affect your brain function and your bowel function, every single organ in the system and so if we can clear the load, we will automatically be healthier. It's less stress on the liver, less stress to the immune system and less stress on the neurological system.

The key in an infrared versus just a straight sauna, there is a difference. It's that the infrared doesn't need a lot of heat to release the toxins. You need at least 100 degrees. That's it. That's pretty safe, pretty comfortable. We like 110, 120, even 140 if you want because the more you sweat the better it is. But the key principle is that it creates a resonance with the cells and it increases their energetic ability to release toxins. So in a sense, increases the vital forces in the body, when the vital force is strong enough **it will release the toxins** and not until then.

The research shows that the infrared actually has 5 times higher rate of toxin release than a straight sauna. That's very significant. And what we like about it is you do not have to have high temperature. The LuxSpa sauna, as far as we were concerned, as you notice we have them all over the place, and we offer it for free here at the Tree, is the safest, easiest form to get maximal release of toxins in your own home.

If you're going to do this on a regular basis, which we recommend because we live in a highly toxic world and it's getting more toxic, that this is a great line of self-defense.

This is high-level workmanship at really the best prices we could find. So when you can combine those two together, it's a winner. In our research, **this is the best quality at the best price**.

When you're highly toxic, your mind is not clear. Your body is not strong. At age 60, I did 601 pushups on a sixth day of a fast. Well, how does that happen? It happens because there are no toxins there to weaken you. So you become a super, spiritual athlete. It's what we're talking about. **These things keep you young, they keep you strong**. They keep you clear. **That's why we recommend it**."

- Even **John Gray, author of "Men are from Mars, Women are From Venus"**, has a weeklong retreat in northern California where he provides the healing art of detoxification using a LuxSpa sauna as part of his protocol.
- In addition to these famous and expensive retreats, there are literally thousands of LuxSpa sauna users all over the world that have amazing stories and an incredible joyfulness about sharing their respective experiences.

I promise your situation is not unique. And more importantly - your situation is NOT hopeless.

The big problem is that people who suffer from toxic overload related problems have been fed the 3 myths by doctors, authorities and media.

Here are the 3 biggest myths about most illness that will never get you the results you want:

1. **The first one is you MUST TAKE THIS DRUG:** it's not your fault, you can eat anything, take this pill, this magic bullet, vitamin and you'll be fine. **News Alert: There is NO MAGIC BULLET OR PILL.** They're all toxic and while serving to (temporarily) hide or assuage a symptom, they cause more damage. **And vitamins? You can't even absorb or assimilate most of them unless or until you eliminate toxins.**
2. **The second is** – It's too late, we need to surgically remove xxxxx, or... gallstones - a great example. Doctors say the certain organs are now unnecessary - to whom - I ask???
3. **The third is: it's inevitable; you're just getting old.** This one is the most deplorable. You will discover how to eliminate (to a large degree) and even reverse the signs of aging.

Wouldn't you agree that it's insane to think you'll get different results if you keep doing the same thing over and over again? If I keep touching a hot stove and kept getting burned - I'd be silly to think the next time I touch that hot stove I won't get burned.

How to first stop the flood of toxic intake ...

That is exactly the problem isn't it? We're living with hundreds and hundreds of 21st century poisons.

Recent studies have now proven:

- The average glass of drinking water has over 2,000 carcinogens in it...
- **Every day we're exposed to toxic metals like mercury, lead and even uranium...**
- Breast and stomach cancer have been traced to chemical estrogens in our food...
- **Early senility may actually be caused by environmental chemicals...**
- Nearly ALL non-organic and even some *organic produce* contains residual pesticides...

Is there any end to all this bad news?

Now, at last, there is. Because now, **Dr Sherry Rogers**, one of alternative medicine's true pioneers has proven that you can quickly reverse a lifetime of suffering caused by these poisons.

Here's just a few quotes by Dr Sherry Rogers:

“What is the best way to get rid of toxic chemicals including pesticides, heavy metals and hydrocarbon residues? **The Far Infrared Sauna**”.

“Thanks to improved technology, the far infrared LuxSpa sauna is now safe and infinitely more tolerable, because it uses a heat energy that **penetrates** tissues, **triggering mobilization**, of chemicals and toxins from subcutaneous, (*under the skin*), fat storage, directly into the sweat.”

“Continue with daily use and over weeks and months chemicals that are stored in **other organs** slowly and safely circulate throughout the body and eventually empty into subcutaneous fat”.

“We bring aging and illness to a screeching halt”!

“Better yet, we can **turn back the hands of time** by booting those nasty disease-causing chemicals out of the body. Sweat out the poisons is the answer, but not any old sauna or sweating program will do, in fact some are dangerous”.

That's why you need to try something different!

Here's how you get back your youthful vigor and health Starting Today...

Anecdotal evidence suggests just a few of the Breakthrough Benefits from using a LuxSpa sauna:

- **Weight loss – 10 pounds within 10 days. You'll even notice your ring finger is thinner, thighs smaller, cellulite starts to disappear, your chin is thinner and you have a more youthful appearance!**
- Astounding mental clarity – Imagine feeling that mental edge, smarter and far more energetic than you have ever been in years. Everything in life starts here!
- **Beautiful facial appearance – your skin looks tighter and years younger... within just a few days! Like getting free facials every single day, bags under your eyes are diminished, watch wrinkles, age spots and acne disappear almost overnight!**
- Cardiovascular workouts – every day while sitting, reading or listening to the stereo... compare it to riding a bike for a half hour – without lifting a finger... up to 600 calories in just a ½ hour... wow... why join the gym?
- **Detoxify – fast and efficiently. That's why I call the book “Painless Detox”. Typical detoxifying procedures usually cause a significant amount of pain. Using the LuxSpa sauna DOES NOT. Eliminating toxins is The MOST IMPORTANT thing we can do for our health, longevity and appearance. Now you can do it painlessly.**
- Relaxation – how often do we really get the chance to contemplate, meditate or just productively daydream? This is the ULTIMATE stress reliever... an opportunity to get a significant education, read a book, learn a language.

Plus, lots more.

How Does The **LuxSpa sauna Far Infrared Sauna** Produce Such Amazing Results?

Good question.

Here's the secret to what many call, the most amazing health product of the 21st century, the **"Fountain of Youth"** and the most complete, convenient health spa, best investment anyone can own in their own home.

What's the secret? It's in the science behind the LuxSpa sauna far infrared heater technology. Researchers, including NASA back in the 1980's discovered a way to duplicate the energy of the sun and match it to the energy emitted by the human body. If you think about it, we are just a body of energy.

The energy from a Far Infrared Sauna is on the same microban level, (*a bar representing the measurement of the sun's energy*) as the beneficial energy of the sun – in the far infrared range between 5-15 microns, matching that of the human body. So this heat penetrates the human body virtually at the speed of light because there is **zero resistance**. Far Infrared heat penetrates far deeper than a traditional hot rock or steam sauna and deep enough and HOT enough, even at 104° to melt deep embedded fat.

As it turns out, the bodies own (very) intelligent protective mechanism stores toxins and acids in deep fat to protect vital organs, veins and arteries. If your veins become too acidic, (*toxins ARE acidic*), you'll experience dis-ease, more specifically cholesterol buildup as a protective measure to keep from burning holes in your veins. Or worse, cancer, diabetes, arthritis, allergies, fibromyalgia and pretty much any other ailment you can think of.

When the far infrared heat from the LuxSpa sauna penetrates, it melts the fat, shaking loose the acids and allowing them to be expelled, both through sweat and through normal channels; liver, kidneys, lymph system, etc... the rapid and profuse sweating frees up the body to then do it's miraculous job of healing in ALL areas; more youthful appearance is the first observation you'll have. Clean, clear acne free skin, tighter skin with less scars, wrinkles, etc...

Obviously when you sweat, you'll lose weight.

Actually it takes 0568 kcals to burn one ounce of sweat. So **you're burning calories with every single ounce of sweat**. You'll regain water weight, however, when you drink (a lot of) nutrified water, but **you'll not regain the calories** and thus **burn fat** in addition to melting and sweating out fat. And... eventually when your body realizes there's no acids to store, you notice the ability to eliminate even more fat... there's no longer the need to retain it for it's own protection.

A secondary benefit to sweating is to drink nearly a gallon of nutrified water. We recommend you drink clean, (not tap water) and add various essential nutrients, (*which*

we tell you about). These nutrients are alkaline and will in combination with lots of water while sweating and stimulating a cardiovascular workout - cause you to become healthy faster than you ever imagined possible.

It's like taking a shower from the inside out!

Imagine changing the oil in your car every single day... it would last a lifetime wouldn't it? Well it's not exactly the same, but actually may be even more powerful, since I'm aware of no car with the unique intelligence and capability to actually reproduce cells and repair itself. **Our body CAN if... you sweat out the sludge!**

Okay, So What's The Cost For This Incredible Resource?

Let's do a quick comparison - last time I checked a traditional hot rock or steam sauna, it would set you back nearly \$20,000 dollars and it would cost more to install it and then there's special electric wiring, maybe plumbing, and you'd pay a fortune just to warm the darn thing up and use it daily.

But the kicker is...

You wouldn't get nearly the benefits. As it turns out the sweat from this type of sauna would produce 2-3% toxins with 97-98% being water. **The LuxSpa sauna produces about 20% toxins in the sweat and 80% water. So there really is no comparison.**

On the other hand you could pay between \$35-\$75 to use a LuxSpa sauna at one of the many spas or health clubs that use them.

If interested, Here's How To Order— just Go to www.LuxSpas.com for an instant purchase of any sauna.

If you continue to delay this vital decision and NOT take action towards eliminating the barriers to your health the same way you've been doing for years, you're going to get the same results. See for yourself how this scientifically developed detoxification techniques can help you enhance your health, improve your appearance and longevity, and help you become the energetic, vibrant person you have always wanted to be.

You care about your health. You exercise, you do your best to eat right, you get enough rest, and yet you still feel tired, anxious, stressed, and rundown. You have aches and pains, frequent headaches, upset stomach, and you have trouble concentrating. Your friends and family tell you that you're doing too much; you should just "slow down." Your medical doctor runs a battery of tests and reports that everything is in the "normal" range. What's wrong with you? Is it all in your head?

No. It's all in your environment. We are surrounded by toxins and they're literally getting under our skin (and into our cells).

Worse yet, you do all of the 'right things' – you don't smoke, you rarely drink, you eat 'healthy' foods – and you receive shattering news from your doctor. Your blood pressure or cholesterol is sky high, or that funny-looking mole is cancerous, or you have an

autoimmune disease, such as lupus or MS. What did you do ‘wrong’? How did this happen to you?

Sadly, it happened to you just by living your life. It’s a reality that toxins surround us. And it’s not just ‘out there’ – it’s in our homes, the foods we eat, the water we drink – even in the air we breathe.

We can become toxic from many things: heavy metals; working with chemicals; eating processed foods...the list goes on and on. But regardless of how it happened, one thing is certain, we need to become educated so we can avoid the avoidable toxins in our environment, and detoxify from the unavoidable ones before they stockpile in our bodies and lead to debilitating disease.

Cellular Healing

Do you remember the last time you lathered on sunscreen and ventured out to enjoy a beautiful summer day at the beach? Were you still hot? Of course you were! The sunscreen only provides a barrier that prevents harmful *UV* (ultraviolet) light from hitting your skin. On the other hand, *far infrared* waves are *thermal*. They penetrate your skin, giving you that wonderful natural warmth. And, unlike UV light, which can damage your skin, you can be exposed to far-infrared heat for hours and it will never cause your skin to burn. It is completely healthy and safe for all living things – so safe, in fact, that hospitals use it to warm newborns!

One of far-infrared light's characteristics is its ability to easily penetrate human tissue. When this happens, it creates a natural resonance – a vibration – which has many beneficial health properties *at the cellular level*.

Never Heard of FIR? That’s All About to Change!

Even if you are quite health-conscious and aware of the benefits of detoxifying, you may not have yet heard of far infrared heat. Rest assured; it will be covered in detail in this book. But first, let’s start at the beginning...

Take a Load off and Maximize Your Health

In a toxic world, adding years means adding toxins. Millions of people have illnesses they attribute merely to "getting old," but these illnesses are actually years of accumulation of a variety of poisons inside their bodies. Anti-aging specialists are now working to detoxify their clients through far infrared saunas and super nutrition. You wouldn't drive your car without ever changing the oil- why would you allow poisons to build up in your body without ever working on getting rid of them?

Astonishingly, modern medicine has had the answer to perfect health for a long time – the secret is in getting your body chemically-unloaded and nutrient-primed so that healing takes place by the body itself, as nature intended.

The purpose of this book is to end your search for the Fountain of Youth by helping you

to turn back the sands of time while you reduce or eliminate the toxic chemical load in your body.

If you are serious about learning how to heal your body and maximize your health, then be prepared for a crash course on curing whatever currently ails you, as you experience a step-by-step paradigm shift of your life through knowledge empowerment.

Let's Get It Started!

If the fact that you are responsible for your health does not scare you, if you are eager to step up to the plate and get rid of life-sapping symptoms, if you are eager to end the futile drug-dominated battle against disease and turn back the hands of time to truly get well, then let's go!

CHAPTER 1: NAVIGATING A SEA OF TOXINS - NOW THE BAD NEWS!

Do you sometimes feel tired or drained of energy for no apparent reason? Do you feel less alert and aware than you used to?

It's really no surprise you feel that way. We are literally swimming in toxic substances that destroy life. Extensive scientific studies show that pollutants, drugs and chemical residues remain in your body dulling your senses, clouding your thinking and causing a wide range of illnesses. Worst of all, they build up in the body faster than they can be removed, contributing to premature aging and chronic and degenerative diseases. There is not a single place left on earth that is free from pollutants at this date and time.

Shrangri-La Goes Industrial

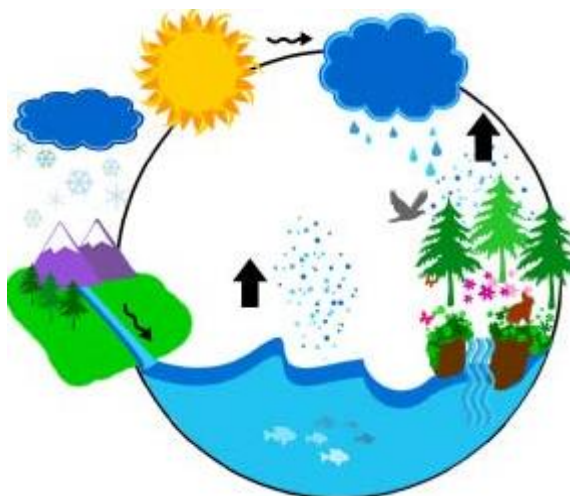
In 1933, the British author, James Hilton, described the fictional Shangri-La in his novel, *Lost Horizon*, as a mystical, harmonious valley. The name has become synonymous with any earthly paradise – a utopia isolated from the outside world.

Several possible places in the Buddhist Himalaya between northern India and Tibet have claimed to be the basis for Hilton's legend. Sadly, even if such a place had once existed, it would not have escaped the effect of man's modern manufacturing byproducts, regardless of how remote it was, or how removed from society it may have been.

Even the most isolated areas of the world have been touched by toxins. Take for example the frozen Arctic, which conjures up images of Eskimos living in pure white tundra. Yet, a study completed has shown that Inuit Indian mothers' breast milk has the highest levels of modern chemical poisons! In fact, so affected are these people that if they brought their milk to the US for disposal, governmental regulations would require them to discard it in a toxic waste dump (Muckle, Dewailly, Bjerregaard, Wormworth, Jacobson & Jensen).

This is only a small indication of what mankind has accomplished in less than a century of polluting the world. There are simply no pristine areas left that do not show traces of man's manufacturing prowess. But how could this happen?

We live in an industrial nightmare of pollution dissemination from the byproducts of manufacturing. These byproducts are deposited in the clouds. The clouds then spread the contaminants to every body of water and landmass on earth. The byproducts are then taken up by the soil, then by the plants, then by the animals, and finally passed on to humans.



Pollution Cycle

Got Toxins?

Scientists have shown that by the time most children reach the age of six, they have already accumulated half of their *total lifetime amount* of cancer-causing chemicals. Extremely disturbing! The CDC (Centers for Disease Control and Prevention) estimates that 4.4 million youth have *attention deficit hyperactivity disorder* (ADHD), with 2.5 million kids were receiving medication for it in 2003. *Infertility* has risen well over 50% in the last two decades. The inability to handle stress, uncontrollable violence, increased mental disease, decreased intelligence, drug addiction, and schizophrenia are all on the rise. And the financial and social burdens resulting from these problems are filtering down through society.

Regardless of how well you live your life, you clearly cannot escape exposure to more chemicals than any generation has ever faced. But, you *can* educate yourself on how toxins enter your body, and what you can do to flush them out of your system as quickly, painlessly, and effortlessly as possible to live a long *and* healthy life.

Top Eight Sources of Toxins:

1. Pesticides
2. Foods
3. Plastics
4. Heavy Metals
5. The Air
6. Water
7. Your Body
8. Your Home

Fast Facts...

- 4.4 million kids have ADHD
- 2.5 million are on medication for it
- Infertility has risen 50%+ in the past 20 years

Pesticides: The Worst of the Worst

Pesticides are, without a doubt, the number one chemical culprits, responsible for harming the most people. And they are inescapable. They are both inside and outside of our homes. They're used on lawns and commercial crops, for roadside weed control, and in aerial assaults on the West Nile virus. Apples are sprayed approximately 14 times per season. The grains and feed that animals eat are grown with pesticides and herbicides, and their water supply often contains runoff from fields treated with pesticides.

Pesticides are also present in organic foods due to various forms of pesticide residue. But, even if by some miracle your fresh fruits and veggies escape the farm unsprayed, once produce is ready for the market, transportation has a requirement to apply fungicides in order to keep it from rotting en route. Additionally, food shipments are frequently treated with vermicides to kill rats, and with insecticides to keep flies and bugs away.

We are led to believe that common, everyday pesticides are harmless. Nothing could be further from the truth. Synthesized pesticides are some of the most dangerous and silently potent chemicals known to man.

And high doses of pesticides are not needed to cause damage. Chromosome damage has been found in patients exposed to ordinary home pesticides. These deadly toxins are responsible for causing a multitude of abnormalities and conditions. They are especially toxic to the nervous and immune systems, and DNA.

There is no question that pesticides can trigger just about every known neurological disease and symptom in adults. But, most disturbing of all is the damage that effects a child's developing brain. This process begins *in the uterus* and continues well into infancy, especially if infants are breast-fed by mothers who are unknowingly poisoned from eating contaminated fish or processed foods. Pesticides have also been proven to cause learning disabilities and brain retardation. Worse yet, there is no escape from this toxic accumulation – it continues to accelerate throughout adult life.

When speaking in the terms of what is considered a 'normal' level for pesticides, absolute zero can no longer be used by laboratories, as there are no real 'clean', pesticide-free animals, fish or humans left on the planet. Zero is no longer considered the 'norm'. Laboratories have instead earmarked their testing with a 'population average', which is a relative comparison to what everyone else has.

When looking at pesticides as a category of toxins, there is one important class that needs to be discussed – *organochlorides* (a compound containing at least one chemically-bonded chlorine atom). This class of chlorinated pesticides is extremely dangerous, and is known to contribute to a host of untreatable diseases (such as chronic fatigue syndrome). In fact, researchers have used as little as *one dose* of this type of pesticide in experimental animals to create cancer, immune deficiencies, nerve damage, intestinal disease, and neurological diseases.

DDT – Still Crazy After All These Years

Organochloride pesticides, even the most carcinogenic types that were banned long ago in the United States, are still unavoidable in our environment, contributing to the most potent causes of cancer, chronic disease, and organ malfunction.

Did You Know?

It is impossible to find any living organism, wild animal or human being that is free from the effects of DDT.

To provide you with a bit of historical reference, DDT first came into commercial and environmental use in 1943. Some *thirty years later* the WHO (World Health Organization) finally

concluded that the health risks far outweighed the benefits of DDT. Yet, it took *another 25 years* before the world found out just how damaging these effects were. By then, it was too late.

It is no longer possible to find any living organism, wild animal or human being that is free from the effects of DDT. To exemplify this further, if every person and animal stopped ingesting and inhaling DDT today, it would take well over 20 years for the levels to dissipate. *And there is no possible way we would live long enough to have DDE (a metabolite of DDT that is many times more toxic than DDT) disappear from our bodies.*

DDT has now been identified as a contributor to pancreatic cancer, breast cancer, liver disease, lung disease and many other diseases. It is also a potent endocrine disruptor, capable of damaging any hormonal function. It has made such maladies as thyroid disease; depression; impotence; and fatigue run rampant in our lifetime.

DDT is found in the oceans, seas and lakes. It has made its way into the most remote spots in the world, including the Arctic Circle, where researchers now have to drill down at least 100 feet in order to find ice that is free from any 20th Century chemicals.

And, even though DDT was banned in the US decades ago, it is still being made and sold to other countries – many of them Third World. As a result, this dangerous pesticide is still entering our environment. For example, in 2001 the *Wall Street Journal* reported that many African nations sprayed large quantities of DDT in an attempt to eradicate malaria from their environment – but it didn't stay on their continent alone. The DDT they sprayed made its way into the rain clouds and eventually found its way into the US atmosphere, polluting people thousands of miles away from the original source.

The Chlordane Conundrum

Here's a recent example of a one of the most dangerous pesticides ever taken off of the market – chlordane. This noxious pesticide has a host of lovely side effects:

- Nervous system – headaches, irritation, confusion, weakness, and vision problems
- Digestive system – upset stomach, vomiting, stomach cramps, diarrhea
- Liver – jaundice
- Large amounts of chlordane taken orally can cause convulsions and death

In the US, the use of chlordane began in 1948. Until 1978, it was also used as a pesticide on agricultural crops, lawns, and gardens and as a fumigating agent. Because of concerns over cancer risk, evidence of human exposure and build up in body fat, persistence in the environment, and danger to wildlife, the EPA canceled the use of chlordane on food crops *but* our government continued to allow the above-ground uses *for the next five years, even with all of these known health risks!*

Chlordane Timeline

1948: Chlordane use in the US began

1948-1978: Used as a pesticide on crops, lawns, gardens

1978: EPA canceled use of chlordane on crops because of known health dangers

1983-1988: US Government allowed use of chlordane to prevent termites in homes

1988: EPA *finally* canceled the use of chlordane as a pesticide, as well

2008 or longer: Amount of time chlordane will remain in the soil

From 1983 through 1988, chlordane was used to control termites in homes by applying it underground around the foundation. Finally, in 1988 the EPA canceled chlordane's use for controlling termites, as well.

Chlordane can remain in soil for more than 20 years! And it is sufficiently long-lived that it may travel long distances and be deposited on land or in water far from its original

source. Chlordane – and the chemicals that chlordane changes into – accumulate in fish, birds, and mammals.

Even though the ban on chlordane was instituted 18 years ago, the Agency for Toxic Substances & Disease Registry (ATSDR), a Department of Health and Human Services, reports that it has not been eliminated from our environment and the danger of exposure is still present in our food, our air, our water, and our soil. And it is still commonly found in the fat of fish, birds, mammals, and *almost all humans*.

Moreover, the ATSDR is certain that *every single man, woman and child in the United States has been exposed to chlordane*. Before its ban in 1988, you might have been exposed to high levels of chlordane if you worked with it. (A national survey conducted from 1980 to 1983 estimated that 3,732 workers were potentially exposed.)

Today, people receive the highest exposure to chlordane from living in homes that were treated for termites. (What a shock!) The ATSDR reports that an estimated *50 million* people have lived in chlordane-treated homes! Chlordane may be found in the air in these homes for many years after treatment. You may also come into contact with chlordane while digging in soil around the foundation of your home, by breathing low levels of chlordane volatilizing from the soil or by touching the soil.

After chlordane enters the body through the skin (via contaminated soil), through the lungs (via contaminated air), or through the digestive tract (if swallowed), it is then stored in body fat. It may take months *or years* before chlordane and its breakdown products leave your body (ATSDR).

On a final note, pesticides are intended to kill living organisms. As such, although we only kill small critters with relatively short life spans, we are, at the same time, stockpiling these very same lethal chemicals in our bodies. And due to the continual bombardment of various types of pesticides, it has become impossible for our bodies to completely metabolize, detoxify or permanently eliminate them from our systems. The biological half-lives of these substances are not just days or months, but years

Tips on Avoiding Pesticides

At Home:

- ✓ Never use synthetic pesticide indoors.
- ✓ Remove footwear before coming into the house to reduce pesticide contamination.
- ✓ Choose safe, natural pesticides when necessary. For example, for roaches and ants, mix boric acid powder and sugar (2:1 ratio) and sprinkle it liberally in the affected crevices.

At the Office:

- ✓ Ask about the pesticide policy.
- ✓ Find out when exterminators are on site and what pesticides they use.
- ✓ Look up the pesticide online and be prepared to show your boss your research.
- ✓ Make sure that you are not in the area of application for two days after treatment.
- ✓ Ensure that all of your work surfaces are wiped down prior to returning.
- ✓ Since pesticides piggy-back on dust particles, a good air cleaner for your office can reduce your exposure to chemicals, molds and dust.

and decades, leading to a slow and steady accumulation of dangerous, multiple compounds.

In short, these are not the simple, harmless, easily metabolized substances that those with a vested interest (i.e., manufacturers) would have us believe.

Foods: Have You Had Your Toxins Today?

As much as 90% of the food consumed within the United States has detectable pesticide residue – and the affordable analytical methods that are available can only detect *one third* of the more than 600 pesticides that are in our environment. Not to mention *polycarbonates* (plastics) that are widely used in food containers and which are known to have hormone-disrupting effects.

Authors Rea, Sullivan and Klaassen do an impressive job of detailing how pesticides, insecticides, herbicides, fungicides, artificial fertilizers, growth regulators, hormones, and ripening regulators such as food additives, dyes, colorings, flavorings, stabilizers, and preservatives contaminate the foods that we ingest daily. The chemicals that are used in growing, harvesting, storing, shipping, processing, packaging, preparing and cooking our foods, although invisible, are nevertheless present, and they are slowly yet hazardously accumulating in our bodies.

Fast Fact...

Up to 90% of the food consumed within the United States has detectable pesticide residue.

You can't even avoid these toxins by living naturally 'off of the land'! Take for example the Swinomish Indian tribe, which is located 75 miles north of Seattle, Washington on approximately 7,400 acres of land. The EPA has supported a grant for the Tribal Community to study bioaccumulative toxins in the

shellfish harvested on this reservation. (90 percent of their land is surrounded by water; therefore, shellfish are vital to their community, are a key subsistence food, and are sold to produce funding for the tribal families.)

The community has environmental and human health concerns because *heavy metals, PCBs, lead, mercury, dioxins, and furans are common contaminants* found in the nearby waters and in the shellfish!

So polluted is their environment that the reservation is completing a project for grade school children called 'Tox in a Box' (you just can't make this stuff up) to educate them on the toxins in the community, and the common health effects.

And the list of chemicals found in our foods is increasing at an alarming rate. Here are a few more examples of everyday exposure to chemicals lurking in our grocery bags:

- Bisphenol-A (BPA)

In a US study conducted by researchers at Tufts Medical Center, 20 different brands of canned foods were found to have high levels of bisphenol-A. Although the funding

for the Tufts study mysteriously dried up before further research could be completed, it is common knowledge that BPA leaches from plastics.

BPA's main uses are in the manufacture of polycarbonate plastic and epoxy resins. Polycarbonates are widely used in many consumer products, from sunglasses and CDs, to water and food containers, to shatter-resistant baby bottles. Some polymers used in dental fillings also contain bisphenol-A, and it is a popular coating for the inside of food cans. *But*, that was not the original intention of BPA.

BPA was originally investigated in the 1930s during the search for *synthetic estrogens*. At that time, another synthesized compound, diethylstilbestrol, turned out to be more powerful an estrogen, so bisphenol-A was not used.

Did You Know?

BPA, a plastic commonly used to line food cans, was first investigated as a synthetic estrogen.

Why, then, should it be surprising that recent studies have shown that BPA can activate estrogen receptors leading to similar physiological effects as the body's own estrogens, such as *lowered sperm count* and *infertility* in men?

Belcher et al demonstrated that even very low levels of BPA can disrupt *neural development* in the fetus of rats. Yet, the plastics industry has long claimed that bisphenol-A is safe at 'typical levels' of human exposure, minimizing or discounting all tests to the contrary. Eleven industry-funded studies found no risk from bisphenol-A, yet 90% of 104 independent studies showed possible risks (vom Saal & Hughes, 2004). How's that for the power of big business?

- Chlordane

The ATSDR considers the most common source of exposure to the pesticide chlordane (discussed in the previous section on pesticides) to be the ingestion of contaminated food. How can that be, you ask? Didn't you just read that chlordane was removed from the market by the EPA as a pesticide in March of 1978? Yes – but it is still in the soil, and therefore continues to remain in our food supply.

Chlordane and its breakdown products are stored in body fat, and it may take months *or years* before chlordane and its breakdown products leave the body. Numerous adverse health effects, including convulsions and death, are connected with chlordane.

- HCB (Hexachlorobenzene)

HCB is a synthetic fungicide that was used from the 1940s to the late 1970s, primarily on wheat. HCB was voluntarily canceled for use as a pesticide in 1984 and is no longer commercially manufactured as an *end product* in the US. However, it is formed as a *by-product* in various manufacturing processes (EPA).

Control of HCB is also hampered by its long-range atmospheric transport from other regions. It is a "highly persistent toxin" due to its chemical stability and resistance to

biodegradation (EPA). It bioaccumulates in fish, marine animals, birds, lichens, and the animals that feed on them; and it can also accumulate in wheat, grasses, vegetables and other plants. Primary exposure occurs through ingestion of contaminated food, particularly meat, dairy products, poultry, and fish.

The EPA Carcinogen Assessment Group considers HCB possibly carcinogenic to humans. Short-term high exposures can lead to kidney and liver damage, central nervous system excitation and seizures, circulatory collapse, and respiratory depression. Long-term low level exposure may damage a developing fetus; lead to kidney damage, liver damage, and fatigue; and cause skin irritation. Nursing infants may be particularly susceptible to high levels of HCB exposure.

- PCBs (Polychlorinated Biphenyls)

More than *1.5 billion pounds* of PCBs were manufactured in the United States prior to cessation of production in 1977 when concern over the toxicity and persistence in the environment led Congress to enact the Toxic Substances Control Act (TSCA) in 1976.

The EPA has found clear evidence that PCBs have significant toxic effects in animals, including effects on the immune, reproductive, nervous and endocrine systems. The body's regulation of all of these systems is complex and interrelated. As

Fast Fact...

More than 1.5 billion pounds of PCBs were manufactured in the United States prior to cessation of production in 1977.

a result, it is not surprising that PCBs have a multitude of serious adverse health effects. Studies in animals also provide conclusive evidence that PCBs cause cancer.

It is very important to note that the composition of PCB mixtures changes following their release into the environment. In 1996, the EPA concluded that certain types of PCBs are likely to bioaccumulate in fish. *The types of PCBs that tend to bioaccumulate in fish and other animals and bind to sediments happen to be the most carcinogenic components of PCB mixtures.* As a result, people who ingest PCB-contaminated fish or other animal products may be exposed to PCB mixtures that are *even more toxic* than the PCB mixtures contacted by workers or first released into the environment!

Here are just some of the many disturbing health effects* of PCBs as reported by the ATSDR:

- **Immune System:** Animal studies have revealed a significant decrease in size of the thymus gland, reductions in the response of the immune system, and decreased resistance to *Epstein-Barr virus* and other infections. *In fact, the studies were not able to identify a level of PCB exposure that did not cause effects on the immune system!* In humans, a recent study found that individuals infected with

* **Note:** Some of these studies were conducted using the types of PCBs *most commonly found in human breast milk.*

Epstein-Barr virus had a greater risk of *non-Hodgkins lymphoma* when exposed to PCBs.

- **Fertility, Fetus Development & Newborns:** PCB exposures were also found to reduce the birth weight, conception rates and live birth rates of monkeys and other species, and reduced sperm count in rats. Children born to women who worked with PCBs showed decreased birth weight and a significant decrease in gestational age. PCBs have also been associated with changes in thyroid hormone levels in infants in studies conducted in the Netherlands and Japan.
- **Developmental Deficits:** Newborn monkeys exposed to PCBs showed persistent and significant deficits in neurological development, including visual recognition, short-term memory, and learning. PCBs decrease thyroid hormone levels in rodents, and these decreases have resulted in developmental deficits, including deficits in hearing.
- DDT (dichlorodiphenyltrichloroethane), DDE (dichlorodiphenyldichloroethylene) & DDD (dichlorodiphenyldichloroethane)

As noted in the previous section, DDT is a pesticide that was once widely used to control insects. It was banned in the US in 1972, but is still used in some countries. As a result, foods treated with DDT in other countries are still making their way back to our grocery stores. Additionally, DDT is still entering our environment via the air.

DDE and DDD are chemicals similar to DDT that contaminate commercial DDT preparations. (DDE has no commercial use; DDD was used to kill pests until it was also banned.)

Fast Fact...

It can take up to 15 years for half of the DDT in soil to breakdown!

DDT, DDE and DDD all stick strongly to soil. Most DDT in soil is broken down slowly to DDE and DDD by microorganisms. *It can take up to 15 years for half of the DDT in soil to breakdown!* From there, it can enter groundwater where it dissolves *even less easily*.

DDT and DDE build up in plants and in fatty tissues of fish, birds and animals. You may be exposed to DDT by eating contaminated foods, such as vegetables, meat, fish, and poultry, and infants fed on breast milk from mothers who have been exposed will also be exposed (ATSDR).

Here are just some of the nasty experiences you may have as a result of exposure to DDT, DDE or DDD:

- DDT affects the nervous system, leading to excitability, tremors and seizures.
- A study showed that women who had high amounts of DDE in breast milk had an increased chance of having premature babies.
- In animals, exposure to DDT in food affected the nervous system, caused liver cancer, and possibly had harmful effects on reproduction.

- The Department of Health and Human Services (DHHS) determined that DDT may reasonably be anticipated to be a human carcinogen.
- Studies in rats have shown that DDT and DDE can mimic the action of natural hormones and affect the development of the reproductive and nervous system. Puberty was delayed in male rats given DDE as juveniles.
- A study in mice showed that exposure to DDT during the first weeks of life may cause neurobehavioral problems later in life.
- Dioxins

You may be familiar with a more common name for dioxins – Agent Orange. Its name became well-known in the 1960s when the US Government began using it in North and South Vietnam to destroy jungle foliage. Agent Orange has since been blamed for causing cancer and for birth defects suffered by the children *and even grandchildren* of Vietnam veterans and civilians. However, these claims have been strongly contested by the two main manufacturers – Dow and Monsanto (what a big surprise!).

Recently, however, a team from New Zealand's Massey University has shown that the group of 24 Vietnam veterans they tested suffered significant genetic damage, compared with a similar-sized group of soldiers who did not serve in Vietnam – crucial evidence to prove the link between Agent Orange and a legacy of illness across three continents.

Dioxins are in everything from our foods and toilet paper to coffee filters, diapers, tampons, and much more (Birnbaum). Today, most human exposure to dioxins occurs through the consumption of contaminated foods, especially animal fats. Skin rashes, liver damage, weight loss, and a reduction in the effectiveness of the immune system have all been attributed to human exposure. What is even more alarming is that studies have shown that nursing infants can consume *as much as 18 times more dioxin* through a bio-concentration in their mother's breast milk in one year than the maximum 'safe' lifetime dose as recommended by the Center for Disease Control (USDHHS 1998).

Sadly, PCBs and dioxins are found in polar ice caps, all landmasses, all seas and gulfs, and in all of the world's oceans. It is no small wonder that childhood cancers are at an all-time high! (According to the CDC, malignant neoplasms (cancer) are the number one cause of death by disease in children age one to fifteen.) From all of these studies, it is imperative that any mother-to-be entirely detoxify and clear these poisons out of her body *before* becoming pregnant.

On a final note, it's always wise to avoid fast foods, fried foods and processed or refined foods. In addition to having very little, if any, nutritional value, these foods have to be processed by the liver and take its energy away from other detoxification work it has to do. A low fat diet, with lots of whole grains and fresh fruits and vegetables supports the liver with nutrients and easy-to-digest food. Switching to such a diet is the first step in an over-

all detox program that can give you more energy, and help you to lose weight and feel years younger.

Plastic: One Cup of Styrene, Please

Each morning millions of Americans – from construction workers to office executives – line up for their ritual coffee breaks. But stealth poisons lurk in those Styrofoam cups and once inside the body there is no mechanism for metabolizing (i.e. getting rid of) all the carcinogenic styrene (USDHHS 1992, Jakoby, Claassen, Sullivan). And that same Styrofoam is used to package our fruits, vegetables, meats and fish – plus to serve our favorite foods at just about every American holiday party and family picnic.

An EPA study on hundreds of Americans has shown that 100% of the fat samples tested contained styrene, which can lead to many perplexing symptoms, including cancer. The ATSDR explains that you might be exposed to styrene by “eating a lot of food packaged in polystyrene [Styrofoam] containers” and that animal studies have show that ingestion of high levels of styrene can cause liver, kidney, brain and lung damage, and other mysterious neuro-toxic symptoms.

Don't Be a Fool for Phthalates

Phthalates are industrial chemicals that add flexibility and resilience to plastic. Many products contain phthalates, such as: vinyl flooring; adhesives; detergents; lubricating oils; solvents; automotive plastics; plastic clothing (raincoats); personal-care products (soap, shampoo, deodorant, fragrances, hair spray, nail polish); and some pharmaceuticals. Phthalates are also widely used in plastic bags, food packaging, and children's toys.

People are exposed to phthalates through direct contact with products that contain them or through food that is packaged in material that contains phthalates. For the general population, the major route of exposure is orally. However, both population studies (Adibi et al., 2003) and occupational studies (Dirven et al., 1993; Liss et al., 1985; Nielsen et al., 1985) have shown that inhalation is an important route of exposure as well (Otake et al., 2004).

Phthalates have produced testicular and liver injury, and liver cancer in rodent studies. In animal studies, several phthalates show antiandrogenic activity (i.e., blocking the production of, or interfering with the action of, male sex hormones). Exposure to high

Styrene's Neuro-Toxic Symptoms:

- Numbness and tingling
- Loss of sensation
- Bizarre pain syndromes
- Weakness
- Toxic encephalopathy (brain fog) with the inability to concentrate
- Unprovoked mood swings
- Memory loss
- Paralysis
- Convulsions
- Tremors
- Blurred vision
- Hearing loss
- Heart arrhythmia
- Spastic colon
- Respiratory symptoms, including asthma
- Rashes
- Hair loss
- Stiffness
- Fatigue

doses of di-2-ethylhexyl phthalate (DEHP), dibutyl phthalate (DBP), and benzylbutyl phthalate (BzBP) during the fetal period have produced lowered testosterone levels, testicular atrophy, and Sertoli cell* abnormalities in male animals, and at higher doses, ovarian abnormalities in female animals.

The chemical and food industries continually assert that small amounts of phthalates are harmless, but they neglect to mention that since we do not entirely detoxify our bodies daily of these carcinogens, these everyday “harmless” amounts of chemicals stockpile.

As studies are not routinely completed to determine the effects of what this chemical has done decades later, we are not aware of what the synergistic effects may be. Most people simply chalk up their health problems to old age. Yet, there are many degenerative diseases (cancer, lupus, cardiovascular disease, rheumatoid arthritis, thyroiditis, diabetes, Parkinson's disease, multiple sclerosis, osteoporosis, etc.) that are suspiciously present in mid-life. And it is no coincidence that the two hormonally linked cancers (breast and prostate) are on a rapid rise. It is unfathomable as to how much damage we have caused to our bodies not only with these chemicals, but with countless others that have yet to be examined.

Metals: A Heavy Menace

Plasticizers and pesticides are not the only toxins in the foods we eat. Another deadly hidden toxin is heavy metal, such as mercury. Some heavy metals, such as zinc, copper, chromium, iron, and manganese, are required by the body in small amounts, but these same elements can be toxic in larger quantities.

Heavy Metals Most Often Implicated in Poisoning:

- Arsenic
- Cadmium
- Lead
- Mercury

Heavy metal poisoning is the toxic accumulation of heavy metals in the body's soft tissues. Heavy metals enter the body in food or water, via the air, or by absorption through the skin. Once in the body, they compete with and displace essential minerals such as magnesium, and calcium, and interfere with organ system function.

Symptoms will vary, depending on the nature and quantity of the heavy metal ingested, but they include: nausea, vomiting, diarrhea, and stomach pain; headache; sweating; and metallic taste in the mouth. In severe cases, patients exhibit obvious impairment of cognitive, motor, and language skills.

Several heavy metals you should be aware of include the following:

- Mercury

It's hard to avoid a danger you can't see, smell or taste, such as mercury, which can enter the air from mining deposits of ores that contain mercury, burning municipal and medical waste (thermometers, electrical switches, fluorescent light bulbs,

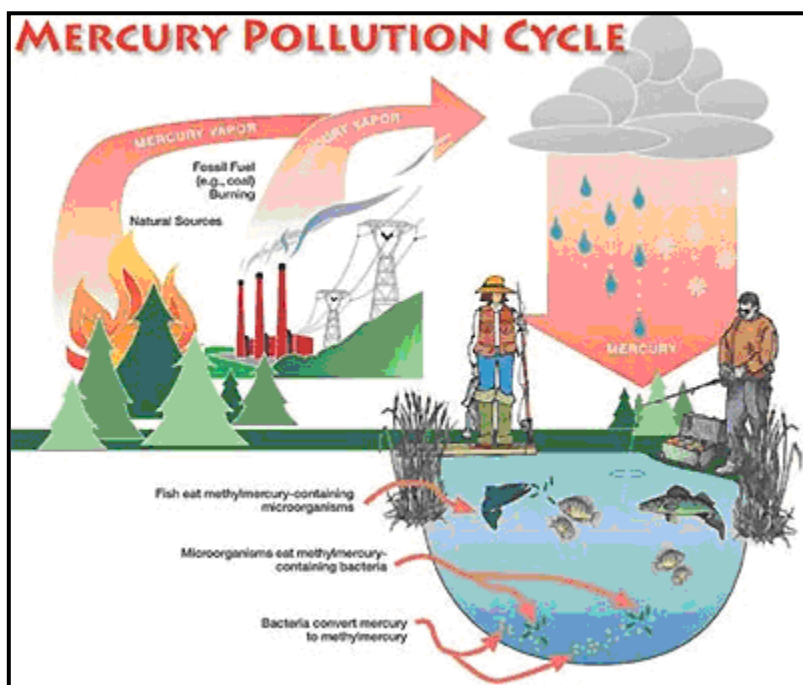
* Sertoli cells are a kind of sustentacular cell whose main role is to nurture the developing sperm cells.

batteries), the production of cement, and uncontrolled releases in factories that use mercury.

It is possible for you to be exposed to metallic mercury vapors from breathing contaminated air around hazardous waste sites, waste incinerators, or power plants that burn mercury-containing fuels (such as coal or other fossil fuels). Exposure to mercury compounds at hazardous waste sites is much more likely to occur from handling contaminated soil (i.e., children playing in or eating contaminated surface soil), drinking well-water, or eating fish from contaminated waters near those sites. You can also be exposed to mercury vapors from the use of fungicides that contain it.

Metallic mercury can evaporate into the air and be carried for long distances. The mercury vapor can also be changed into other forms of mercury, and can be further transported to water or soil in rain or snow. Microorganisms (bacteria, phytoplankton, fungi) then convert mercury to methylmercury, and it enters the water or soil where it can remain for a long time.

Mercury can also accumulate in the food chain. When small fish eat the methylmercury in food, it goes into their tissues. When larger fish eat smaller fish or other organisms that contain methylmercury, it is then stored in the larger fish. As a result, the larger and older fish (like swordfish and shark) build up the highest amounts of methylmercury. Mushrooms can also accumulate high levels if grown in contaminated soils.



The FDA currently advises that pregnant women, and women of childbearing age who may become pregnant, limit their consumption of shark and swordfish to no more than one meal per month. Women of childbearing age are included in this advice because dietary practices immediately before the pregnancy could have a direct bearing on fetal exposure during pregnancy, particularly during the earlier months of pregnancy.

The FDA further advises that other persons in the general population limit their regular consumption of shark and swordfish to about 7 ounces per week (one serving).

But mercury isn't just in your food – it could be in your religion, too! Santeria (a Cuban-based religion), Voodoo (Haitian-based), Palo Mayombe (practiced mainly in the Caribbean), and Espiritismo (native to Puerto Rico) all utilize metallic mercury. Not all people who observe these religions use it, but when they do, exposure may occur both at the time of the practice and afterwards from contaminated indoor air.

Metallic mercury is sold under the name "azogue" in stores called "botanicas" as an herbal remedy or for spiritual practices, usually in capsules or in glass containers. It may be placed in a sealed pouch to be worn on a necklace or in a pocket, or it may be sprinkled in the home or car. Some people may mix azogue in bath water or perfume, or place azogue in devotional candles. Because metallic mercury evaporates into the air, these practices may put anyone breathing the air in the room at risk of exposure and may also threaten the health of future residents who are unknowingly exposed to contaminated floors or walls.

Also, you should check to see if any medicines or herbal remedies that you or your child uses contain mercury. Some traditional Chinese and Hispanic remedies for stomach disorders (for example, herbal balls) contain mercury. If you are pregnant or nursing a baby and you use mercury-containing remedies, you could pass some of the mercury onto your unborn child or nursing infant.

Metallic mercury is also used in a variety of household products and industrial items, including thermostats, fluorescent light bulbs, barometers, and glass thermometers. It generally does not pose a risk unless the item is damaged or broken, and mercury vapors are released. Even very small amounts of metallic mercury (a few drops) can raise air concentrations to levels that may be harmful. The longer people breathe the contaminated air, the greater the risk to their health.

Fast Facts...

- Metallic mercury in the blood of a pregnant woman can enter her developing child.
- Methylmercury can accumulate in fetus's blood to a concentration higher than that in the mother.

Metallic mercury and its vapors are extremely difficult to remove from clothes, furniture, carpet, floors, and walls. But, if these items are not properly cleaned, the mercury can remain for months or years, and continue to be a source of exposure.

Occupations that have a greater potential for exposure include manufacturers of electrical equipment or automotive parts, chemical processing plants, metal processing, construction

where building parts contain mercury (electrical switches, thermometers), and the medical profession where equipment may contain mercury (such as blood pressure devices). Dentists and dental assistants may be exposed to metallic mercury from breathing in vapors released from amalgam fillings and, to a much lesser extent, from

skin contact with amalgam restorations. Family members of workers may also be exposed to mercury if the worker's clothes are contaminated.

When you swallow small amounts of metallic mercury, for example, from a broken thermometer, less than 0.01% of the mercury will enter your body through the stomach or intestines, unless they are diseased. However, when you breathe in mercury vapors, about 80% of it enters your bloodstream directly from your lungs, and then rapidly goes to other parts of your body, including the brain and kidneys. Once in your body, metallic mercury can stay for weeks or months. When metallic mercury enters the brain, it is readily converted to an inorganic form and is trapped there for a long time. Metallic mercury in the blood of a pregnant woman can enter the fetus. *Methylmercury can also accumulate in an unborn baby's blood to a concentration higher than the concentration in the mother.*

Metallic mercury absorbed into the body may eventually leave in the urine and feces, while smaller amounts leave the body in the exhaled breath.

Methylmercury is most easily absorbed through the gastrointestinal tract (about 95% is absorbed). After you eat fish, or other contaminated foods, it enters your bloodstream and goes rapidly to other parts of your body. Methylmercury that is in the blood of a pregnant woman will easily move into the blood of the developing child and then into the child's brain and other tissues. Like metallic mercury, methylmercury can be changed by your body to inorganic mercury. When this happens in the brain, the mercury can remain there for a long time. When methylmercury does leave your body after you have been exposed, it leaves slowly over a period of several months, mostly as inorganic mercury in the feces.

The nervous system is very sensitive to mercury. In poisoning incidents, people who ate fish contaminated with large amounts of it,

Tips: Cleaning Up Mercury

- Don't vacuum mercury – it will evaporate into the air, creating greater health risks, and it will contaminate the vacuum cleaner.
- Don't step on the mercury (you'll track it into other areas).
- Do not remain unnecessarily in a room with a mercury spill.
- If you have been exposed directly, wash yourself thoroughly and discard contaminated clothing in a sealed plastic bag.
- Remove children from the area.
- Mercury is not absorbent – don't try to wipe or blot it with a cloth or paper towel – that will only spread the mercury, making it more difficult to remove.
- Clean up ~~the~~ metallic mercury beads by using one sheet of paper to ~~carefully~~ roll them onto a second sheet ~~of paper~~, or by sucking very small beads of mercury into an eye dropper.
- After picking up the metallic mercury, put it into a plastic bag or airtight container, along with the paper and eye dropper.
- Dispose of all plastic bags outside of the house, according to instructions from your local health department.
- Ventilate the room and close it off

or grains treated with methylmercury or organic mercury compounds, developed permanent brain and kidney damage.

Metallic mercury vapors or organic mercury may affect many different areas of the brain and their associated functions, resulting in a variety of symptoms. These include personality changes (irritability, shyness, nervousness), tremors, changes in vision (constriction, narrowing of the visual field), deafness, muscle incoordination, loss of sensation, and difficulties with memory.

Short-term exposure (hours) to high levels of metallic mercury vapor in the air can damage the lining of the mouth and irritate the lungs and airways, causing tightness of the chest, a burning sensation in the lungs, and coughing. Other effects include nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation. Damage to the lining of the mouth and lungs can also occur from exposure to lower levels of mercury vapor over time.

In studies, animals exposed orally to long-term, high levels of methylmercury or phenylmercury experienced damage to the kidneys, stomach, and large intestine; changes in blood pressure and heart rate; adverse effects on the developing fetus, sperm, and male reproductive organs; and increases in the number of spontaneous abortions and stillbirths. Adverse effects on the nervous system of animals occur at lower doses than do harmful effects to most other systems of the body. Animal studies show that methylmercury exposure damages the nervous system during development, *and evidence suggests that the effects worsen with age, even after the exposure stops.* Male rats and mice that received organic mercury (methyl- or phenylmercury) in their drinking water or feed had an increased incidence of cancer of the kidney.

Did You Know?

Animal studies show that methylmercury exposure damages the nervous system during development, and evidence suggests that the effects worsen with age, *even after the exposure stops.*

Children who breathe metallic/elemental mercury vapors; eat foods or other substances containing phenylmercury or inorganic mercury salts; or use mercury-containing skin ointments may develop a disorder known as *acrodynia* ('pink disease'). Acrodynia can result in severe leg cramps; irritability; and abnormal

redness of the skin, followed by peeling of the hands, nose, and soles of the feet. Itching, swelling, fever, fast heart rate, elevated blood pressure, excessive salivation or sweating, rashes, fretfulness, sleeplessness, and/or weakness may also occur. It was once believed that this syndrome occurred only in children, but recent cases have shown that teenagers and adults can also develop it.

As with mercury vapors, exposure to methylmercury is more dangerous for young children than for adults, because more methylmercury easily passes into the developing brain of young children and may interfere with the development process.

Mothers who are exposed to methylmercury and breast-feed their infant may also expose the child. The effects on the infant may be subtle or more pronounced, depending on the amount of exposure. In cases in which the exposure was relatively small, some effects might not be apparent, such as small decreases in IQ or effects on the brain that may only be determined by the use of very sensitive neuropsychological testing. In instances in which the exposure is great, the effects may be more serious. In some such cases, the effects are delayed - the infant may be born apparently normal, but later show effects such as being slower to reach developmental milestones (like walking and talking), to more severe effects including brain damage with mental retardation, incoordination, and inability to move. Other severe effects observed in children whose mothers were exposed to mercury during pregnancy include eventual blindness, involuntary muscle contractions and seizures, muscle weakness, and inability to speak.

Researchers are currently studying the potential for other developmental effects, including effects on a child's behavior and ability to learn, think, and solve problems that may result from eating lower levels of methylmercury in foods.

- Lead

In adults, symptoms of lead poisoning are usually seen when blood lead levels exceed 80 ug/dL for a number of weeks. In childhood, blood lead levels above 80 ug/dL generally indicate lead poisoning; however, significantly lower levels (30 ug/dL) can cause mental retardation and other cognitive and behavioral problems. The CDC considers a blood lead level of 10 ug/dL or higher in children a cause for concern, but the level that causes brain damage in children is *lower than 10 ug/dL* (Lanphear). Because this arbitrary cutoff has been inappropriately assigned too low a value, regular testing often will not diagnose a problem as being related to lead poisoning.

- Arsenic

You might not think that you could ever come in contact with arsenic. Surprisingly, it is in many common household items, such as pesticides, herbicides, fungicides, wood preservatives, paints, tobacco, seafood and microwaves. You can also get arsenic toxicity from such things as smoking cigarettes or even lounging around on your pressure-treated wood deck. It has been found through research, that children are also extremely prone to arsenic accumulation through playing on pressure-treated wood swing sets or playing in dirt that surrounds pressure-treated telephone poles, decks and walkways.

While the average daily intake of arsenic by US adults is 50 mcg (range 8-104 mcg), 80% of the dietary arsenic intake comes from meat, fish, and poultry (because of the pesticides, herbicides and fungicides used in feed). It can cause every heart, blood vessel, and neurologic symptom you can think of.

In closing, it is important to keep in mind that because exposure to heavy metals is often an occupational hazard, protective clothing and respirators should be provided and worn

on the job. Protective clothing should then be left at the work site to ensure that toxic dust is not transferred to family members.

Heavy metal poisoning may be detected using blood and urine tests, hair and tissue analysis, or X ray.

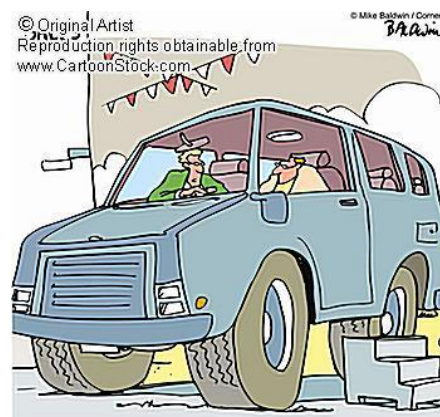
Studies have concluded that once these toxins are deep inside the body, they do not leave – we have no way of completely metabolizing them. It's no small wonder that society has an unsurpassed rate of cancer and many other chronic diseases today.

The treatment for most heavy metal poisoning is chelation therapy*. This process may be lengthy and painful, and typically requires hospitalization. It is effective in treating lead, mercury, and arsenic poisoning, but is not useful in treating cadmium poisoning. To date, no treatment has been proven effective for cadmium poisoning.

The Air: How Long Can You Hold Your Breath?

In this day and age, there isn't one home, school, or business where plastics cannot be found in some form or another – we are quite literally surrounded! It's in:

- Construction materials
- Building products and furnishings
- Plastic baby bottles, rattles, teething toys, crib bumpers and car seats
- Mattresses and kitchen appliances
- Shoes, sneakers and clothing
- IV tubing
- Computer housing
- Automobile dashboards and under-coatings
- Electrical wire coverings and cables
- Carpet backing
- Cosmetics
- Notebook covers
- Dishes, tablecloths, shower curtains and toilet seats
- Gadgets and games



"And this little warning light flashes when the outside air becomes too polluted to breathe."

Although this list is far from exhausted, it is important to realize that these toxins reach deep into our daily lives.

*Note: Chelation therapy can only halt further effects of the poisoning. It cannot reverse neurological damage that has already been sustained.

These phthalates and plasticizers not only make their presence known in our foods, they are also present in the air we breathe, ensuring that they have another easy route to every one of our internal organs. Everyday, products inside our house and office have plastics that outgas (leach into) the air we breathe. Think of that famed ‘new car smell’ of vinyl in your automobile. Why do we crave it? It’s addictive – like so many toxic habits. In fact, any smell present in the air can be a sign of a dangerous chemical. These molecules diffuse from your lungs and through your skin and work their way into the bloodstream, where they are eventually disseminated to all of your internal organs.

Plastics are but only one example of thousands of everyday chemicals that we stockpile in our bodies. Our air is also contaminated with exhaust from our automobiles, which contains heavy metals, pesticides, volatile organic hydrocarbons (formaldehyde, benzene, toluene), and many other pollutants that are lumped into the term *xenobiotics* (foreign chemicals). Diesel exhaust, for example, has been proven to aggravate asthma and increase allergies, trigger heart attacks, lead to depression, and lower the immune system’s resistance to infections.

Through the consistent daily onslaught of chemicals, we are literally bathing in a continual sea of chemicals. And outdoor air is the major offender. Where you live, how long you spend traveling and how close you live to major highways, all has a bearing on the amount of pollution you absorb on a daily basis. Another gauge of the amount of pollutants you are exposed to is how close you live to industry, what they manufacture, what types of air-borne toxins exist, and the direction of the prevailing wind.

Sadly, there is absolutely no safe haven to escape from the pollutants and toxins in the air we breathe. Take for example a happy American family living in suburbia to avoid all of that ‘nasty’ city air. They’re miles away from the grime of the city and big industry. Yet in the evening, while they are relaxing on their porches and breathing in all that ‘fresh’ country air, columns of pollutant-laden hot air rise from the sun-heated city pavements, roads and buildings. With this hot air comes exhaust from vehicles and fumes from industry smokestacks, which are carried for miles on the evening breeze. By the early morning, the cooling of the earth’s surface allows the *isotherms* (a mass of air that is the same temperature) to settle out over unsuspecting, sleepy suburbia. Shockingly, many suburbanites actually breathe worse air quality than people who live right next door to the factory!

Water: It’s Not Just H₂O Anymore!

Unbeknownst to the general public, both ground and water contamination is a very serious and ongoing problem that has been created from old industry, old forgotten and rusting underground storage tanks, and from leaking municipal waste sites. Possible contaminants in your water include *TCE*, *lindane* and *atrazine*. Compounding this are the mountains of other chemicals that are released into the water supply from acid rain via the manufacturing industry, vehicle exhaust, coal burning power plants, and many other toxic sources. And, if by some miracle your water source is actually pure, there’s a high likelihood that the very conduits used to transport it to and through your home are

contaminating it. Copper, lead, vinylidene chloride (used in pipes) and other plumbing materials leach out toxins.

Not to mention the ‘bugs’ in common drinking water – micro-organisms like *Giardia*, *Shigella*, and the *Norwalk virus* (famous for its effects on cruise ships) that may cause gastrointestinal illness (EPA).

Examination of drinking water disease outbreak trends over the last 30 years reveals a big increase in the early 1980s. During this time, a tremendous amount of infrastructure was put into place in state and local systems, which may have led to contamination. As infrastructure systems are updated in the next decade, experts believe that we may see another such increase.

It is not dramatic to say that all of the chemicals generated by man will eventually end up in our water supply. The contamination of water is directly related to the degree of contamination of our environment. Rainwater flushes airborne pollution from the skies, and then washes over the land before running into the rivers, reservoirs, and lakes that supply our drinking-water.

Would it surprise you that the average city water system contains *more than 500* different chemicals? That’s what was reported on the cover of *USA Today* more than a decade ago! It should have been a wakeup call to all of us back then. Anyone who doubts the amount of toxicity that is in our water need only ask themselves why it costs more per gallon for bottled water than it costs to haul a gallon of gasoline thousands of miles after its been extracted via expensive wells and refining.

Let’s face it – uncontaminated, clean water does not contain 500 different chemicals, nor does it have an objectionable odor or taste. In contrast to what we find in average city water, pure water does not require the addition of multiple chemicals to make it safer, cleaner, more palatable, less acidic, or healthier.

Fluoride: Fool Me Once...

As we seem to continually look to add even more toxins to the water supply, man has come up with yet another way to pollute: fluoride.

“But wait,” you say, “isn’t fluoride good for us and our kids?” That’s the saddest news of all! It offers no true benefit to humankind and has actually been linked to disease!

Fluoride is a naturally occurring element in the sea, rocks, and some groundwater. It is a halogen (one of five electronegative elements) and a potent enzyme-inhibitor that is even used as a preservative and anticoagulant for biological specimens. Fluoride is an extremely inert chemical, yet its thermodynamic potential lends itself to a very active state that interferes with hydrogen bonds, forms complex ions, and mobilizes the movement of metal ions, such as aluminum, into places that it normally would not travel. In fact, fluoride acts

Did You Know?

90% of the fluoride added to water is from two *waste products* of the fertilizer industry (Herzy).

much like a heavy metal inside of the body. Once it gets inside the cell membrane, it can cause the cell to malfunction and damage hormone receptors and other regulatory sites.

Fluoridation began in 1939 in the United States, and none of the chemicals used for fluoridation are pharmaceutical grade. In 1983, the Deputy Assistant Administrator for Water, Rebecca Hanmer, said that the EPA viewed the use of hydrofluosilicic acid recovered from the waste stream of phosphate fertilizer manufacture as "...an ideal solution to a long standing problem. By recovering by-product fluosilicic acid (sic) from fertilizer manufacturing, water and air pollution are minimized, and water authorities have a low-cost source of fluoride..." In other words, the solution to pollution is dilution, as long as the pollutant is dumped straight into drinking water systems and not into rivers or the atmosphere.

Top Reasons to Oppose Fluoridation

Medically Unethical – fluoridation violates the individual's right to informed consent to medication, does not allow for individual sensitivity to dose, does not control the dose to the individual, and does not allow for individual response to be monitored.

Unnecessary – children are already receiving overdoses of fluoride without water fluoridation.

Inequitable – the wealthy can avoid fluoridated water; the poor cannot afford bottled water or other avoidance measures.

Inefficient – 99.97% of the added fluoride is flushed down the drain and toilet, or washed away during car washing and other activities.

Ineffective – a 21-city study showed that there is an inverse relationship between tooth decay and fluoride in drinking water, but there is a direct relationship between dental fluorosis and fluoride levels.

Unsafe – 29.9% of US children have dental fluorosis (mottling of enamel) on at least two teeth.

And even though our government is liberally peppering our drinking supply with this industrial byproduct, there is no chronic toxicity data on hydrofluosilicic acid and its sodium salt! However, newly published studies indicate a link between the use of these chemicals and elevated levels of lead in children's blood, plus anti-social behavior.

In 1998, the results of a fifty-year fluoridation experiment involving Kingston, New York (un-fluoridated) and Newburg, New York (fluoridated) were published. In summary, there is no overall significant difference in rates of dental decay in children in the two cities, but children in the fluoridated city show significantly higher rates of dental fluorosis than children in the un-fluoridated city.

According to a study by the National Institute of Dental Research, 66 percent of America's children in fluoridated communities show the visible sign of over-exposure and fluoride toxicity, dental fluorosis. Additionally, a 21-city study determined that there is an inverse relationship between tooth decay and fluoride concentration in drinking water. Using the same data, Ziegelbecker demonstrated that there is no correlation between fluoride and dental disease, and identified a direct relationship between dental fluorosis and fluoride levels. And a 1998 study by De Liefde concluded that the difference in decay, missing, and filled teeth between fluoridated and non-fluoridated populations is "clinically meaningless."

A national survey of 39,000 United States schoolchildren conducted from 1986 through 1997 revealed that there was *no significant difference statistically in tooth decay between kids that did drink fluoridated water and kids who did not*. Instead, it was found that fluoride was damaging brain enzymes and lowering IQ. No wonder there is such an epidemic of learning disabilities in this country!

Additionally, fluoride is also being added to infant formulas, baby foods, juices, tooth treatments and pediatric prescriptions, along with what is being put into the water. Children have immature detoxification systems, yet they are actually getting a *higher dose* of fluoride than most adults, and they are the least able to handle it! But ‘fluoride-boosting’ is not limited to the products previously mentioned; it is also found in medications such as the anti-depressant Prozac.

Fluoride is also known to cause excessive calcification, not only in arteries, but also in joints and ligaments, and it contributes to the formation of many types of cancer (such as bone cancer), osteoporosis and hip fractures caused by skeletal fluorosis* (fluoride accumulation inside the bone). It has also been linked to a variety of behavioral disorders, birth defects, flu-like illnesses and some forms of arthritis.

Did You Know?

The results of a 50-year fluoridation experiment involving Kingston, New York (un-fluoridated) and Newburg, New York (fluoridated) showed that there is no significant difference in dental decay in the two cities, but children in the fluoridated city show significantly higher rates of dental fluorosis than children in the un-fluoridated city.

There is also an increase in death rates in fluoridated communities compared to those communities living on well water (Yiamouyianis, Hoover, Cohn). In a study conducted by the United States National Cancer Institute, there was a 70% increase in cases of osteosarcoma (bone cancer) among young men living in fluoridated areas of Iowa and Seattle versus a 4% lower incidence of osteosarcoma** among young men in non-fluoridated areas in the same states.

Fluoride has also been linked to damage to the heart, brain and kidneys, as well as disrupting hormones and interfering with the metabolism of testosterone. (It’s no wonder why physicians are writing more than 100,000 prescriptions *per week* for Viagra!).

In the United States, 29.9 percent of the children already have dental fluorosis (mottling of enamel) on at least two teeth. Heller et al concluded that the severity of dental fluorosis increases with dose, and the daily dose received by children in unfluoridated areas is already nearing 1 mg/L. There also is a superlinear relationship between the incidence of bone fractures in children and the increase in fluoride concentrations. 50 percent of the ingested fluoride is excreted in the urine daily – the remainder accumulates in bone. Other

* Skeletal fluorosis is a crippling disease that can result either from a hardening of the bone (osteosclerosis) or a softening of the bone density due to impaired mineralization (osteomalacia). Its effects include limitation of joint movement, calcification of ligaments, crippling deformities, and muscle wasting.

** Osteosarcoma is a rare type of bone cancer.

studies report negative health effects related to fluoride such as earlier onset of menstruation in young girls (Hilleboe et al.).

Since 1994, there have been six publications that link fluoride exposure to direct adverse effects on the brain. Two epidemiology studies from China indicate depression of IQ in children. Another animal study shows a link between prenatal exposure to fluoride and offspring that are hyperactive throughout life. A 1998 paper shows brain and kidney damage in animals given the 'optimal' dosage of fluoride. And yet another publication links fluoride dosing to adverse effects on the pineal gland and pre-mature onset of sexual maturity in animals. Earlier onset of menstruation of girls in fluoridated Newburg, New York has also been reported.

Why then is it a goal of the CDC and the United States Public Health Service to see that 100 percent of the water supplies in the United States are fluoridated?

That's exactly what Dr. William Hirzy, an officer of the National Treasury Employees Union Chapter 280 of the EPA wanted to know.

The first involvement of the National Treasury Employees Union in fluoridation was in 1985 as a matter of professional ethics when the recommended maximum contaminant level (MCL) for fluoride was being developed. An employee went to the Union expressing concerns over the standard, stating that it did not protect public health against severe dental fluorosis. The Union's most recent involvement has been to sign a statement of concern along with hundreds of other organizations calling for a national review on the policy of water fluoridation.

In his address to the senate, Dr. William Hirzy stated: "...we hold that fluoridation is an unreasonable risk. That is, the toxicity of fluoride is so great and the purported benefits associated with it are so small – if there are any at all – that requiring every man, woman and child in America to ingest it borders on criminal behavior on the part of governments."

Dr. Hirzy stated that the policy of water fluoridation in the United States was "a massive experiment that has been run on the American public, without informed consent, for over fifty years." He went on to say that it is high time for a national review of this policy by a Joint Select Committee of Congress to explore several points, including:

- excessive and un-controlled fluoride exposures;
- altered findings of a cancer bioassay;
- the results and implications of recent brain effects research;
- the "protected pollutant" status of fluoride within the EPA;
- the altered recommendations to the EPA of a 1983 Surgeon Generals Panel on fluoride;
- the results of a fifty-year experiment on fluoridation in two New York communities;

- the findings and implications of recent research linking the predominant fluoridation chemical with elevated blood-lead levels in children and anti-social behavior.

He also cited that if the initial findings of the National Toxicology Program's (NTP) cancer bioassay on sodium fluoride were published in 1990, it would have ended fluoridation. But a special commission was hastily convened to review the findings, resulting in the salvation of fluoridation through systematic down-grading of the evidence of carcinogenicity. The final, published version of the NTP report says that there is, "equivocal evidence of carcinogenicity in male rats," changed from "clear evidence of carcinogenicity in male rats." The change prompted Dr. William Marcus, who was then Senior Science Adviser and Toxicologist in the Office of Drinking Water, to blow the whistle about the issue, which led to his firing by the EPA. Dr. Marcus sued the EPA, won, and was reinstated with back pay, benefits and compensatory damages.

Finally, Dr. Hirzy expressed concern that children's' bones and other tissues, as well as their developing teeth, are accumulating too much fluoride. And, while few researchers are looking for the effects of excessive fluoride exposure on bone and other tissues in American children, what has been reported so far is disturbing.

Fast Facts...

- There are serious deficiencies in water treatment plants in 75% of the states (US General Accounting Office)
- More than 120 million people (50% of the population) may get unsafe water (Natural Resources Defense Council)
- US Health Officials estimate 900,000 people become ill from waterborne disease each year
- An estimated 66% of Safe Drinking Water Act violations aren't reported (US General Accounting Office)
- 7,500 cases of illness are linked to drinking water in the US annually, and this number is much lower than generally accepted because drinking water contaminants are often not considered in diagnoses (US Center for Disease Control)

Are Your Pipes Filled with Pool Water?

Another toxin that you may not realize is causing elevated cholesterol and accelerates aging is chlorine. This toxin has been used for decades to kill the 'bugs' in drinking water. Unfortunately for all of us, chlorine is also a free radical initiator. It drills holes into the arterial walls (lipid peroxidation) and the artery has no choice but to call for help from the body's own 'band-aid system' to plug up the holes before the body bleeds to death. You've probably heard of this 'band-aid' – it's called cholesterol.

Additionally, statistical analysis and an exhaustive supply of scientific articles have documented how chlorine in our drinking water promotes not only arteriosclerosis (hardening of the arteries), but also various forms of cancer of both the rectum and bladder.

But even if you avoid drinking tap water, you'll still absorb chlorine while showering and bathing in city water. The installation of filters for your shower, tub and drinking faucets is currently the only way to avoid this problem.

Leukemia in the Water?

Take for example the case of little Jimmy Anderson. In 1973, this then three-and-a-half-year-old boy was diagnosed with leukemia. His mother Anne suspected her son's illness was caused by contaminated drinking water in their hometown of Woburn, Massachusetts. (Woburn's water was notoriously noxious; people from other towns even complained of a 'smell' that emanated from this area.) In 1979, after Jimmy and seven other children had died from leukemia and other cancers, and many others fell seriously ill, tests proved that the water in two public wells was, in fact, seriously polluted with toxic chemicals from industrial waste – especially TCE (tetrachloroethylene). The wells were immediately closed (Massachusetts Foundation for the Humanities).

TCE looks like water and has a sweet odor like chloroform. It is mainly used in metal degreasing, but it is also used as a raw material to make other chemicals, as a cleaner in electronics manufacturing, and for all sorts of general solvent purposes such as in paints, paint strippers, and adhesives.

TCE can enter your body when you breathe it in, or it can be absorbed through your skin. According to the Department of Health Services, trichloroethylene mainly affects the central nervous system (the brain), causing headache, nausea, dizziness, clumsiness, drowsiness, and other effects like those of being drunk. It can also damage facial nerves, damage the liver and kidneys, and damage the nerves of the arms and legs, causing tingling, loss of feeling, weakness, and paralysis. There have also been reports of certain rare immune diseases such as systemic sclerosis (scleroderma) and lupus erythematosus among people exposed to TCE. In terms of cancer, it has been associated with kidney, liver, esophageal and cervical cancer, Hodgkin's disease and non-Hodgkin's lymphoma, and leukemia (Wartenberg).

But that's not all that could be floating around in your pipes. Here are just a few more examples of the nasty chemicals possibly hiding in your water:

- Copper

While it is an essential element for all living organisms, including humans, too much copper can cause adverse health effects, including vomiting, diarrhea, stomach cramps, and nausea. It has also been associated with liver damage and kidney disease.

Unfortunately, lots of folks have elevated copper levels. The primary source? Copper piping with acidic chlorinated water running through it that pulls the copper from the pipes into the water. (One clue that you have too much copper in your water is a blue-green stain in the tub, toilet or sink.)

According to the Minnesota Department of Health, the longer the water stands idle in the pipes, the more copper it is likely to have absorbed. Thus, anytime the water has

not been used for more than six hours (overnight, for example, or during the day when people have been at work or school) it should be cleared from the pipes before being used for drinking or cooking. Before using *each and every* faucet in the house, let the cold water faucet run until you can feel the water getting colder (30 to 60 seconds). Hot water dissolves copper more quickly than cold water; so water used for drinking or cooking should never be drawn from the hot water tap. (If you need hot water for cooking or drinking, take water from the cold tap and heat it on the stove.) *It is especially important not to use the hot water for making baby formula as children under the age of one are more vulnerable to the toxic effects of copper.*

- Lead

Lead is considered the number one health threat to children, and the effects of lead poisoning can last a lifetime. Not only does lead poisoning stunt a child's growth, damage the nervous system, and cause learning disabilities, it has also been linked to crime and anti-social behavior in children.

Yet, more than 98% of homes in the US have pipes that contain lead or lead solder! The main sources are lead pipes, or copper pipes connected by lead solder, and from brass faucets, which also contain lead.

Contamination of drinking water with significant levels of lead is much more widespread than previously believed, and levels that were once considered safe are now known to be health threats. Even low levels in drinking water, when continuously ingested, will cause health deterioration. Exposure to lead produces many different health problems, such as permanent damage to the central nervous system, the brain, and kidneys. This damage commonly results in behavior and learning problems (such as hyperactivity), memory and concentration problems, high blood pressure, hearing problems, headaches, slowed growth, reproductive problems in men and women, digestive problems, and muscle and joint pain.. These effects are cumulative and usually irreversible, especially in sensitive populations such as fetuses, children, and pregnant women.

Fast Facts...

- Lead is considered the #1 health threat to children.
- More than 98% of US homes have pipes that contain lead or lead solder.
- More than 30 million Americans are drinking water with lead levels in excess of the Maximum Contaminant Level (MCL) set by the EPA .

Sadly, more than *30 million Americans* are drinking water with lead levels in excess of the Maximum Contaminant Level (MCL) set by the EPA.

- Atrazine

Atrazine is the second most frequently detected pesticide in the EPA's National Survey of Pesticides in Drinking Water Wells. Widely used for weed control, it was estimated to be the most heavily used herbicide in the United States from 1987 to

1989, with its most extensive use for corn and soybeans, predominately in Midwestern states. Effective in 1993, its uses were greatly restricted.

Atrazine is released into the environment in wastewater from manufacturing facilities and through its use as a herbicide.

The EPA has found atrazine to potentially cause the following health effects when people are exposed to it for relatively short periods of time: congestion of heart, lungs and kidneys; low blood pressure; muscle spasms; weight loss; and damage to adrenal glands. Atrazine has the potential to cause the following effects from a lifetime of exposure: weight loss, cardiovascular damage, retinal and some muscle degeneration; and cancer.

- Vinylidene Chloride

Vinylidene chloride is used in the production of polyvinylidene chloride copolymers, the major application of which is in the production of flexible films for food packaging (SARAN® and VELON® wraps), as flame retardant coatings for fiber, carpet backing, and in piping.

The short-term effects in humans from vinylidene chloride exposure are on the central nervous system (CNS), including depression and symptoms of inebriation, convulsions, spasms, and unconsciousness at high concentrations. Animal studies indicate that chronic exposure to vinylidene chloride can also affect the liver, kidneys and lungs. According to the EPA, vinylidene chloride has been detected in a number of drinking water supplies across the United States.

- Lindane

Lindane is used primarily for treating wood-inhabiting beetles and seeds. It is also used as a dip for fleas and lice on pets and livestock; for soil treatment; on fruit and nut trees, vegetables, and timber; and for wood protection. It enters surface water as a result of runoff from agricultural land and from home and garden applications where it is used as an insecticide. When released into the water, lindane is not broken down by microbes and it is accumulated in fish and shellfish.

The EPA has found lindane to potentially cause high body temperature and pulmonary edema when people are exposed to it for relatively short periods of time. Lindane has the potential to cause liver and kidney damage as well.

Since *dilution is the solution to pollution*, we need a lot of quality water each day. So it is ironic that one of our most important detoxification tools is progressively more polluted. What can you do to avoid these toxins? Well, at home, you should at least install a carbon filter on each of your facets. Better yet, use a filter that will also alkalize your water.

Your Body: What Dangers Are You Harboring?

Before you visit your dentist for a checkup – think twice about how you may want your cavities filled. One potential source of exposure to metallic mercury is that which is released from dental amalgam* fillings. When the amalgam is first mixed, it is a soft paste which is inserted into the tooth and then hardens within 30 minutes. Once the amalgam is hard, the mercury is bound within the amalgam, but small amounts are slowly released from the surface of the filling due to corrosion or chewing or grinding motions. (People who frequently grind their teeth or often chew gum can add to the amount of mercury normally released from those fillings over time.) Part of the mercury at the surface of the filling may enter the air as mercury vapor or be dissolved in the saliva. The total amount of mercury released from dental amalgam depends upon the total number of fillings and surface areas of each filling, the chewing and eating habits of the person, and other chemical conditions in the mouth. Whether the levels of exposure to mercury vapor from dental amalgam are sufficiently high to cause adverse health effects, and exactly what those effects are, continues to be researched by scientists and health officials. One thing is certain, further study is needed to determine the possibility of behavioral or immune system effects, and to determine the levels of exposure that may lead to adverse effects in sensitive populations (such as pregnant women, children under the age of six, people with impaired kidney function, and people with hypersensitive immune responses to metals). Cadmium and arsenic from porcelain tooth restorations have also been known to cause osteoporosis. And another agent used in dental work, methylacrylates from the dental bonding glues, has been known to cause sudden heart attacks. In addition, the phenols that are used for sterilizing root canals can cause serious migraines.

Other bodily contaminants come in the form of different types of implants:

- Silicone from breast implants has caused auto-immune disorders such as lupus, as well as chronic fatigue syndrome and fibromyalgia
- Titanium from hip replacements has caused fibromyalgia
- Heavy metals found in hair dyes have been responsible for damaging kidneys
- Coal tars found in prescriptions and over-the-counter psoriasis creams are related to the very chemicals that scientists use to cause cancer in experimental mice

Also *all* drugs – even medications prescribed by your doctor – are toxic to your body. Why? Because medications have to be metabolized by your liver, which is your prime organ of detoxification. Your liver is also busy doing a lot of other things that keep you alive, and if it gets too overloaded, it can't process all the toxins, so instead of processing them, it stores them within the liver itself, as well as in other organs and in fat cells.

Those afflicted with hormonally mediating cancer such as breast, uterine, ovarian, testicular, prostate or thyroid, and who are serious about fighting it, need to consider the

* An amalgam is a mixture of metals. The amalgam used in silver-colored dental fillings contains approximately 50% metallic mercury, 35% silver, 9% tin, 6% copper, and trace amounts of zinc.

option of ridding their bodies of lifelong accumulations of all toxins* which have lead to disease. It is important to also eliminate any further plastic exposure and fertilizers which can further cancer infiltration.

Your Home: It's Not Really So Sweet

As you sit reading this book on your comfy couch, you're certainly not thinking of your home as a cesspool of toxic chemicals. Yet, looking back to the 1970s, there was a flood of people who innocently insulated their homes and offices with urea foam formaldehyde

Did You Know?

The average carpet outgases more than a dozen chemicals, all of which are capable of creating disease.

insulation (UFFI) or moved into a new mobile or prefab home that was insulated with this material. As this type of insulation made its health effects known, people suddenly started to pitch tents on their suburban lawns for survival.

The symptoms ranged from brain fog, headaches and depression to arthritis, asthma, and nausea. For some, the treatment was as simple as avoiding exposure, removing the UFFI, or moving. Some were more damaged, and required years of treatment or special environmental units. Others were totally incapacitated and never healed.

As you can well imagine, the manufacturers of UFFI vehemently denied any connection between their product and health issues. But the battle was slowly won via scientific papers and lawsuits.

That's one extreme example, but there are many more examples of every day toxins in your home. Did you know that the average carpet outgases more than a dozen chemicals, all of which are capable of creating disease? Beebe and others have written books about the devastating health effects from new carpeting. Anderson Labs demonstrated on TV just how toxic new carpeting can be. They placed a little patch of carpet in the bottom of a glass jar with some mice. In the morning, the mice were dead. 4-PC was one of the chemical culprits, which also included the other common carpet chemicals: benzene, toluene, xylene, formaldehyde, butadiene, styrene, methacrylates, and more (Anderson 1997).

The EPA independent biopsy studies of the many chemicals that have been stored in human beings shows, alarmingly, that 100% of the people studied had dioxins, PCBs, dichlorobenzene and xylene in their fat cells. Dioxins and PCBs are among the most potent carcinogens known to mankind. These chemicals are in no way normal to the body, and they are not meant to be metabolized by the body – we simply do not have the proper metabolic machinery to entirely detoxify. The result: slow accumulation of toxins that eventually metastasize into disease.

The question prevails, are dioxins and PCBs only found in exotic types of occupations? This couldn't be any further from reality, as these chemicals outgas from such sources as carbonless copy paper, plastics, inks, paints, furnishings, and construction glues, and are

* Always consult with your physician before going off of any prescribed medication.

also common contaminants within the food chain. Dichlorobenzene can be the noxious odor of what is found in “air fresheners” in public bathrooms, and xylene outgases from all types of materials including plastic, carpeting, furnishings, construction materials, and industrial and traffic exhaust. This list is certainly not exhaustive, but one fact is common – these toxins are inescapable; they’re everywhere.

A solvent that is known to cause leukemia is benzene, which can come from a variety of sources including auto exhaust, gasoline, plastic, rubber, carpet, and cleaners.

Solvents such as perchloroethylene and tetrachloroethylene are commonly used in the dry cleaning industry and out-gas from furnishings, cars, plastics and more. According to the CDC, these common solvents are known toxins to the liver and kidneys. Toxic chemical hepatitis, and enlargement of the liver and spleen have been associated with exposure to tetrachloroethylene. Altered physiological and behavioral responses observed in subjects exposed to tetrachloroethylene include vague nonspecific complaints generally attributed to CNS depression. These symptoms include vertigo, impaired memory, confusion, fatigue, drowsiness, irritability, loss of appetite, nausea and vomiting. Motor coordination following tetrachloroethylene exposure requires additional mental effort. Various disturbances of the peripheral nervous system such as tremors and numbness have also been associated with exposure to tetrachloroethylene. Excessive absorption of tetrachloroethylene can cause severe depression of the CNS leading to coma; and ultimately death may occur from respiratory paralysis or circulatory failure.

Your most important environment is the household environment; first because that's where you spend the majority of your time; and second, because it's the one place you have the most control over. Yet, few people give a thought to the paints, solvents, insecticides, grease, oils and other sources of toxicity they happily store in their basements and garages.

Construction materials like paints and wallboard, plasticizers in wallpaper, phenols in plywood, formaldehyde in pressed wood kitchen cabinets, bookcases and dresser drawers, and wood preservatives are just a few of the common household materials that are polluting your home. Did you know that the ordinary carpet emits *more than 200 types of chemicals* including formaldehyde, benzene, toluene, acetaldehyde, chloroform, xylene, phenol, benzaldehyde, hexanes, chlorobenzenes, styrene, and butadiene latex? Not to mention the foam formaldehyde in sofas, mattresses, and insulation. Back drafts from creosote-lined chimneys and flues can also trigger symptoms.

As we make our way inside, further sources of pollution include appliances and computers with their plastic housings and plastic-coated heated wires which all outgas pollutants. And, of course, the air fresheners and pesticides that can be found in the home, which are definitely avoidable toxins.

Do you have trouble falling asleep or staying asleep? It’s really no wonder why! The formaldehyde foam mattresses and pillows, which usually contain pesticides and fire retardants, are polluting us in our own beds. Add to that the wool blankets that can emit trichloroethylene dry cleaning fluid and moth-detering pesticides, and it is truly a wonder that we ever get any sleep with our noses continually pressed into those disease-

producing chemicals. We force our bodies to adapt to them and detoxify from them all night long!

Carbon monoxide and natural gas from malfunctioning furnaces, and molds from humidifiers and air-conditioners, bathrooms that are not vented, and undiagnosed roof leaks have slowly poisoned entire families, causing the most mysterious and diverse symptoms.

The body has a very large surface area and EPA studies show an enormous amount of toxins can be absorbed through the skin. A person does not need to work in a factory that produces an exotic chemical to be susceptible to chemically poisoning in their very own home. Be aware and take steps today to purify your most precious environment – your home.

There's Only One Way Out

The question that needs to be answered is this: why are the most potent man-made cancer-causing chemicals found inside the fat cells of all of us? Why are these chemicals allowed to permeate and infiltrate every aspect of our daily lives?

Think back to the example of Woburn and how many innocent children died before authorities could be convinced that there were toxins in the water. What a shame – what a horrible tragedy.

Don't let yourself be a victim of your environment. Get involved! Protect yourself from the toxins that you can avoid, and learn how to detoxify from the chemicals that are unavoidable. It's your life. You can be sick, depressed, irritable, and listless – or you can be youthful, vibrant, healthy and alive! Make the right choice.

CHAPTER 2: THE ROOT OF ALL (HEALTH) EVILS

There is no argument that accumulated toxins, along with their undiagnosed nutrient deficiencies, lead to disease. When our bodies stockpile chemicals they simply do not stay where they accumulate. There is a slow leaching out to different parts of your body that leads to accelerated aging.

According to Fife in *The Detox Book*, over the past decade hundreds of studies have demonstrated the health dangers posed by toxins, including decreased immune function, autoimmune disease, enzyme dysfunction, hormonal imbalances, psychological disturbances, altered metabolism, nutritional deficiencies, and even cancer. Fife goes on to explain that toxic accumulation is the underlying cause of most degenerative disease. They build up faster than they can be removed, and disease results.

And modern medicine is no help. For one, most medical practitioners rely heavily on drugs to treat symptoms, rather than searching for an individualized cure. For another, each person is treated as if they were the same in every way.

| Take heart disease, for example. For years, women were expected to present with the same symptoms as men during a heart attack, and they were given the same emergency treatment (or none at all) and long-term care. The result? Countless women were misdiagnosed and left to die from coronary disease. Not until recently did the medical establishment wake up and realize that women are different from men, and heart disease is not just a ‘man’s disease’. In fact, *Time* magazine blasted this headline in the April 2003 edition: “The No. 1 Killer Of Women, No, it's not breast cancer. More women die

“The more scientists learn about a woman's heart and what can go wrong with it, the more they realize that females aren't just small males.”

- C. Gorman, 2003, *Time Magazine*

of heart disease than of all cancers combined.” As of 2003, more than 500,000 women were dying each year from cardiovascular disease in the US, compared to the most *feared* health threat,

breast cancer, with 40,000 deaths annually. The article goes on state that heart disease has never discriminated between the sexes, and that it is often *more* fatal in women than in men. And the common belief that premenopausal women are immune to heart problems is just plain wrong, with heart attacks striking 9,000 women younger than 45 each year. The journalist, Christine Gorman, then states: “The more scientists learn about a woman's heart and what can go wrong with it, the more they realize that females aren't just small males.”

Could the Cause Be Cadmium?

Here’s another example: What does a woman afflicted with chronic fatigue and osteoporosis have in common with a man suffering with hypertension and ED (erectile dysfunction), and a child battling with cancer? It’s very possible that they all have cadmium poisoning as the underlying cause of their symptoms.

The general population is exposed to cadmium from breathing cigarette smoke (which *doubles* the average daily intake), eating cadmium-contaminated foods (there are low levels in all foods; the highest levels are found in shellfish, liver, and kidney meats), drinking contaminated water, or breathing contaminated air (usually found near the burning of fossil fuels or municipal waste). And until 1997, cadmium carbonate and cadmium chloride were used as fungicides for golf courses and home lawns.

Cadmium enters air from mining, industry, and burning coal and household wastes. Its particles can travel long distances in the air before falling to the ground or into water. It binds strongly to soil particles, and it *doesn't* break down in the environment, but it can change forms. Fish, plants, and animals take up cadmium from the environment. Cadmium disappears from organisms very slowly. Its half-life in the human body can be as long as 20 years (Jin, Clark, Slebos, Al-Refai and Taylor).

Fast Facts on Cadmium...

- Cigarette smoking doubles the average daily intake.
- Cadmium *doesn't* break down in the environment, but it can change forms.
- Its half-life in the human body is up to 20 years.
- Cadmium can cause high levels of mutations not only by damaging DNA directly, but also by inhibiting DNA repair.

According to the ATSDR, breathing high levels of cadmium severely damages the lungs and can cause death. Eating food or drinking water containing cadmium irritates the stomach, leading to vomiting and diarrhea. Long-term exposure to lower levels of cadmium leads to a buildup in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones. In addition, animals that were given cadmium in food or water had high blood pressure, iron-poor blood, liver disease, and nerve or brain damage. It is listed in the Federal Report on Carcinogens as a "known human carcinogen" and has long been known to cause human lung cancer. Some portion can cross the placenta from a mother to child during pregnancy, and it can also be found in breast milk. The babies of animals exposed to high levels of cadmium during pregnancy had changes in behavior and learning ability. Cadmium may also affect birth weight and the skeleton.

Researchers at the National Institute of Environmental Health Sciences reported in June of 2003 that cadmium also disturbs a DNA repair system that is important in preventing cancer. "Unless cadmium is unique in its mechanism," NIEHS' Dmitry A. Gordenin, Ph.D., said, "it would seem that environmental factors may cause genetic defects and cancer not only by attacking our DNA directly but also by undermining the mechanisms by which faulty DNA replication is repaired."

Soon after the discovery of the DNA double helix 50 years ago, studies showed environmental chemicals and stresses could cause mutations that could result in uncontrolled cell growth, leading to cancer. But the NIEHS group's new contribution is to show that cadmium causes mutations in another way - by inhibiting the ability of cells to repair routine errors made when the DNA is copied to make new cells.

Without the repairs, cells mutate "dramatically" and multiply. Dr. Gordenin said, "Cells must duplicate their DNA in order to increase their numbers enough to replace dying cells. However, in duplicating the DNA mistakes are made with a frequency that organisms would not be able to tolerate, if uncorrected." Without these corrective mechanisms, mutations can occur and multiply in cell after cell, leading to cancer, reproductive problems, birth defects and other diseases.

"What we have shown," Dr. Gordenin continued, "is that environmental factors such as

"What cadmium exposure does in living cells is to block post-replication mismatch repair of natural errors and thus increase the mutations dramatically – as much as 2,000 fold. Genetically, this can result in a vast increase in errors that could be catastrophic."

- Michael A. Resnick, Ph.D.

cadmium can cause high levels of mutations not only by damaging DNA directly but also by inhibiting DNA repair." In fact, cadmium exposure blocks post-replication mismatch repair of natural errors in living cells, and thus increases the mutations dramatically – as much as 2,000 fold – which could lead to genetic errors of catastrophic proportion (Resnick). Most disturbing of all? The amount of cadmium needed to inhibit repair and increase mutations was remarkably small (Kunkel).

In short, a body burdened with cadmium can make recovery time impossible. Not to mention the scores of other heavy metals and the thousands of other common everyday chemicals that we use that are also silently accumulating in our bodies.

More on Mercury

Another toxin, mercury, cannot be created *or destroyed* by humans.

According to the EPA, coal-burning power plants are the largest human-caused source of mercury emissions to the air in the United States, accounting for over 40 percent of all domestic human-caused mercury emissions. The EPA has estimated that about one quarter of US emissions from coal-burning power plants are deposited within the contiguous US and the remainder enters the global cycle.

Mercury in the air eventually settles into water or onto land where it can be washed into water. As mentioned previously, once deposited, certain microorganisms can change mercury into methylmercury – a highly toxic form that builds up in fish, shellfish and animals that eat fish.

Mercury exposure at high levels, in people of all ages, can harm virtually every part of the human system, including the brain, heart, kidneys, lungs and the immune system.

It has also been demonstrated that high levels of methylmercury in the bloodstream of unborn babies and young children may harm the developing nervous system, making the child less able to think and learn. Impacts on cognitive thinking, memory, attention, language, and fine motor and visual spatial skills have been seen in children exposed to methylmercury in the womb. (Methylmercury exposure in the womb can result from a

mother's consumption of fish and shellfish that contain methylmercury.)

Outbreaks of methylmercury poisonings have made it clear that adults, children, and developing fetuses are at risk from ingestion exposure to methylmercury. During these poisoning outbreaks some mothers with no symptoms of nervous system damage gave birth to infants with severe disabilities. It became clear that the developing nervous system of the fetus may be more vulnerable to methylmercury than the adult nervous system.

In addition to the impairments noted above, symptoms of methylmercury poisoning may include:

- Impairment of the peripheral vision
- Sensations of "pins and needles" feelings, usually in the hands, feet, and around the mouth
- Lack of coordination of movements
- Impairment of speech, hearing, walking
- Muscle weakness

Laughably, the EPA suggests that people concerned about exposure to methylmercury should consult their physician. When was the last time you heard about a medical doctor diagnosing a problem as methylmercury toxicity?

Are Medical Doctors Missing the Proverbial Toxic Boat?

Which leads us to the next topic: in general, the medical community is not in tune with environmental medicine and the triggers that are caused by chemicals and toxins from the air, the water or our food chain supply.

For example, the July 2006 issue of the *Annals of Neurology* reported that exposure to pesticides may boost the long-term risk for developing *Parkinson's disease* by 70 percent, according to a new study. Their findings back up earlier animal studies linking pesticide exposure to motor function abnormalities and lower levels of the brain neurotransmitter dopamine. (Declines in dopamine have long been associated with Parkinson's.)

Did You Know?

Exposure to pesticides may boost the long-term risk for developing Parkinson's disease by 70% (*Annals of Neurology*).

The researchers studied 413 participants who were diagnosed with Parkinson's disease. The surveys revealed that just over eight percent of the men and just over three percent of the women reported exposure to pesticides. And although exposed patients were twice as likely to be blue-collar workers and 14 times more likely to work as farmers, ranchers, or fishermen, the Harvard team found that, regardless of occupation, pesticide exposure boosted long-term Parkinson's risk by 70 percent over the long-term.

Robin Elliot, executive director for the Parkinson's Disease Foundation remarked: "This is certainly the biggest and most serious populations study on people, and it appears to be the best proof today that there is a general association between pesticide and Parkinson's among people."

Yet, how often does a neurologist consider that when treating a patient? Or have you ever heard of a neurologist who looks to aluminum levels in Alzheimer's disease or cyanide levels in multiple sclerosis sufferers?

Dr. Rogers, in her book *Detoxify or Die* provides an example of one man who presented with years of depression. When they identified heavy levels of aluminum in his red blood cells, he realized he had totally forgotten to mention the years of taking antacids for his stomach. When the aluminum was removed through oral detoxification over a period of three months, his depression melted away, never to return in over 15 years.

The US Government's own EPA studies have shown that 100% of human fat biopsies they examined showed chemicals such as styrene, dioxin, xylene, dichlorobenzene and many others. They accumulate in our bodies over a lifetime of exposure. According to IARC, styrene is a known carcinogen and dioxin is probably carcinogenic, and the NTP (National Toxicology Program) lists dichlorobenzene as "reasonably anticipated to be [a] human carcinogen."

Fast Fact ...

Cancer death rates declined by just 1.1% per year from 1993 to 2001 (National Cancer Institute).

Not surprisingly, the prevalence of cancer is on the rise. As little as 35 years ago, cancer was around the 6th to 10th cause of death and illness, and it was even unusual to know someone with cancer. Nowadays, it is not unusual to know a 23-years-old woman with breast cancer, or a child with brain cancer, or a 21-year-old man with testicular or bladder cancer. It is an unparalleled epidemic and no age group is exempt. Cancer is now the second overall cause of death and illness for adults, and even worse, for children between the ages of 1 and 15, cancer actually leads the pack as the number one disease-causing death.

And would you be surprised to discover that the overall cancer death rates for all racial and ethnic populations combined declined by just 1.1 percent per year from 1993 to 2001 (National Cancer Institute)? Or that the median survival (all types and stages) stalled at a paltry six years? This statistic is particularly alarming considering the dramatic improvements in earlier diagnosis, not to mention the billions of dollars that have been spent on research.

How Much Are Pretty Fingernails Worth to You?

If you are a mother who is reading this book – this question is for you: when you were pregnant, did you OB/GYN caution you not to use nail polish or be exposed to it in any way?

Probably not; and that's a crying shame. It's a well known fact that breathing *toluene** (a component of nail polish) during pregnancy can result in children with birth defects, and retard mental abilities and growth. And the ATSDR admits that they "do not know if toluene harms the unborn child if the mother is exposed to low levels of toluene during pregnancy." We bet you would choose to forgo pretty finger and toenails for nine months for the sake of your unborn child, but you probably never knew of the risk.

In addition to its known hazards for birth defects, toluene may affect the nervous system. Low to moderate levels can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, loss of appetite, and hearing and color vision loss. Inhaling high

Did You Know?

Breathing toluene (a component of nail polish) during pregnancy can result in birth defects, and retard mental abilities and growth.

levels of toluene in a short time can make you feel light-headed, dizzy, or sleepy. It can also cause unconsciousness, and even death, and may affect your kidneys.

Not only does the toluene bioaccumulate, it also metabolizes into even more lethal forms and actually has an addictive potential equal to that

which can be found with alcohol and opiates. This addiction is so bad that people look to seek it out instead of finding it a disagreeable toxin! It is extremely sad that there is a whole generation of children and teens who are sniffing these brain-damaging toxins in such forms as nail and shoe polishes, glues, pesticide sprays, home cleansers and degreasers.

What does the ATSDR suggest to help families reduce the risk of exposure to toluene? That you use toluene-containing products in well-ventilated areas, and that when these products are not in use, that you tightly cover them to prevent evaporation into the air. How about if you just don't use them? Wouldn't that be a better solution?

More Toxins in the Womb

ADHD affects approximately 3 to 5 percent of all children. The Surgeon General has proclaimed that it is the most commonly diagnosed behavioral disorder of childhood. Sadly, children who have ADHD will most likely mature into adults who have ADHD. (Several recent studies have estimated that between 30 and 70 percent of children with ADHD continue to exhibit symptoms as adult.)

Research on how the brain normally develops in the fetus offers some clues about what may disrupt the process. Throughout pregnancy and continuing into the first year of life, the brain is constantly developing. It begins its growth from a few all-purpose cells and evolves into a complex organ made of billions of specialized, interconnected nerve cells. Scientists at NIMH (National Institute of Mental Health) and other research institutions are tracking clues to determine what might prevent nerve cells from forming the proper

* Toluene occurs naturally in crude oil and in the tolu tree. In addition to nail polish, toluene is also produced in the process of making gasoline and other fuels, and it is used in making paints, paint thinners, lacquers, adhesives, rubber, and in some printing and leather-tanning processes.

connections. Some of the factors they are studying include drug use during pregnancy, toxins, and genetics.

Research shows that a mother's use of cigarettes, alcohol, or other drugs during pregnancy may have damaging effects on the unborn child – particularly to the fetus's developing brain. Alcohol and nicotine in particular may distort developing nerve cells. For example, heavy alcohol use during pregnancy has been linked to *fetal alcohol syndrome* (FAS), a condition that can lead to low birth weight, intellectual impairment, and certain physical defects. Many children born with FAS show much the same hyperactivity, inattention, and impulsivity as children with ADHD.

Drugs such as cocaine also affect the normal development of brain receptors, which help control our responses to the environment. Current research suggests that drug abuse may harm these receptors. Some scientists believe that such damage may lead to ADHD.

Toxins in the environment may also disrupt brain development or brain processes, which may lead to ADHD. Lead is one such possible toxin. It is found in dust, soil, and flaking paint in areas where leaded gasoline and paint were once used. It is also present in some water pipes.

Breathing in Leukemia

And what about leukemia? You're increasing your risk of developing this deadly disease every time you gas up your car, breathe in second hand smoke, drive in traffic, or use common household items such as glues, paints, furniture waxes or detergents. Why? These are all ways to be exposed to benzene (ATSDR).

Benzene is widely used in the United States; it ranks in the top 20 chemicals for production volume. Some industries use benzene to make other chemicals which are used to make plastics, resins, and nylon and synthetic fibers. Benzene is also used to make some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Benzene is also a natural part of crude oil, gasoline, and cigarette smoke.

Breathing benzene can cause drowsiness, dizziness, and unconsciousness. Long-term benzene exposure causes effects on the bone marrow and can cause anemia and leukemia.

The Perfect Crime

We are just at the beginning of the nightmare as we continue into the never-ending succession of chemical infiltration as we accelerate all the symptoms associated with aging ranging from poor memory, depression, weight gain, elevated cholesterol levels, exhaustion and a loss of everything from sex drive to teeth. It is indeed baffling for the average physician faced with a complaining patient with a normal lab test. Often the diagnosis is that the person is a hypochondriac, a neurotic, or even worse, that s/he is just having a difficult time 'coming to terms with' getting older.

We are simply a polluted people. Pollutants are pervasive. We are surrounded by toxic environmental chemicals – they are everywhere – in our water, our soil, our foods, our

homes, offices and schools, and even in the air we breathe. Not only do these chemicals overwhelm our capacity to detoxify, but because many of them are man-made synthetic compounds invented in the laboratory, the body does not have the capability to completely metabolize them. Un-metabolized chemicals are stockpiled in the body, primarily in surface fat. They are also widely distributed throughout the body organs. Not a day goes by when we don't silently add to the chemical load our bodies. No one can predict the effect of the total load or combination of hundreds of chemicals in each person. As our bodies try desperately to detoxify, the chemicals deplete nutrients that could have been used to protect us from diseases and aging.

You need to come to terms with the realization that you are in contact with toxins on a regular and unrelenting basis. It would be naïve to think otherwise. From that first morning shower loaded with lead, copper and chlorine (and at least 497 other chemicals), to your morning coffee in a styrene-leaching Styrofoam cup, to your dose of benzene during your morning commute...you get the point.

Once these chemicals have entered into our bodies, we have no mechanism in hand to entirely metabolize them. Even the so-called 'tiny' amounts that we ingest every day slowly accumulate over a lifetime until our bodies reach the point of critical mass – meaning that there has been enough damage to our body's chemistry that a trigger will then bring a symptom or disease to the forefront.

Through knowledge, you will be able to take your first and most important step in undoing a lifetime of toxicity before it is too late.

CHAPTER 3: JUST HOW TOXIC ARE YOU?

As you have read so far, there is a definite problem in our environment with respect to the sheer volume of toxins we are inundated with. Through constant exposure over the years, our bodies simply cannot eliminate this stockpile of toxins without some much-needed detoxification help.

Unless you detoxify, these chemicals will affect the normal day-to-day operations of your organs and tissues. Eventually, serious illness is likely to result. In fact, two of the main toxicity-related diseases are cancer and cardiovascular disease.

Additionally, holistic practitioners are finding that several forms of arthritis can be significantly relieved by a detoxification diet, plus proper supplementation. Dr. Bennett and Dr. Barrie state in their book the *7-Day Detox Miracle*, "Arthritis pain may be related to a toxic reaction to specific foods (food allergies), dehydration from inadequate intake of water, a very common problem, and bowel toxemia."

Do You Need to Detox?

According to noted biochemist Jeffrey Bland, Ph.D., in his book *The 20-Day Rejuvenation Diet Program*, "toxicology textbooks list the first symptoms of chronic poisoning as low energy, fatigue, muscle weakness, inability to concentrate and intestinal complaints."

It's also important to note that a healthy digestive system eliminates its contents one to three times daily. If you do not have at least one bowel movement a day, or if you have flatulence or chronic indigestion, a detox program as part of a larger change of diet and awareness about food can often change those problems rapidly.

And it's nice to note that, in general, detoxing at any level enhances a woman's ability to deal with the ebb and flow of hormones that characterize her adult life.

If you answered yes to any of symptoms listed in the side bar, you may have a toxic condition that needs to be addressed. If your symptoms are severe, or if you have multiple symptoms you may need an effective detoxification program.

Common Toxicity Symptoms

*Do you have any of these symptoms?
Are they mild, moderate, or severe?*

- ☐ **Adult acne** or other skin problems
- ☐ Food **allergies**
- ☐ **Anxiety, depression or irritability**
- ☐ **Arthritis**
- ☐ **Asthma**
- ☐ Chronic **cough or ear infections**
- ☐ **Hives** or other rashes
- ☐ **Itchy ears, nose or eyes**
- ☐ **Respiratory/sinus** problems
- ☐ Chronic **runny nose**
- ☐ **Sneezing** attacks
- ☐ **Watery eyes**
- ☐ Chronic **belching**
- ☐ **Binge eating or cravings**
- ☐ Chronic **constipation or diarrhea**
- ☐ **Fluid retention**
- ☐ **Indigestion or heartburn**
- ☐ Chronic **intestinal gas** or foul gas
- ☐ Frequent **nausea or vomiting**
- ☐ **Body odor or bad breath**
- ☐ **Excessive sweating**
- ☐ **Brittle nails and hair**
- ☐ **Chronic fatigue**
- ☐ Chronic **insomnia/sleep disturbance**
- ☐ **Coated tongue**
- ☐ Poor **concentration**
- ☐ **Difficulty making decisions**
- ☐ Lack of **coordination**
- ☐ **Dark circles** under your eyes
- ☐ **Difficulty in losing weight**
- ☐ **Underweight** / failure to thrive
- ☐ **Unexplained weight gain**
- ☐ Feeling **faint, shaky or weak**
- ☐ Frequent **headaches or migraines**
- ☐ **Hyperactive**, restless, agitated
- ☐ Unusually poor **memory**
- ☐ Tight or stiff **neck**
- ☐ Back or joint **pain**
- ☐ **Psoriasis**
- ☐ **Rapid or irregular heartbeat**
- ☐ **Sensitive to light or noise**
- ☐ **Speech** difficulties
- ☐ **Urinary** urgency/inability to hold urine

A good detoxification system will support the liver's ability to do its job by:

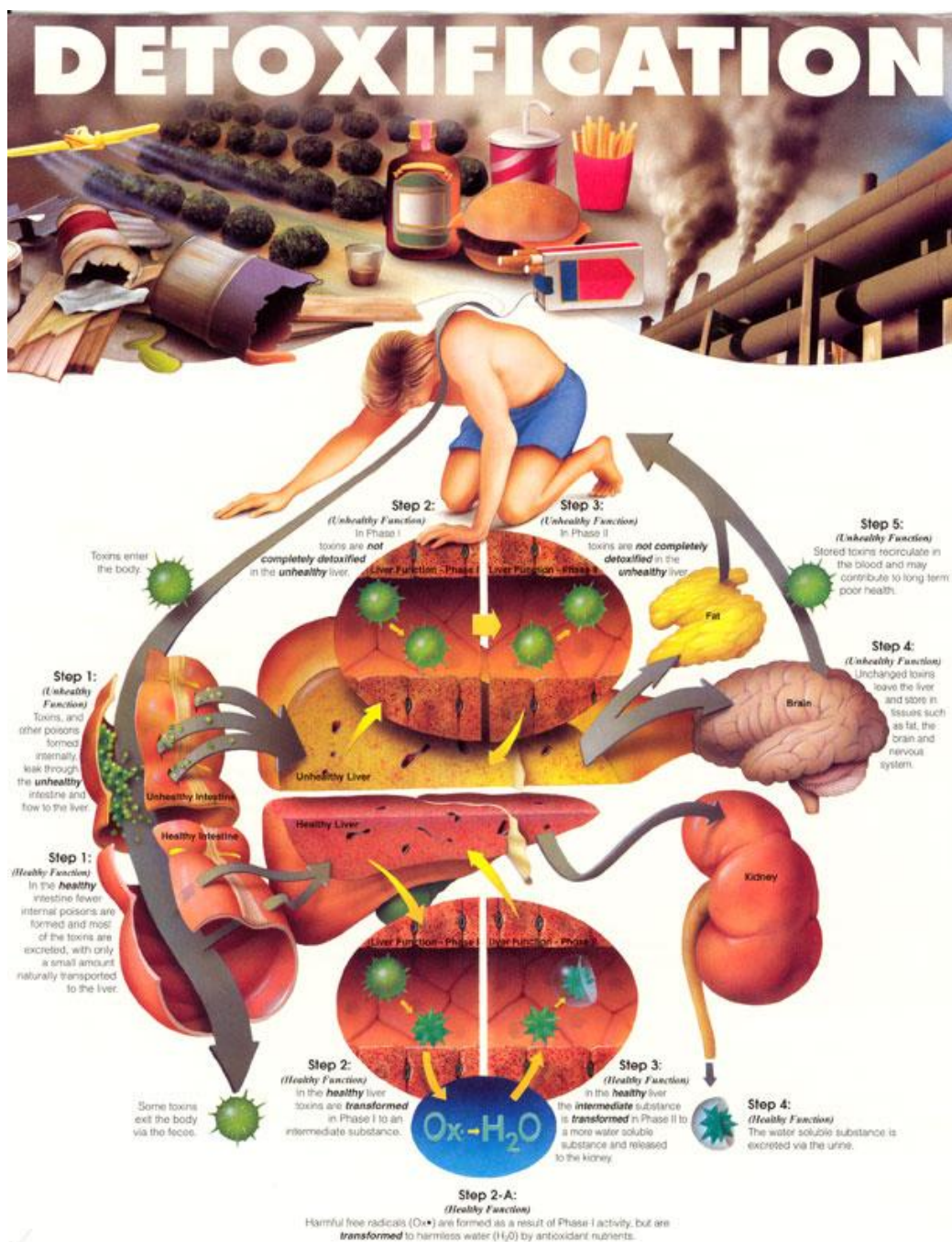
- 1) Reducing the amount of toxins you ingest;
- 2) Supplying additional nutrients to help the liver transform toxins into molecules that can be excreted by the body's systems;
- 3) Giving you techniques that allow the stored toxins within your body to gradually reenter the bloodstream where the liver can prepare them for excretion.

CHAPTER 4: YOUR BODY IS FIGHTING FOR YOUR LIFE!

The human body is a miraculous and complex organism. Everyday, your immune system is bombarded by an onslaught of germs, bacteria, fungus, pollution, etc. and your body is fighting with all of its might and all of its resources to keep you healthy.

There are two major detoxification systems operating within the body – namely, the anti-oxidation system, and the liver's detoxification processes. They both work in conjunction with the body's circulatory and elimination systems.

When your body is exposed to a hazardous chemical, it goes through two phases to



remove the toxic invader from your system. Bennett and Barrie explain that the detoxification process is similar to a two-phase wash cycle. Enzymes act like soap to breakup the grime into little droplets, removing impurities. When hormones, drugs, chemicals or other toxins enter the liver in the blood, this first group of enzymes goes to work to transform them. In this first part of the 'wash cycle', enzymes break toxins down into intermediate forms. Many toxins are fat-soluble. The liver's job is to transform them into water-soluble substances so they can be excreted via the bowel or the kidneys. (Neither the bowel nor the kidneys can process items until they are water-soluble.) Some toxins are ready for elimination at this stage, but others require a second 'wash' cycle.

In phase two, the intermediate compounds are routed along one of six chemically driven detoxification pathways, where they are further broken down to create nontoxic water-soluble compounds, and then bound to specific types of protein molecules which act as 'escorts' to guide them out of the body through the kidneys (in the form of urine) or the bile (in the form of feces).

These bio-transformed intermediates have another name you're probably more familiar with, *oxygen free radicals*, and if they can't be immediately processed out due to lack of nutrients, they begin to cause oxidative stress to the liver and to other tissues where they're carried in the bloodstream. A dangerous bottle-neck in the detoxification process is created. And the free radicals can be *more dangerous* than they were in their original form as toxins entering the liver.

Free Radicals & Aging

We all intuitively know what "aging" means, but it is difficult to define in words. One widely accepted definition of aging is "the process(es) that occur during life which culminate in changes that decrease an individual's ability to handle biological challenges." As our physiological functions decline, our ability to withstand assaults by disease or the environment also decreases.

By far, one of the most popular theories of aging is the "Free Radical Theory of Aging", first proposed by Dr. Denham Harman. This theory postulates that aging results from an accumulation of changes caused by reactions in the body initiated by highly reactive molecules – free radicals.

Typically, stable molecules contain pairs of electrons. When a chemical reaction breaks the bonds that hold paired electrons together, free radicals are produced. Free radicals



contain an odd number of electrons, which makes them unstable, short-lived, and highly reactive. As they combine with other atoms that contain unpaired electrons, new radicals are created, and a chain reaction begins.

The changes induced by free radicals are believed to be a major cause of aging,

disease development and death. A major premise in this theory is that free radicals and their precursors may be produced *endogenously* (within the body) through normal metabolic processes, or *exogenously* (outside of the body) from sources such as cigarette smoking.

The body's defense mechanisms against these free radicals are referred to as antioxidants. When the amount of antioxidants in the body is insufficient to do battle with the free radicals, these very reactive molecules easily react with vital molecules in the body, such as DNA, causing mutations. The accumulation of this damage is thought to lead to aging and degenerative disease.

Endogenous free radicals are produced in the body by four different mechanisms:

- 1) From the normal metabolism of oxygen-requiring nutrients. It has been estimated that *more than 20 billion molecules of oxidants per day are produced by each cell* during normal metabolism.
- 2) White blood cells destroy parasites, bacteria and viruses by using oxidants such as nitric oxide, superoxide and hydrogen peroxide. Chronic infections result in prolonged activity and increased exposure of body tissues to the oxidants.
- 3) Other cellular components called peroxisomes produce hydrogen peroxide as a byproduct of the degradation of fatty acids and other molecules. Under certain conditions, some of the hydrogen peroxide escapes to wreak havoc in other compartments in the cell.
- 4) An enzyme in the cells called cytochrome P450 is one of the body's primary defenses against toxic chemicals ingested with food. However, the induction of these enzymes to prevent damage by toxic foreign chemicals like drugs and pesticides also results in the production of oxidant by-products.

Fast Fact...

More than 20 billion molecules of oxidants per day are produced by each cell during normal metabolism.

Opara explains that exogenous sources of free radicals include air pollution, of which industrial waste and cigarette smoke are major contributors. Additionally, trace metals, such as mercury, iron and copper, are major sources of free radical generation. Caffeine may also contribute to the exogenous supply of oxidants.

According to the Linus Pauling Institute, we are constantly exposed to free radicals generated from endogenous and some exogenous sources. These free radicals react with biological molecules, such as DNA, proteins, and lipids, causing structural and functional damage. Oxidative damage accumulates in human tissues with age and can causally contribute to a number of degenerative diseases, such as heart disease and cancer.

One way to prevent free radical damage is to liberally supplement with antioxidant nutrients like vitamins A, C and E, minerals like selenium, and nutritional antioxidant cofactors like Lipoic acid. Another approach is to use chelating substances like chlorella

and EDTA (Ethylenediaminetetraacetic Acid) to remove free-radical-promoting toxic heavy metals.

It is important to note that not all free radicals are bad. Once they are harnessed inside of white blood cells, they are used to burn up (oxidize) many of the nasty bugs in the blood stream from things like bacteria from food, candida that sneaked through the leaky gut, or viruses that entered the bloodstream through the lungs. But when the balance swings, and there are more free radicals than antioxidants, we begin the downhill course of symptoms, accelerated aging, and disease.

How does the balance swing? Environmental chemicals are common producers of free radicals. We inhale well over 500 of these every day within the average home environment and this doesn't even include what we inhale in our offices, factories or traffic.

As levels for detox enzymes like SOD (super oxide dismutase) or GSH-Px (glutathione peroxidase) continually rise, so too does the need for our bodies to work overtime fighting these free radicals. When you see an elevated enzyme blood test, it is an outright signal that your body is paddling against the current on a long ride up the river.

Gut Level Causes of Disease

It is without a doubt that we live in a toxic external environment, but it is also important to know that toxins come from our *internal* environment as well. A main source of toxicity is the gut (stomach). For example, some folks harbor abnormal bacteria or incubate yeasts like *Candida albicans* in their intestines (from antibiotics and sweets). These bugs lead to inflammation of the gut lining, which is a major problem, as the gut lining houses over half of the immune system and half the detoxification system. Therefore, if the gut isn't perfectly healthy, you are at a standstill in terms of healing any other condition, regardless of how remotely unconnected to the gut it may be.

For example, *serotonin*, the neurotransmitter known as the 'happy hormone' that is used in many antidepressant medications, such as Prozac, Vioxx, and Zoloft, is not primarily made in the brain. It's true! In fact, 95 percent of serotonin production is made in – you guessed it – the gut. Therefore, it's quite logical that if the gut isn't healthy, a depressed person will have no hope for becoming totally well. Healing your gut is the first important step towards getting well.

Think of your body as a finely tuned engine, with food as fuel. If you aren't digesting food completely, you're not adequately fueling your body. The lack of proper fuel – or the inability to use it properly – will quite obviously lead to any number of problems.

Questions Answered by a CDSA

- Is your digestion impaired
- Do you have mal-absorption?
- Do you have any hidden yeast?
- Any bacterial infections?
- Is the intestinal flora balanced?
- Does your diet contain adequate fiber?
- Do you have the right balance of short chain fatty acids to protect intestinal mucosa?
- Is the bowel pH in balance?
- Is the immunity of the gut within the reference range?

The first step toward healing your gut is to ask your physician to order a *Comprehensive Digestive Stool Analysis* (CDSA). This non-invasive test will indicate any abnormalities in your gut by evaluating digestion and absorption, bacterial balance (both the good and the bad), metabolism, yeast overgrowth such as *Candida*, and immune status. It also looks at your ability to digest proteins, fats, starches and vegetables. There's a lot of valuable information about your body's GI tract hidden in a stool sample. The results of your test could be the hidden link to many of your problems.

Another gut-related problem you should be aware of that can lead to accelerate aging, or feelings of being tired, toxic, and unhealthy is called *hypochlorhydria* (low stomach acid). While it can be present at any age, it is estimated that by the time people reach their 50s, more than half of them may have hypochlorhydria, an inadequate production of hydrochloric acid (HCL) by the parietal cells in the stomach. HCL is necessary for proper digestion and nutrient absorption. It also kills many organisms and helps to keep the stomach sterile.

There are a host of issues associated with this condition, including:

- Indigestion
- Premature aging
- Food sensitivities
- Nutritional deficiency
- Bacterial overgrowth
- Yeast infections
- Weak hair, skin, and nails

In addition to the symptoms mentioned above, hypochlorhydria can lead to autoimmune and degenerative disease.

Hypochlorhydria, or the more severe achlorhydria (complete lack of hydrochloric acid), can result from several causes:

- Acid-blocking medications. (These are often used for digestive symptoms that are actually due to the lack of HCL!)
- Nutrient deficiencies, such as histidine (an amino acid), zinc, and vitamin B1. (Interestingly, the absorption of histidine and zinc are dependent upon the presence of adequate levels of HCL!)
- Stress, which can also impair HCL production.
- Alcohol consumption, which can damage the HCL-producing cells in the stomach.
- Consumption of food allergens, which have the same affect as does alcohol.
- Infection with the bacteria *helicobacter pylori*, which appears to be spread, at least in some instances, by flies. People with type O blood are more susceptible to infection with *helicobacter pylori*, as are those with a weakened immune system.

Because food isn't being properly digested and nutrients aren't absorbed, hypochlohydria is believed to contribute to the onset of many diseases, including:

- Asthma
- Adrenal fatigue
- Autoimmune diseases
- Celiac disease
- Chronic fatigue syndrome
- Chronic hepatitis
- Chronic thyroiditis
- Diabetes
- Eczema
- Food allergies
- Gallbladder disease
- Gastritis
- Graves disease
- Hives
- Hypoglycemia
- Lupus
- Multiple sclerosis (MS)
- Osteoporosis
- Pernicious anemia
- Psoriasis
- Rheumatoid arthritis
- Rosacea
- Thyrotoxicosis
- Ulcerative colitis
- Vitiligo

Supplementing with glutamine, deglycyrrhizinated licorice, duodenum concentrate, and vitamins A and B5 can help repair the acid-secreting cells. Until the body can begin secreting adequate levels of HCL on its own, supplemental HCL under the supervision of a physician should be used.

Detoxify your Body; Save your Life

Simply put: it is impossible to escape from the many miniscule amounts of chemicals that are part of our daily intake through ingestion, absorption and inhalation. On the other hand, our bodies were not designed to metabolize many of the new chemicals produced daily. Fortunately, natural healing methods can help correct a toxic state. By detoxifying,

you can pamper your body's cleansing organs, eject toxins that are causing you discomfort, and begin to restore the homeostasis (natural balance) your body craves.

In order to be truly well, you must have as much knowledge of the total world picture and the effect of everyday toxins, pollutants, chemicals and prescribed drugs as possible. We owe it to our children, our grandchildren, our spouses and our friends, as well as to ourselves, to learn from this information and shout it from the rooftops for the whole world to hear.

You have enormous control over your health. It is up to each of us to save future generations from unacceptable levels of toxic exposure and to insist that these levels are corrected. Until then, we must educate everyone we know on how to avoid toxins and how to help our bodies detoxify.

If you are serious about being healthy, *it is possible* to eradicate your body of free radicals and to reverse and/or slow the aging process. It can be done by changing your diet, cleansing the gut, detoxifying years of poison accumulation, improving your environment as a whole, and kick-starting your antioxidant nutrient defenses. The remaining chapters of this book will teach you how to do all of those things, and many more, to experience true health as it was meant to be.

CHAPTER 5: FASTING & THE RAW TRUTH

Fasting is an ancient and exceptionally powerful approach to healing many common disease conditions. It allows the body to rest, detoxify and heal.

During fasting the body moves into the same kind of detoxification cycle that it normally enters during sleep. Energy is used to cleanse the body and to heal, rather than to digest food. As a fast progresses, the body consumes everything that it can that is not essential to bodily functioning. This includes bacteria, viruses, fibroid tumors, waste products in the blood, any build up around the joints, and stored fat. Thus, it is considered to be one of the quickest, healthiest and most important ways to start the cleansing process.

During a water fast, only water is consumed. During a juice fast, a variety of fruit and vegetable juices are consumed.

Why Just Water?

People detoxify and heal more quickly with a water fast than with a juice fast. With a water fast, your digestive passageway and organs are able to rest completely, allowing all of your energy to be used to cleanse and repair damaged tissues.

With a juice fast, your body must use energy to digest nutrients, leaving less available energy for detoxification and healing.

Another significant difference is that more fat tissue is burned during a water fast, as your body must rely exclusively on fat reserves after the first one to three days of water fasting. Since your body stores the bulk of incoming toxins in your fat reserves, any stored toxins will be released into your circulation, to be eliminated through various channels like your urine and respiratory tract. This mechanism of detoxification also occurs with juice fasting, but at a slower pace.

All things considered, both types of fasting can be used effectively, depending on your circumstances and goals. If you need to make significant gains in your health in a short period of time, water fasting may be the best route. On the other hand, if you have a long history of taking extremely toxic drugs like certain chemotherapeutic agents, an intense period of detoxification through water fasting could cause damage to the kidneys, so juice fasting or a simple diet of organic vegetables and fruits may be the best first step to recovery.

Finally, a water fast is most effective when you are able to get plenty of rest – both physically and emotionally. If your circumstances don't allow this, juice fasting is a better choice.

Juice Fasting

Not surprisingly, a juice fast is often much easier for people than a water fast. It is one of the most refreshing and best choices for detoxification, as it provides a fantastically

abundant source of nutrients (including enzymes) and enough calories to help reduce the intensity of a detoxification.

Some juices work better for certain people or conditions. In general, diluted fresh juices of raw organic fruits and vegetables are best. Canned and frozen juices should be avoided. Some bottled juice may be used, but fresh squeezed is best, as long as it is used soon after squeezing.

Water and other liquids are what primarily cleanse your system by increasing waste elimination. Each juice has a certain nutritional composition and physiological actions. Think of fresh juices as natural vitamin pills with a very high assimilation percentage. A variety of juices can be used in a fast with different ones squeezed daily.

If you are planning to make your own juice, you should be aware that there are basically three types of juicers to choose from: compressor, rotary blade, and centrifuge. The best juicers are the

compressors, but they are very expensive. The rotary-blade juicers are good at squeezing the juice with minimum molecular irritation. The centrifuge juicers are also fine, but they waste juice left in the pulp.

Certain fruits and vegetables and their parts should not be juiced, such as the pits of peaches, apricots, cherries, and other fruits, apple seeds, citrus peels, carrot and rhubarb tops, tough skins (such as kiwi, pineapple, mangoes), and bananas and avocados. Also, diluted lemon juice (called the ‘Master Cleanser’) with or without a little honey can

Juice Chart	
Fruit Juice	Benefits
Apple	Liver, intestines
Cherry (black)	Colon, menstrual problems, gout
Citrus	CVD (cardiovascular disease), obesity, hemorrhoids, varicose veins
Grape	Colon, anemia
Lemon*	Liver, gallbladder, allergies, asthma, CVD, colds
Papaya	Stomach, indigestion, hemorrhoids, colitis
Pear	Gallbladder
Pineapple	Allergies, arthritis, inflammation, edema, hemorrhoids
Watermelon	Kidneys, edema
Vegetable Juice	Benefits
Beet greens	Gallbladder, liver, osteoporosis
Beets	Blood, liver, menstrual problems, arthritis
Carrots	Eyes, arthritis, osteoporosis
Cabbage	Colitis, ulcers
Celery	Kidneys, diabetes, osteoporosis
Comfrey	Intestines, hypertension, osteoporosis
Cucumber	Edema, diabetes
Garlic	Allergies, colds, hypertension, CVD, high fats, diabetes
Greens	CVD, skin, eczema, digestive problems, obesity, breath
Jerusalem artichokes	Diabetes
Parsley	Kidneys, edema, arthritis
Potatoes	Intestines, ulcer
Radish	Liver, high fats, obesity
Spinach	Anemia, eczema
Watercress	Anemia, colds
Wheat grass	Anemia, liver, intestines, breath

loosen mucus fast. So if you use it, you will need to cleanse the bowels regularly to prevent sickness. Most vegetable juices are milder than lemon juice.

Fast Expectations

The most dramatic changes that occur in the body during a fast usually take place during the first three days while the body switches from one fuel source to another. Normally, the primary form of energy the body uses is *glucose*, a type of sugar. Most of this is extracted from or converted from the food we eat. Throughout the day, the liver stores excess sugar in a special form called *glycogen* that it can call upon as energy levels fall between meals. There is enough of this sugar source for eight to twelve hours of energy. Usually it is completely exhausted within the first 24 hours of fasting.

Once the liver's stores of glycogen are gone, the body begins to shift over to what is called *ketosis* or *ketone production* – the use of fatty acids as fuel instead of glucose. (However, once the body shifts over to ketosis, this new fuel is also used to restore the body's glycogen reserves.) This shift generally begins on the second day of fasting and is completed by the third. In this interim period there is no glucose available and energy from fat conversion is insufficient but the body still needs fuel. So it accesses glucose from two sources. It first converts *glycerol*, available in the body's fat stores, to glucose, but this is still insufficient. So it catabolizes (breaks down), the amino acids in muscle tissue, using them in the liver for gluconeogenesis (the making of glucose).

By the third day, ketone production is sufficient to provide nearly all of the energy the body needs and the body's protein begins to be strongly conserved. The body still needs a tiny amount of glucose for some functions, however, so a very small amount of protein is catabolized.

From the third day on, the rate of the breakdown of fatty acids from adipose (fat) tissue continues to increase, hitting its peak on the tenth day. This seven day period, after the body has shifted completely over to ketosis, is where the maximum breakdown of fat tissue occurs. As part of protein conservation, the body also begins seeking out all non-body-protein sources of fuel: nonessential cellular masses such as fibroid tumors and degenerative tissues, bacteria, viruses, or any other compounds in the body that can be used for fuel. This is part of the reason that fasting produces the kind of health effects it does. Also, during this period of heightened ketosis, the body is in a state similar to sleep – a period of rest and detoxification. The focus is on the removal of toxins from the body and the healing and regeneration of damaged tissues and organs.

Fasting Facts

Fasting has been found to help a number of disease conditions, often permanently. There have been a number of intriguing clinical trials and studies treating numerous conditions with fasting. Here are some of those results:

- In a clinical trial, 174 people with **hypertension** ate only fruits and vegetables for two to three days and then participated in a water fast for ten to eleven days,

followed by six to seven days of eating only a low-fat, low-sodium vegan diet. Initial blood pressure in the participants was either in excess of 140 systolic or 90 diastolic or both. 90 percent of the participants achieved blood pressure less than 140/90 by the end of the trial. The higher their initial blood pressure, the more their readings dropped. The average drop for all participants was 37/13. Those with stage III hypertension (over 180/110) had an average reduction of 60/17. All those taking blood pressure medication prior to fast were able to discontinue it. Fasting has been shown in a number of trials like this to be one of the most effective methods for lowering blood pressure and normalizing cardiovascular function. Blood pressure tends to remain low in all those using fasting for cardiovascular disease once fasting is completed.

- A number of studies have found that fasting is beneficial in **epilepsy**, reducing the length, number, and severity of seizures.
- In a 1988 clinical trial of 88 people with acute **pancreatitis**, fasting was found to be better than any other medical intervention. Neither nasogastric suction nor cimetidine (which is sold under the brand name Tagamet®) were found to produce effects as beneficial as those received from fasting. Symptoms were relieved regardless of the cause/origin of the disease.
- A number of studies have found that fasting is effective for treating both osteoarthritis and rheumatoid **arthritis**. Fasting induces significant anti-inflammatory actions in the body. Researchers found decreased joint pain and stiffness, and a decreased need for medication.
- Clinical trials have found that people poisoned with **PCB** experienced dramatic relief after fasting for seven to ten days.
- Studies have found beneficial effects on the **immune system**, including: increased macrophage^{*} activity, increased cell-mediated immunity, decreased complement factors, decreased antigen-antibody complexes, increased immunoglobulin^{**} levels, increased neutrophil (a white blood cell) bactericidal activity, depressed lymphocyte blastogenesis, heightened monocyte killing and bactericidal function, and enhanced natural killer cell activity.
- Folklore about fasting increasing **lifespan** is garnering support in research. Regularly repeated four-day fasting has been found to increase the life span in normal and immunocompromised mice.
- Intermittent fasting (two days weekly) has shown an inhibitory effect on the development of liver **cancer** in rats.

* A macrophage is a large cell present in blood, lymph, and connective tissues that removes waste products, harmful microorganisms, and foreign material from the bloodstream.

** Immunoglobulin is a glycoprotein that acts like an antibody and is produced by white blood cells during an immune response.

Read this Before Fasting!

Although most people can fast, there are a few who, because of special conditions, should not, such as:

- People who are underweight, extremely emaciated, malnourished or in a state of starvation, or who are anorexic or bulimic.
- Pregnant women, nursing mothers, and children.
- Those with an extreme fear of fasting.
- Those with porphyria, a genetic metabolic defect that can cause malfunctions in the liver, bone marrow, and red blood cells and that produces a wide range of symptoms including seizures. Those with this deficiency who do fast can experience severe side effects, including hepatic steatosis (also called ‘fatty liver’), myocardial lipid accumulation, and severe hypoglycemia (abnormally low blood sugar).
- People should not fast before or after surgical procedures, unless instructed by a physician to do so as part of their procedure.

In addition, while most people can fast safely there are some that should do so only under the supervision of a health professional experienced in fasting for healing:

- Those with serious disease conditions (including but not limited to: diabetes, low blood sugar, kidney disease, liver disease, addictions, anemia, impaired immune function, gout, asthma, infection, nutritional deficiency, low blood pressure, ulcerative colitis, cancer, terminal illness, and/or epilepsy).
- People with a high toxic contamination level of DDT. DDT is stored by the body in a highly concentrated form in fat tissue. Fasting can release huge levels of DDT into the bloodstream as the fat stores are released. This can be quite dangerous.
- Fasting can reduce blood proteins and change the way prescription drugs react in the body. If you are currently taking prescription medication, don’t fast unless you are under the supervision of an expert.

Even short one- and two-day fasts require guidance. Before you fast, it is important to consult a qualified health professional and also receive a proper medical checkup. Be sure to let your doctor know that you are planning a fast. Also, get copies of your blood test and note all of the levels before you begin. A few weeks after the fast, you can do another blood test to compare to your pre-fast levels.

Juice Fasting ‘How Tos’

Before the Fast

Fasting is often difficult for those who need it the most, such as people who eat three large meals each day plus snacks, and people who eat whatever they want, whenever they

want. If you fall into either of these categories, you may want to start with subtle diet changes and prepare slowly for fasting.

A transition plan that can be used before even going on the one-day fast is the one-meal-a-day plan. The one daily meal is usually eaten around 3:00 p.m. Water, juices, and teas and even some fresh fruit or vegetable snacks can be eaten at other times. The one wholesome meal is not excessive or rich. It can be proteins and vegetables, such as fish and salad or steamed vegetables, or starch and vegetables, such as brown rice and mixed steamed greens, carrots, celery, and zucchini. People on this plan start to detox slowly, lose some weight, and after a few days feel pretty sound. The chance of any strong symptoms developing, as might occur with fasting, is minimal with this type of transition, and the actual fast, when begun, will be handled more easily.

Additional tips include:

- ✓ Eliminate alcohol, nicotine, caffeine, and sugar before the fast.
- ✓ 3-4 Days before the Fast: Consume only fruits and vegetables to nourish you while you slowly detoxify so that the actual fasting is less intense.
- ✓ 1-2 Days before the Fast: Avoid red meats and other animal foods, including milk products and eggs.
- ✓ 1 Day before the Fast: Curtail the use of nutritional supplements – they are not usually recommended during a fast.

During the Fast

Throughout the day, sip between 32 and 64 ounces of juice. Typical fruits and vegetables include celery, carrot, kale, cabbage, apple, pineapple, cranberry, spinach, beet, and greens. Most citrus fruits should be avoided, although a limited amount of lemon juice in water will add variety. Caffeine-free herbal tea is also great. Parsley and dandelion tea are effective for the liver and kidneys, and pau d'arco works well for blood purification.

Approximately six glasses of room temperature or warm filtered water are often recommended in addition to the juice.

For any cleansing period, it is essential to plan times to meditate, exercise, get fresh air and sunshine, clear your intestines, get massages, take baths, brush your skin, and more. With less shopping, food preparation, and eating time, you'll have more hours in the day to take care of yourselves in other ways!

A variation on the strict juice fast would be eating one meal a day in addition to the juice.

Breaking a Fast

Knowing when to stop fasting takes some inner guidance; if your energy falls for more than one day, your weight gets too low, your detox symptoms intensify, your tongue becomes coated, and/or your degree of hunger intensifies, you should come off the fast –

you probably need food. When in doubt, it is better to make the transition back to food. You can always fast again later.

It is important to make a gradual transition into a regular diet, rather than just going out to dinner after a fast. Breaking a fast must be planned and done slowly and carefully to prevent creating symptoms and sickness. Take several days (or half of your total fasting time) to move back to food. Hopefully your new diet is well-planned and more healthful.

However you make the transition, go slowly, chew well, and do not overeat or mix too many foods at a meal. Your digestion has been at rest – go slowly! Simple vegetable meals, salads, or soups can be used to start. Fruit should be eaten alone. Soaked prunes or figs are helpful. Well-cooked brown rice or millet is handled well by most people by the second day. From there, progress slowly through grains and vegetables, and then add some nuts, seeds, or legumes. Finally, you can add richer protein foods if you so desire.

Coming back into foods is a crucial time for learning individual responses and reactions. You may even wish to keep notes on information such as your energy level, intestinal function, sleep patterns, and food desires. If you respond poorly to a food, avoid it for a while (about a week) and then eat it alone to see how your body reacts.

Here is a post-fast day-by-day example menu plan:

- Day 1: Two pieces of fruit, divided into four servings total for the day.
- Day 2: Lightly steamed non-starchy vegetables, such as spinach.
- Day 3: Brown rice, fresh salad.
- Day 4: Add yogurt (unflavored and unsweetened) and eggs.
- Day 5: Add meat, chicken, fish, and/or tofu.
- Day 6: Add beans and other grains.
- Day 7: Other foods, as desired.

Raw Food Diet

Raw foods are considered the healing force in our diet because they contain active enzymes, which are broken down when foods are cooked. Many health enthusiasts consider a raw-food diet the most healing and most nutritious. Similar cleansing reactions that are felt and experienced on the juice fast will be comparable to what you can expect on the raw food diet, but the process is slower.

CHAPTER 6: FOOD POWER

There's an expression we've all heard since we were little: "you are what you eat."

It's probably no news to you that Mom was indeed right – what we eat *does* have a powerful impact on our bodies. A healthy diet is imperative if you want to restore your natural detoxifiers. A body fed predominately junk food doesn't have a hope of making enough detoxifiers, thus leaving you extremely vulnerable to the next chemical exposure.

For example, in a recent study, people were put on a diet of wholesome foods (all junk food was eliminated). Their diet contained:

- Two tablespoons of sesame butter
- Two slices of whole wheat toast
- Three small boxes of raisins and two tablespoons of almonds or pecans for snacks
- Two cups each of ginger tea, and green tea
- One tablespoon of wheat germ oil
- Six servings of fruit and vegetables (½ cup each)
- Beans
- Whole grains
- Three ounces of meat, fish, or poultry (for the entire week)
- Nonfat dairy
- Eggs



The following foods were not permitted: white flour, processed junk foods and whole milk products.

The results?

- Dietary fiber increased by 160% in the blood
- Vitamin E by 145%
- Vitamin C by 160%
- Carotene by a whopping 500%
- Cholesterol dropped by 13% (with the bad cholesterol, LDL, dropping by 16%)
- SOD (superoxide dismutase) dropped by 69%
- GSH-Px dropped by 35%

Dietary changes can result in drastic improvements in your health. Superoxide dismutase and glutathione peroxidase are the very enzymes the body uses to protect us from the damage of free radicals. Thus, with a mere whole foods diet and getting off the junk, you can dramatically slow down aging and disease.

The key with food: choose items with high free radical-fighting antioxidants, such as raw fruits and vegetables, organic products, un-roasted seeds and nuts, and soaked or sprouted grains and beans.

To put this in perspective, the average box of breakfast cereal is expensive and contains sugars, pesticides, additives, dyes and damaging trans fatty acids (also called hydrogenated oils). By simply replacing this one meal with something natural and much less expensive, such as soaked buckwheat* groats and sunflower seeds that are drained and dressed in the morning with fruit, yogurt or nuts, you are giving your body a highly nutritious meal that is also great ‘on the go’.

It’s also important to choose *non-GMO* (non-genetically modified organisms), as more and more corporations are adding genes to your foods from other species. In many cases, these genes are direct producers of toxins and they have not been adequately tested on humans.

Is Trans Fat Hiding in YOUR Food?

Trans fat is hidden in many products:

- Shortenings & margarine
- Fried foods (including fast food)
- Snack foods & chips & dips, cookies, pretzels and crackers)
- Candy bars
- Frozen (‘TV’) dinners
- Doughnuts
- Processed foods made with, or fried in, partially hydrogenated oils
- Salad dressings
- Pastries & baked goods
- Breakfast toaster treats
- Breakfast cereals
- Breads
- And even baby formula!

Small amounts are also found naturally in meat and dairy products.

Good vs. Bad Food Choices

A detoxification program needs to consist of the “right” foods. For instance, use only refined sea salt, spring water, fresh and preferably organic fruits and vegetables, and so on. The goal is to choose foods containing live enzymes and nutrients.

Foods without live enzymes and nutrients turn into acid, which then produces a mucous-like substance that clogs the digestive tract when consumed. Soon, a layer of plaque builds up, which causes a number of health problems.

*** Information on Buckwheat:**

Raw groats are hulled buckwheat. Don’t use whole buckwheat, which is almost blackish as the hull is still on it, and don’t use kasha, which is roasted buckwheat.

To make groat, put 2/3 cup of seed into a bowl; add 2-3 times as much cool water (60-70° F). Mix seeds to assure even water contact for all. Allow seeds to soak for 20-60 minutes. (Groats take up all the water they need quickly, that is why their soak time is so short.) Rinse thoroughly with cool (60-70° F) water.

While making healthy food choices, it's important to note that a number of foods and beverages can lead to serious problems.

Trans Fat – It's Time for an Oil Change!

When it comes to your health, what you *don't* eat is just as important as what you *do* eat. Processed foods, French fries, breakfast cereals, hydrogenated oils, and margarine all harbor a stealth poison, which is a major cause of illness – *trans fat*.


Dr. Walter Willett of the Harvard School of Public Health estimates that the number one cause of death and illness – cardiovascular disease – could be cut by more than half if trans fat were eliminated from the diet.

Trans fat is formed when liquid vegetable oils go through a chemical process called *hydrogenation*, in which hydrogen is added to make the oils more solid. Hydrogenated vegetable fats are used by food manufacturers because they enable foods to have a longer shelf-life, while also giving foods desirable taste, shape and texture.

But by adding taste and longevity to food, these manufacturers are, at the same time, *decreasing* our health and longevity. According to the American Heart Association, evidence suggests that consumption of trans fat raises LDL (bad) cholesterol levels and lowers HDL (good) cholesterol levels, causing the arteries to become clogged and increasing the risk of developing heart disease and stroke.

So dangerous are trans fats that the Food and Drug Administration (FDA) now requires trans fat content to be listed separately on the Nutrition Facts panel of all packaged foods. In order to avoid foods containing trans fatty acids, you must become an avid ingredients reader, and put back on the shelf any foods that contain this nasty ingredient.

The place to start, if you are serious about detoxifying your body back to the levels of chemicals that were found in your system during infancy, is with an oil change. In order to rid your body of its lifetime accumulation of chemicals, you must have healthy, detoxified membranes. The membranes will be useless to you if they are still plugged up with twisted trans fatty acid molecules that are a direct result from a lifetime of eating processed foods. More importantly, *folks who forget to give their bodies an oil change risk never getting well*, as many people simply don't have the chemistry to pull it off.



Nutrition Facts	
Serving Size 1 slice (47g)	
Servings Per Container 8	
Amount Per Serving	
Calories 160	Calories from Fat 90
% Daily Value*	
Total Fat 10g	15%
Saturated Fat 2.5g	11%
Trans Fat 2g	
Cholesterol 0mg	0%
Sodium 300mg	12%
Total Carbohydrate 15g	5%
Dietary Fiber less than 1g	3%
Sugars 1g	
Protein 3g	
Vitamin A 0%	

Aspartame – A Sweetener with Bitter Side Effects

Also known as Equal, Benevia, NutraTaste, and NutraSweet, *aspartame* is a popular (and very dangerous!) sugar substitute with no nutritional value. This zero-calorie, *artificial* sweetener, which is 180 times sweeter than sugar, is used in more than 6,000 products including beverages, breakfast cereals, desserts, candy, yogurt, chewing gum, and

pharmaceutical products (such as vitamins and cough drops), and also as a tabletop sweetener. After saccharin, it is the second most used artificial sweetener in the world. It is estimated that more than 8,000 *tons* of aspartame are consumed each year in the United States (Hazardous Substances Data Bank 2005) and it is consumed by more than 200 million people worldwide.

In 1985, amid a myriad of health concerns regarding not only the chemicals in our food supply, but also the materials used to package our foods, the Cesare Maltoni Cancer Research Center (CMCRC) of the European Ramazzini Foundation (ERF) set out to study various components of the ‘industrialized diet’ via a project of mega-experiments. Over the course of the project, 32 long-term bioassays have been performed. Studies have evaluated the carcinogenicity of 12 different products, including aspartame.

In their study, the sweetener was administered in feed to Sprague-Dawley rats for the life span of the animal. Here is what the researchers had to say:

*“Our study shows that APM [aspartame] is a multipotential carcinogenic compound whose carcinogenic effects are evident even at a daily dose of 20 mg/kg bw, much less than the current ADI [acceptable daily intake] for humans in Europe (40 mg/kg bw) and in the United States (50 mg/kg bw). The results of carcinogenicity bioassays in rodents are consistent predictors of human cancer risks (Huff 1999; Rall 1995; Tomatis et al. 1989). **The results of our study therefore call for an urgent reexamination of the present guidelines on the use and consumption of APM.** The decision to use experimental data to protect public health is important because the time span of widespread APM use is still too brief to have produced solid epidemiologic data. Moreover, it is unlikely that sufficient epidemiologic data will be available in the near future, given the difficulty of finding a control group that has not been exposed to this widely diffused compound.”*

What most people do not know is that aspartame is made of 50% phenylalanine, 40% aspartic acid, and 10% methanol. While all three ingredients are bad, the methanol leads the pack as a human health hazard. Also known as wood alcohol, methanol is a deadly poison that is slowly released into the small intestine when the methyl factors of aspartame come in contact with the enzyme chymotrypsin. While methanol poisoning can cause all types of physical problems, the most common is vision problems due to retinal damage. But that’s just the start. When free methanol enters the body, the absorption rate is accelerated and the methanol breaks down into formaldehyde (formic acid), which is deadly and a known carcinogen.

To give you an idea of how dangerous methanol is: the maximum a person should consume is 7.8 mgs daily. However, if you were to drink just one quart of something sweetened with aspartame, you would be consuming an overwhelming 56 mgs!

It is important to note that people with the genetic disease phenylketonuria (PKU), and pregnant women with hyperphenylalanine (high levels of phenylalanine in blood) do not effectively metabolize the amino acid phenylalanine. High levels of this amino acid in

body fluids can cause brain damage. Therefore, the FDA has ruled that all products containing aspartame must include a warning to phenylketonurics that the sweetener contains phenylalanine.

Making things even more complicated is that people consume aspartame without realizing that the symptoms they feel are associated with it, such as:

- Abdominal pain
- Anxiety
- Bloating
- Burning eyes
- Confusion
- Depression
- Diarrhea
- Fatigue
- Hair loss
- Headache
- Hives
- Infection
- Insomnia
- Joint pain
- Memory loss
- Nausea
- Panic Attack
- Phobias
- Rash
- Slurring
- Tremors
- Tinnitus
- Vertigo
- Vision Loss
- Weight Gain

If you have started to suffer from chronic illness, or you have noticed changes in your body (such as feeling tired, confused, or depressed), and if you are a chronic diet soda drinker, there could be a strong connection. By going through detoxification and quitting all products containing aspartame, you can stop the damage that is being done to your body and start to notice a vast improvement in your health within about two months.

Other Foods to Avoid

Sugar & Artificial Sweeteners – Refined sugar and mixtures containing refined sugar, including sucrose, dextrose, corn syrup, brown sugar, and turbinado.

Dairy Products – Milk, eggs, butter and other dairy products.

Wheat and products containing wheat.

Gluten – All gluten-containing grains, including barley, rye, spelt and kamut. Some people are sensitive to gluten, a protein fragment in these grains.

Caffeine – Coffee (both regular *and* decaffeinated), black tea, and other drinks containing caffeine. Green tea is a great substitute for regular coffee.

Other – Yeast, alcohol, food additives and preservatives, chocolate, and high-fat foods.

Healthy Choices

As you begin your journey down the path to wellness, be sure to earmark this page and use it as a guide to help you choose foods that will support, rather than sabotage, your detoxification efforts.

Fresh Fruit – No limitations. Fresh Fruits and vegetables are great sources of vitamin C and glutathione, which are essential for detox.

Fresh Vegetables – No limitations. Great detox foods include:

- Broccoli, cauliflower and broccoli sprouts (members of the brassica family support the liver's detoxification enzymes)
- Onions and garlic (rich in sulfur-containing compounds – sulfation is the main detox pathway for environmental chemicals, certain drugs, and food additives; and it helps with the elimination of heavy metals)
- Artichokes (contains caffeoylquinic acids, which increase the flow of bile and helps to digest fats)
- Beets (contains betaine, which promotes the regeneration of liver cells and the flow of bile, and also have a beneficial effect on fat metabolism)
- Red and green vegetables

Roasted Cauliflower Recipe

An example of a great cancer toxin fighting recipe is roasted cauliflower (Wong). It makes a delicious and satisfying snack, too.

2 bunches of cauliflower, cut into florets

¼ cup extra virgin olive oil

Sea salt to taste

Preheat the oven to 400° F.

Place the cauliflower, olive oil, and salt in a large bowl and toss.

Place in a large roasting pan in the oven for 30 minutes.

Rice – Brown or basmati rice, rice cakes, rice crackers and rice pasta.

Other Grains – Quinoa, amaranth, millet, and buckwheat.

Beans – Split yellow and green peas, and lentils are easiest to digest and require the least soaking time. Other acceptable legumes include kidney beans, pinto beans, mung beans, garbanzo beans (chickpeas) and adzuki beans. (Protein is required by the liver for detox. Beans, nuts, seeds, quinoa, and protein powder are good sources. Some people may choose to eat fish in moderation, as well.)

Nuts and Seeds – Unsalted nuts, seeds, and nut butters can be sprinkled over any meal. This includes flaxseed, pumpkin seeds, sesame seeds, sunflower seeds, almonds, cashews, and walnuts. Avoid peanuts.

Sample Detox Menu

Upon Rising

- ½ lemon squeezed into a glass of warm water
- 1 tablespoon of ground flaxseed in a glass of water

Breakfast

- Smoothie made with pear, rice milk and rice protein powder
- Supplements: vitamin C

Snacks

- Apple juice diluted with water
- Water
- Vegetable broth
- Celery sticks and hummus

Lunch

- Chunky soup made with vegetable stock and your choice of vegetables
- Steamed broccoli with sesame seeds and beets sprinkled with lemon juice on brown rice
- Apple sauce
- Supplements: multivitamin

Snacks

- Carrot sticks with hummus dip
- Water
- Supplements: milk thistle

Dinner

- Curried lentils on quinoa
- Salad with mixed greens, red peppers, artichokes and sprouts drizzled with a salad dressing of garlic, lemon juice and olive oil
- Vegetable broth

Before Bed

- 1 tablespoon of ground flaxseed in a glass of water

Oil – Extra-virgin olive oil

Condiments – Vegetable salt, sea salt, vinegar, naturally fermented soy sauce or tamari, all culinary herbs and spices, and limited amounts of honey.

Herbal Tea – Non-caffeinated teas, and green tea.

Other Beverages – Water, lemon water, 100% natural fruit and vegetable juices, and rice milk.

In addition to these healthy food choices, be sure to follow these **‘4 Daily Dietary Detox Musts’**:

- 1) Drink a minimum of eight glasses of warm or room temperature water per day. Water is essential to clear waste from the blood, and thirst is often mistaken for hunger.
- 2) Do not drink liquids around mealtime.
- 3) Dilute fruit juice with 50% water.
- 4) Take the time to chew food well, especially grains.

Customizing Your Detox Diet

Ayurveda, the ancient Hindu science of health and medicine, roughly translates to the ‘Science of Life’. This holistic approach focuses on healthy living during the entire span of life and its various phases. Besides dealing with health maintenance principles, Ayurveda has also developed a wide range of therapeutic measures to combat illness. These principles of positive health and therapeutic measures relate to the physical, mental, social and spiritual welfare of human beings. Thus, Ayurveda

is one of the oldest systems of healthcare to comprehensively deal with both the preventive and curative aspects of life today.

In the Ayurveda system there are five elements that comprise the basis of harmony:

1. Space
2. Air
3. Earth
4. Fire
5. Water

These five elements make up everything in the universe including the human body. They come together to create three different constitutional types, or doshas, known as: Vata (airy), Pitta (fiery), and Kapha (earthy).

Knowing your Ayurvedic type can help you learn which foods support your health and which foods imbalance you. Thus, you can further plan your diet in order to maximize the benefits of detoxifying. You can also begin to understand what foods, exercises, and lifestyle elements can support and nurture your health and which ones can cause imbalance.

If you are unsure or need further understanding of the elements, the most accurate way of learning your constitution is to visit an Ayurvedic doctor who will conduct a physical examination, including a pulse assessment. S/he will tell you what your type is and provide specific recommendations. (Note: Most people are a combination of types.)

Remember that the food lists in this chapter are the only ones that are allowed on the detox diet. Once you have found your Ayurvedic type, it is important to look at the list of foods that will fit into your detox sample plan given on the previous page.

The following general guidelines can help you get started. An Ayurvedic physician can help you further tailor your diet towards your individual constitutional type.

Vata-Balancing Foods

Fruit – Apricots, avocado, bananas, berries, dates, fresh figs, grapefruit, grapes, kiwi, lemons, mango, melon, oranges, papaya, peaches, pineapple, plums, strawberries. Sweet fruits are balancing. No dried fruits.

Vegetables – Artichoke, asparagus, beets, carrots, cucumber, green beans, leeks, mustard greens, okra, olives, onion, parsnip, potato, squash, watercress, zucchini. Cooked vegetables are most balancing. Avoid raw vegetables.

Grains – Amaranth, oats, rice, wheat, wild rice.

Legumes and Nuts – Adzuki beans, almonds, black lentils, brazil nuts, cashews, flax, hazelnuts, mung beans, peanuts, pecans, pine nuts, pistachios, pumpkin, red lentils, sesame, soy cheese, soy milk, sunflower, tofu, walnuts.

Meat – Beef (occasionally), chicken or turkey (white meat), duck, eggs, freshwater fish, seafood, shrimp.

Herbs, Spices, Condiments – Brown rice syrup, honey, maple syrup, molasses, sweeteners other than white sugar, allspice, almond extract, anise, basil, bay leaf, black pepper, caraway, cardamom, cayenne, chamomile, cinnamon, cloves, coriander, coconut, cumin, dill, fennel, garlic, ginger, mustard, nutmeg, onion, oregano, parsley, peppermint, poppy seeds, rosemary, sage, spearmint, spirulina, tamarind, tarragon, thyme, pickles, salt, seaweed, soy sauce, turmeric, vanilla.

Dairy – Buttermilk, cottage cheese, cow's milk, cheese, ghee, goat's milk, goat cheese, yogurt. All in moderation.

Pitta-Balancing Foods

Fruit – Apples, avocado, berries, dates, figs, grapes, mango, melon, pears, pineapple, plums, pomegranate, prunes, raisins, watermelon. Sweet fruits are balancing. Sour fruits are aggravating.

Vegetables – Artichoke, asparagus, bell pepper, broccoli, Brussels sprouts, cauliflower, cucumber, celery, green beans, leafy greens, mushrooms, okra, parsley, parsnip, peas, potatoes, squash, sprouts, and zucchini. Sweet and bitter vegetables are balancing.

Grains – Barley, cooked oats, basmati rice, white rice, wheat, wheat bran, and wheat granola are balancing. Amaranth, buckwheat, millet, oat granola, quinoa, brown rice and rye are aggravating.

Legumes and Nuts – All beans except black and red lentils are balancing, such as adzuki beans, chickpeas, kidney beans, soy beans, split peas and tofu. Coconut, psyllium, pumpkin and sunflower are balancing. Almonds, brazil nuts, cashews, chia, filberts, flax, macadamia nuts, peanuts, pecans, pine nuts, pistachios and sesame are aggravating.

Meat – Chicken white meat, turkey white meat, egg white, freshwater fish, shrimp (in moderation) are balancing. Beef, egg yolk, duck, lamb, pork, venison and seafood other than shrimp are imbalancing.

Herbs, Spices and Condiments – Maple syrup, fruit juice concentrate, barley syrup, brown rice syrup and other sweeteners other than except for honey and molasses, coriander, coconut, cumin, dill, fennel, ghee, mint, orange peel, peppermint, saffron, seaweed, spearmint, sprouts, turmeric, wintergreen are balancing. Chili peppers, garlic, ginger, horseradish, ketchup, mustard, lemon, mayonnaise, onions, pickles, salt, sesame seeds, soy sauce and tamari are aggravating.

Dairy – Butter (unsalted), cottage cheese, mild soft cheeses, ghee, cow's milk, goat's milk are balancing. Salted butter, buttermilk, hard cheese, feta cheese, sour cream and yogurt are aggravating.

Kapha-Balancing Foods

Fruit – Apples, apricots, berries, cherries, cranberries, dried figs, mango, peaches, pears, pomegranate, prunes, and raisins. Sweet fruits such as bananas and dates are aggravating, as are sour fruits such as lemons, sour oranges and grapefruit.

Vegetables - Asparagus, beets, beet greens, bell pepper, broccoli, Brussels sprouts, cabbage, carrots, cauliflower, celery, eggplant, garlic, green beans, horseradish, leafy greens, leeks, lettuce, mushrooms, okra, onions, parsley, peas, peppers, potatoes, spinach, sprouts, turnips, and watercress. Raw, pungent and bitter vegetables are balancing. Sweet, juicy vegetables are aggravating.

Grains – Amaranth, barley, buckwheat, corn, granola, millet, oats, oat bran, quinoa, basmati rice, rice, rice cakes, rye and wheat bran are balancing. Cooked oats, brown or white rice, and wheat are balancing.

Legumes and Nuts – Adzuki beans, black-eyed peas, chickpeas, flaxseeds, pumpkin seeds, sunflower seeds, lima beans, navy beans, pinto beans, red lentils, split peas, white beans are balancing. Almonds, brazil nuts, cashews, coconut, macadamia nuts, peanuts, pecans, pine nuts, pistachios, psyllium, sesame, black lentils, mung beans, kidney beans, lentils, soy beans, tempeh, walnuts and tofu are imbalancing.

Meat – Chicken dark meat, turkey dark meat, eggs are balancing. Beef, duck, freshwater fish, lamb, pork, seafood, shrimp, and venison are aggravating.

Herbs, Spices and Condiments – Allspice, anise, basil, black pepper, caraway, cardamom, cayenne, cinnamon, cloves, coriander, cumin, dill, fenugreek, garlic, ginger, horseradish, mint, mustard seeds, nutmeg, onion, oregano, paprika, parsley, peppermint, poppy seeds, rosemary, sage, spearmint, star anise, tarragon, thyme, turmeric, wintergreen are balancing.

Dairy – Ghee, goat's milk, diluted yogurt (1:4 yogurt:water) are balancing. Butter, cheese, buttermilk, cow's milk, ice cream, sour cream and yogurt are aggravating.

In conclusion – remember that you can live to eat or eat to live. Choose clean, healthy, natural fuels for your body. You'll be amazed by how more powerful, alert, calm and focused you will feel!

CHAPTER 7: THE ESSENTIALS (I.E. NUTRIENTS)

The liver requires certain nutrients for detox. In addition, increasing the flow of bile is an important part of detox because bile carries stored fat-soluble toxins away from the liver to be excreted in the stools.

Signs of poor bile flow include constipation aggravated by fiber supplements, flatulence, dry skin and hair, indigestion one to two hours after eating, indigestion after fatty foods and small, hard stools.

Here are suggestions for nutrients to beef up your detox support:

Multivitamin – Choose a high-potency multivitamin with selenium, molybdenum, and zinc.

Choline & Methionine – Known as lipotropic factors, the supplements choline and methionine help to regulate fat metabolism and increase bile flow.

Vitamin C – As a water-soluble vitamin, this nutrient is an antioxidant that supports detox. It may also help to decrease some of the side effects of detox, such as headache or nausea.

Milk Thistle – This herb has many positive effects on the liver. It is an antioxidant, assists in liver cell regeneration, and is used after exposure to chemical and industrial pollutants or adverse effects from excess alcohol or fat consumption.

Dandelion Root – Increases the flow of bile and can be taken as a tea.

CHAPTER 8: YOUR DETOXIFICATION GUIDE

Even though each cell within the body has its detoxification abilities, over half of the detoxification of the entire body actually occurs inside the gut. The intestinal lining houses not only half of the immune system for the entire body; it is also responsible for half of the detoxification system. Thus, you can't *completely* heal any disease until your gut is fully healthy.

Your Life-Saving Detox Cocktail

A simple yet powerful way to kick-start the abilities of your body to fight free radicals and detoxify from environmental chemicals contained within the air, food, and water is to make a 'detox cocktail' and to have it once or twice a day. It revs up both phases of detoxification.

The main way the body gets rid of any health-damaging, age-promoting chemical is through the gut. When a chemical first enters the body, nutrients such as vitamin C, which has been proven to enhance the activity of natural killer cells*, can prepare an attachment site on a chemical for *glutathione*. Glutathione and ascorbic acid are the best protectors against the infiltration of environmental chemicals. The body, in fact, makes a lot of glutathione that can hook onto this prepared site, thus making the toxin heavy and electrically charged. Through this process comes the facilitation of dragging the chemicals out of the bloodstream, into the liver, then the gallbladder and finally into the intestines where it is then passed and flushed down the toilet. Thus, vitamin C and glutathione are an important part of your lifesaving detox cocktail, which can be as simple as:

- 1 heaping teaspoon of vitamin C powder** (a pure ascorbic acid powder)
- 300-600 mg of Lipoic acid
- 400-800 mg of glutathione

Have this with one to two big glasses of water.

The above detox cocktail, much like any other type of detox cocktail, is designed to get rid off all types of environmental attacks, but, more importantly, it is meant to help your body dump stored heavy metals such as mercury. This will begin to occur once you don't have any other chemicals that require detoxification.

Yes, You Do Need an Enema

Enemas*** are an ancient form of hydrotherapy. They have been used for hundreds of years to mechanically cleanse the colon. Enemas and colonic irrigation used to be routine

* Natural killer cells are the the body's first line of defense in fighting off infection and cancer cells.

** **Note on Vitamin C:** If you develop diarrhea from a full teaspoon of vitamin C powder, cut back to a half or quarter teaspoon.

*** Enemas should only be performed under supervision by a holistic medical doctor, naturopathic physician or herbalist. Pregnant women, children, and people with gallstones should not try a coffee enema.

procedures in hospitals. It is important to not easily dismiss this part of the solution or to quickly close your mind to this step and run away from this very important phase of the process. Enemas are a quick way to remove toxins from the colon and the body in general

As mentioned previously, the main way your body gets rid of damaging toxins is through your gut. That is the normal process of colon cleansing. But, what if you are constipated or your gut is not entirely healthy? By cleansing the intestine, you reduce the workload put on your gut and the detoxification system, and ensure that nasty chemicals do not have the chance to become reabsorbed. Elimination of stools and urine is the body's primary method of getting rid of toxic substances. Especially important during detox, regular bowel movements decrease the likelihood that toxins will be reabsorbed into the body.

While there are many types of enemas used for many different conditions, the coffee enema has an important function in heavy metal detoxification and is very helpful for many types of conditions – from aborting flues, colds and infections; to healing everything from hangovers to cancer. Additionally, the procedure is inexpensive and can be done in the privacy of your own home.

A common contributor to ill health is the production and absorption of toxins within the small and large intestines. If food is not digested properly, sugars ferment and protein putrefies or rots. Both processes generate toxic chemicals which are then absorbed into the liver. The coffee enema enhances digestion by increasing bile flow and removes toxins in the large intestine so they will not be absorbed.

The phytonutrients found in coffee go directly from the colon veins to the liver. Once in the liver, they actually stimulate the synthesis of more glutathione along with the release of both detoxifying bile and glutathione. The detox enema will basically supercharge your detoxification system.

Coffee enemas were first popularized by Max Gerson, MD, author of *A Cancer Therapy - Results of 50 Cases*. Dr. Gerson pioneered nutritional therapy for cancer and other diseases with excellent results. His therapy combined coffee enemas (an integral part of the therapy) with a special diet, juices and other supplements. A coffee enema is believed to detoxify the liver by rapidly emptying the colon, enhancing liver detoxification, and increasing the flow of bile and the elimination of toxins through bile. Some people claim that it provides immediate relief to toxicity symptoms, such as congestion, indigestion, pain and headaches. Other benefits include:

- It dilutes portal blood and, subsequently, the bile.
- Theophylline and theobromine, major nutraceutical constituents of coffee, dilate, blood vessels and counter inflammation of the gut.
- The palmitates of coffee enhance glutathione S-transferase, which is responsible for the removal of many toxic free radicals from blood serum.

- The fluid of the enema itself stimulates the visceral nervous system, promoting peristalsis and the transit of diluted toxic bile from the duodenum out through the rectum.
- Because the stimulating enema is retained for up to fifteen minutes, and because all the blood in the body passes through the liver nearly every three minutes, coffee enemas represent a form of dialysis of blood across the gut wall.

Indeed, endoscopic studies confirm that coffee enemas do increase bile output. A patient was given a coffee enema and monitored. Within minutes of administering the enema, bile flow increased. Increased bile flow also alkalinizes the small intestine and promotes improved digestion. Coffee also acts as an astringent in the large intestine, helping to clean the colon walls.

To start with, it would be beneficial to use one enema per day to assist detoxification or to enhance liver activity.

Making a Coffee Enema

2-3 tablespoons of fresh ground organic coffee (light roast, non-instant and <i>not</i> decaffeinated)	Fine sieve
4 cups distilled or purified water	Enema bag with rubber or plastic tubing connected with a fountain syringe applicator
Glass or enamel pot (do not use teflon, aluminum or iron)	Olive oil

1. Combine coffee and water in a pot and bring to a boil. Boil for 3 minutes and then simmer for 15 minutes. (Or use a coffee maker.) You may make a larger quantity and use it for several enemas.
2. Allow the liquid to cool to body temperature (98.6° F). It should feel comfortable to the touch. One or two ice cubes may be added to speed the cooling process.
3. Strain the liquid through a very fine sieve or coffee filter paper into a clean enema bag. Screw on the top of the enema bag. The enema is now ready. Lubricate the nozzle with a small amount of olive oil – too much lubrication will cause the tip to fall out of the rectum, creating a mess!
4. Be sure the plastic hose is pushed into or fastened well onto the enema bag and the thin enema tip is attached to the other end. Remove any air from the enema tube by grasping, but do not closing, the clamp on the hose; placing the tip in the sink; and holding the enema bag up above the tip until the water begins to flow out. When this happens, close the clamp.
5. Hang the enema bag one and a half to two feet above the floor in the bathroom. (The higher the bag the faster the speed of intake into the colon.)
6. Place a large towel on the floor. Lie on your right side, with your legs curled into your abdomen; or lie on your back with a pillow under your buttocks.

7. Take deep breaths and slowly insert the nozzle several inches into the rectum. If it is inserted too quickly it may bend or become kinked inside the colon. A gentle rotating motion can be used to insert the tip. Move the enema bag higher or lower to adjust the flow of the solution into the colon.
8. When all of the liquid is inside, the bag will become flat. Close the clamp. You can leave the tube inserted, or remove it slowly.
9. Retain the solution for about 10 to 12 minutes. To encourage the solution to reach all parts of the colon, you can lie on your left side for 3 minutes, your back for 3 minutes and your right side for 3 minutes. You may hear or feel a squirting of fluid below your right rib cage. Many people believe that this sensation is due to the release of toxin-laden bile.
10. Empty the bowel carefully. The enema syringe should be sterilized after each use. It can be boiled or washed thoroughly with soap and water, then soaked in a solution of four drops of grapefruit seed extract and two cups of water.

14 Additional Health-Saving Detoxifiers

In addition to fasting, your daily detox cocktail and the detox enema, there are fourteen proven methods for helping your body to detoxify naturally every day. They include:

1. Exercise
2. Vegetarianism
3. Skin Cleansing
4. Hydrochloric Acid
5. DIM
6. Lipoic Acid
7. Glycine
8. N-Acetylcysteine
9. Green Tea
10. Kyolic
11. SeaVive
12. Lactobacillus & Bifidobacterium

Key Points about Enemas...

- If you start to feel sick, or become dizzy, nauseous or faint, stop the enema.
- You may not be able to hold all of the fluid in one enema. In this case, the procedure can be repeated two or more times in sequence, making sure to empty the bowel in between.
- If you have cramping, the solution is flowing too quickly. Pinch the enema tube to stop the flow and lower the bag. Do not continue until the cramps have subsided.
- If the solution is not flowing evenly, the enema tube may be bent or kinked. Slowly and gently pull it partly out and then insert it again several inches.
- The best time to take the enema is after a normal bowel movement.
- You may get a slight 'rush' from the caffeine. If the enema makes you jittery, reduce the amount of coffee. Coffee enemas taken in the evening may interfere with sleep.
- People with hemorrhoids may find the enema irritating.
- If the water is too hot or too cold, retaining the enema will be more difficult.
- The enema may lower your blood sugar – eat something just before or after taking the enema.

13. Herbs

14. Herbal Detox Patches

Get Moving!

An increasingly important factor in any detoxification regime is using a practical exercise program that involves low impact exercise such as walking or any light exercise that assists in flushing the lymphatic system. Through this flushing, the cells are then flooded with health-giving oxygen.

Go Vegetarian!

Another excellent way to gain great detoxification results is through changing to a light vegetarian diet. By changing your diet through having, for example, fruit for breakfast, a salad for lunch and a meal of cooked vegetables and raw nuts for dinner, you will gain great results in detoxifying your system. To obtain even better results, refrain from eating cooked starches, such as potatoes.

Clean Up Your Act

It is important to not only include your inner body in any detoxification regimen, but to also include your outer body. Why? The skin is the largest organ of the body, with the sweat glands performing as much detoxification as the kidneys. Thus, it is extremely important to support your skin when you are creating a detoxification plan.

The skin is also one of the best eliminative organs – heavy metals are actually released through the skin’s pores when we sweat. Saunas – especially high quality far infrared saunas – are great for removing toxins from the skin and regenerating your health and energy.

To ensure optimal skin care is maintained, it is important to not to use any skin care products that are made with chemicals, even though they may be cheaper. These chemicals can be absorbed into your circulatory system, adding even more toxins to your body. Additionally, if you are environmentally toxic, you will immediately see an improvement in your health by using natural soaps and shampoos.

Cleansing your skin is simple:

- ✓ First, bath using natural soap.
- ✓ Next, care for your skin with natural oils.

Detoxification Bath

Add the following ingredients to your bath once a week during your detoxification routine and then once a month for maintenance:

- ½ cup baking soda
- ½ cup epsom salts
- ½ cup sea salt

Soak in the bath for 15 to 20 minutes and then scrub the skin gently with soap on a natural fiber. Within a few minutes, the water will turn murky and “dirty”. The darkness that changes the water is the heavy metals that are coming out of your skin, such as aluminum and mercury.

- ✓ Be choosy about the fabrics you wear. Synthetic fibers do not absorb sweat (toxins) while other fibers, such as cotton, do.
- ✓ Finally, be sure to dry brush your skin to remove the outer layers of dead skin and to keep the pores open.
- ✓ You should also vigorously towel off after a shower or bath for the same reason. Towel roughly until your skin is slightly red, and make sure to change the towel often as it will contain the very toxins that you are trying remove.

The Low Down on Low Hydrochloric Acid

If you do not have a sufficient amount of hydrochloric acid secreted by your stomach, it becomes very difficult to ionize mineral supplements to absorb them properly. One way to determine if you may have a deficiency in hydrochloric acid is to check your ribs. There is a hydrochloric acid reflex present on the lowest rib approximately one inch lateral to the midline. If this area on the rib is tender to palpation, there is a strong likelihood that you are indeed deficient in hydrochloric acid, and would benefit from supplementation. A deficiency in hydrochloric acid is also more likely if you are fifty or older, or if you have food allergies.

One way to remedy insufficient hydrochloric acid is to take one to six capsules (or more) of Betaine hydrochloride with the first bite of every meal for proper digestive support. Betaine can usually be discontinued once the reflex point is no longer tender to deep palpation, or when you are sure you have a sufficient level of hydrochloric acid.

Supplementing with DIM Is a Bright Idea

About a decade ago, researchers at Johns Hopkins and many other centers around the world began studying foods that were rich in nutrients as potentially potent cures for cancer. In 1992, it was discovered that broccoli and other members of the Brassica, or cruciferous, family of vegetables (Brussels sprouts, cauliflower, kale, collard greens, watercress, turnips, horseradish, mizuna [a Japanese mustard green], cilantro and other similar vegetables) actually contain photochemicals that boost both phase I and II of the detoxification process.

A recent study of Seattle men showed that three or more servings of cruciferous vegetables a week can reduce prostate cancer risk almost by half. In addition, the active substances in cruciferous vegetables benefiting estrogen-related disorders have proven to be absorbable diindolylmethane (DIM) and its precursor indole-3-carbinol (13C). Supplemental use of these substances has a long history in cancer prevention research. With expanding applications in preventive nutrition, their use in women has actually been shown to reduce risk status for breast cancer, and cause the regression and disappearance of advanced cervical dysplasia. The supplemental use of DIM and 13C are under active investigation. These natural products are increasingly available as dietary supplements for healthier estrogen metabolism, perimenopause, men's health, and cancer risk-reduction.

Significant amounts of DIM are found in cruciferous plants following crushing. This is unlike 13C, which, due to its unstable nature, is only transiently present, primarily during digestion. 13C is the natural precursor to DIM, which is formed from a "condensation reaction" in which one 13C molecule combines with another. The resulting DIM is a "di-indole" or double molecule formed from two 13C molecules. Release of active DIM is facilitated by enzymes in the plant and is also due to the action of gastric acid on 13C released during digestion.

Pure forms of these natural substances derived from plant-based precursors are now available as dietary supplements, such as IndolPlex. To boost the detoxification of hormones and environmental hormone mimics or destroyers, the initial dose of this nonprescription *phytochemical* (natural plant-based supplement) is at two capsules twice a day.

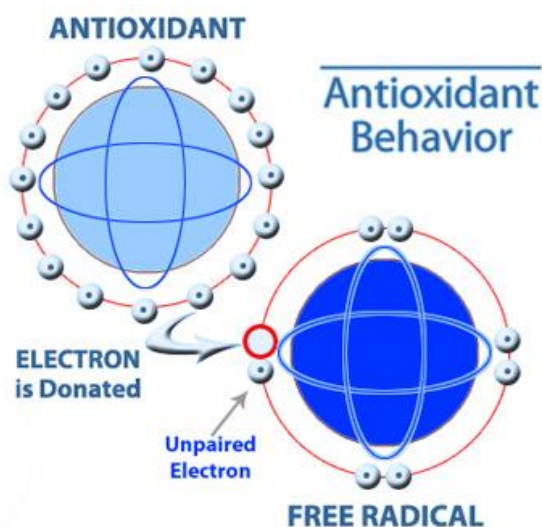
Lipoic Acid, the King of Antioxidants

When our bodies are inundated with chemicals, they do not simply form just one kind of free radical or reactive oxygen species, but, in fact, many types of free radicals. Fortunately, within our bodies there are many types of free radical quenchers, such as:

- Glutathione, which neutralizes the hydroxyl radical
- Taurine, which neutralizes the hypochlorite radical
- vitamin E, which neutralizes the peroxy radical
- beta carotene, which neutralizes the singlet oxygen radical
- glutathione peroxidase, which neutralizes the hydrogen peroxide radical

Lipoic acid, known as 'the universal antioxidant', has the advantage of being both water-soluble and fat-soluble, and is able to pass the blood-brain barrier. Other antioxidants, such as vitamin E and beta-carotene, have a highly specialized influence on specific types of free radical activity. Alpha lipoic acid, on the other hand, is effective over a *broad spectrum* of antioxidant actions. It has also been shown to increase the effectiveness of other antioxidants, including vitamins E and C.

Lipoic acid is also uniquely able to *recycle* antioxidants such as vitamin C and E back into their useful forms. To explain this further, once an antioxidant such as vitamin C gives up an electron in order to quench the wildly destructive activity of a free radical (such as that carcinogen trichloroethylene found in your morning coffee), that vitamin C molecule is rendered useless; therefore, it can no longer donate an electron to turn off further free radical damage. Lipoic acid, will restore this



electron to either vitamin C or E, thus restoring its usefulness. And it is able to do all of this without damaging its own chemistry. It's nature's perfect recycler!

Lipoic acid is also a neuroprotective agent due to its protective action on the nervous system and the brain. In fact, alpha lipoic acid has been used extensively in Germany for the treatment of diabetic neuropathy – a degenerative nerve condition in which the nerves leading to the arms and legs are damaged. It is also used to:

- Effectively treat glaucoma
- Control the glucose level in diabetics
- Prevent cataracts
- Repress HIV
- Promote anti-aging
- Protect against stroke and other brain disorders

Glycine...How Sweet It Is

By keeping your body from stockpiling the chemicals that are part of your daily life, the simple daily detox cocktail will help boost phase I of detoxification through the vitamin C powder and it will boost phase II by the use of glutathione. If you want to make your detox cocktail even more potent, however, you can simply add glycine.

Glycine itself is a very simple amino acid and is also one of the three ingredients which the body uses in making its own glutathione, which drags unwanted chemicals out of your blood so your body can be rid of them by passing urine or stool.

Glycine can also protect against cadmium toxicity, and protect the liver from damage. Once you become knowledgeable as to just how potent glycine is as a detoxifier, it will come as no surprise to you that it also protects the lungs against other various types of toxins. Glycine has some other endearing properties such as zapping cravings for sweets, and helping to calm hyperactive children and anxious adults with frazzled nerves. It has also been known to improve schizophrenia, epilepsy, depression, learning disabilities and memory, and to help thwart hypoglycemia and fatigue.

To add more Glycine, simply use one or two 500 mg capsules with every detox cocktail. If you need to calm or detoxify yourself even quicker, you can actually break the capsule open and drop the contents under your tongue; or you can dilute the powder in water. (Glycine has a sweet, pleasant taste.)

A Need for NAC (N-acetylcysteine)

N-acetylcysteine (NAC) is a precursor for your body to produce even more glutathione - a major anti-oxidant and detoxifier in the body.

As people age, they become susceptible to more diseases, and their glutathione levels go down. Conversely, the younger and healthier a person is, the better the glutathione levels.

As the glutathione levels go down, and as free radical levels rise, NAC, aside from boosting glutathione production, enhances your ability to kill invading infectious bugs and inhibits some viruses from growing in your body.

Replace Coffee with Green Tea

There are four primary polyphenols in green tea that are often collectively referred to as catechins. Powerful antioxidants, catechins have been shown in recent studies to fight viruses, slow aging, and have a beneficial effect on health. Clinical tests have shown that catechins destroy free radicals and have far-reaching positive effects on the entire body. Additionally, *epigallocatechin gallate* (EGCG), an antioxidant found in green tea, is at least 100 times more effective than vitamin C and 25 times more effective than vitamin E at protecting cells and DNA from damage believed to be linked to cancer, heart disease and other serious illnesses. This antioxidant has twice the benefits of resveratrol, found in red wine.

Green tea also:

- Reduces high blood pressure
- Lowers blood sugar
- Fights cancer
- Boosts the immune system because of its high concentrations of polyphenols and flavenoids
- Lowers cholesterol
- Promotes weight loss

Green tea catechins have been shown in the *Journal of the National Cancer Institute* to stop cancer cells from growing, have stopped cigarette-smokers from gene mutations that cause cancer, and have sopped up free radicals intentionally triggered by heavy metals, thus preventing them from going on to trigger disease.

Current research suggests a minimum of four to five cups of green tea daily for maximum benefit.

More than 280 Reasons to Reach for Kyolic

Kyolic (Wakunaga) is a unique proprietary formulation of aged garlic that boosts the body's ability to detoxify environmental chemicals. Kyolic is so potent that it also helps detoxify aflatoxins, the cancer-causing mycotoxins made by a certain fungus, *Aspergillus*.

Not only is Kyolic an antifungal and a great antibiotic for bad gut bugs, it even protects the gut against the damage produced by chemotherapy and radiation. If that weren't enough, it also helps to detoxify heavy metals and strengthens the killing power of white blood cells needed to protect the gut.

Kyolic has been documented in well over 280 research papers. The recommended dose is two to three capsules two to three times daily. For an even greater boost for gut health, use Kyo-Green, the companion chlorophyll product, to cleanse the gut of nasty toxins.

Revive with SeaVive!

When the digestive tract (also known as the intestinal mucosa) is inflamed, you can develop what is called a "leaky gut". This means that large food molecules, endotoxins and xenobiotics can pass straight into the bloodstream and be presented to the liver for detoxification. They should not be in the blood – so the immune system reacts to them, immune complexes are formed and these complexes travel to the liver where they are broken down. This places an enormous burden on the liver, stressing its detoxification capability. As a result, these substances may be partially processed and accumulate in the liver and fatty (adipose) tissue. It is now well established that inflammation of the intestines and a resultant increased permeability of the intestinal mucosal wall has a connection with conditions such as:

- Infection
- Food allergy
- Crohn's disease
- Coeliac disease
- Dermatological conditions
- Colitis
- Auto-immune diseases (such as rheumatoid arthritis, ankylosing spondylitis, Reiter's syndrome, eczema and other 'allergic' disorders)

It is important to be aware that your bowels may be harboring excessive populations of unfriendly microorganisms such as fungi (most commonly yeasts such as candida albicans), bacteria, viruses and parasites. To reduce bowel infections with unfriendly bacteria, parasites and yeasts:

- ✓ Avoid refined sugars and carbohydrates, as this is fuel for microorganisms especially yeasts
- ✓ Avoid preserved foods, especially meats (corned beef, ham, devon, bacon, sausage, smoked meats and fish, etc.)
- ✓ Avoid moldy or pickled foods such as old peanuts, green potatoes, dried fruits, and bitter and yeast extracts.
- ✓ Avoid long term use of antibiotic and steroid drugs.
- ✓ Eat plentiful fiber in the form of raw vegetables and fruits, whole grains, bran, ground seeds and legumes, and raw or lightly cooked sweet corn. This will have a "broom effect" and sweep the walls of the colon, removing layers of encrusted and hardened faeces, which harbor unfriendly microorganisms.

- ✓ Use natural antibiotics to kill intestinal yeasts, bacteria and parasites. Natural antibiotic foods, herbs and condiments include cabbage juice, cruciferous vegetables, raw garlic, onions, leeks, radishes, fenugreek, gingerroot, hot chili, lemon juice, turmeric, mustard and rosemary.

Once the bad bugs have been killed off, the next step is to heal the leaky gut. This can be completed through the use of a nonprescription, over-the-counter product called SeaVive. It contains the highest quality fish proteins which have been hydrolyzed into peptides which can be used to re-strengthen the sick intestinal cells, thereby regenerating all immune system functions that line the gut.

The most essential amino acid that can be used in healing the gut is the glutamine protein. SeaVive also provides another potent immune-booster to the bod: a *bovine colostrums* – the first milk of nursing cows. This milk has the highest level of protective antibodies possible.

Another extremely important ingredient in SeaVive is a factor derived from the cell wall of yeasts similar to those used in bread making: *beta glucan*. This factor is an extremely proficient immune system booster. It revs up macrophages (white blood cells), making them far more potent in their attack. Beta glucan is also known for boosting the body's production of *natural killer* (NK) cells in addition to boosting *tumor necrosis factor* (TNF) both of which are made by the body in order to kill off cancer cells and other unwanted invaders.

To regenerate and boost the detoxification and immune functions of the gut, take two to three capsules of SeaVive two to three times a day.

Good Bugs to the Rescue!

After healing the gut, it is important put back the 'good bugs'. *Lactobacillus* and *Bifidobacterium* will discourage the re-growth of bad bugs that you will be continually exposed to through foods. In addition, these *probiotics* have special properties that nourish and boost the detoxification and immune properties of the gut lining, acting like a sponge to sop up free radicals in the gut generated by Candida and other nasty organisms. They also prevent the free radicals from eating holes in the intestinal cell membranes, thereby destroying the gut lining and its functions (Lin).

There are many different products that are available that do a fine job in restoring these good bugs. Two recommendations include: Vital 10 and Cutlurelle.

Add Herbs

Herbs, although they can be taken at any point in time, are the best for detoxification purposes when they are taken within a diet, too. What doesn't make sense is to take herbs that are meant to cleanse the liver if the bowels are clogged with junk food or other refined food products, as the liver dumps all of its toxins into the bowels. It is important for you to realize that the detoxification diet is extremely vital and effective on its own,

but it can be reinforced and accelerated by using herbs that stimulate the eliminative organs.

Herbs come in many forms including teas, powders or extracts. Powders usually come in the form of capsules which make them easier to swallow and are best taken with a meal and digestive enzymes. Extracts can be used when specific herbs are needed but are best avoided if possible, as they could be extracted using alcohol, which you should avoid. The most popular method of taking herbs is through teas, which can be sipped throughout the day.

Here are just a few herbs to consider adding to your daily regimen:

Burdock: An excellent blood, skin and kidney purifier that helps to eliminate harmful acids. This herb also encourages sweating, which aids the release of toxins through the skin.

Black Walnut: This herb has antifungal and astringent properties. It helps cleanse the body of a variety of intestinal parasites and yeast.

Cascara Sagrada & Buckthorn: Strengthens tones and cleanses the colon.

Psyllium Hulls: A bulk fiber laxative. The husks act like a colon "broom" cleansing the intestines and absorbing toxins that adhere to the intestinal walls.

Uva Ursi & Buchu: Good herbs for detoxifying the kidneys

Herbal Detox Patches

The Japanese have been using herbal detox patches to combat fatigue, improve circulation, increase metabolism, improve sleep quality, absorb body toxins, and to stay healthy and more energetic.



The herbal detox patch is a reservoir patch designed to promote stimulation of the body's systems and detoxification using a minus ion and far-infrared reaction. Far infrared stimulates the reflexology points on the soles of the feet and, by doing so, affects the whole body's circulation, thus encouraging self-healing. It opens the pores allowing body waste, in the form of sweat, to be absorbed in the patch. At the same time, the process of osmosis allows the healing properties of the herbs to be absorbed.

These special patches help detoxify your body by pulling the toxins out through the soles of your feet. (The sole contains more than 60 reflexology points, which means they are very energetically active places on your body.)

Specific body systems can be targeted by placing patches on known reflex zones on the feet and hands. For example: The central-anterior area of the sole of the foot corresponds to and connects with the kidneys and liver. They can also be placed directly on specific body organs and systems to coordinate with the reflex zones.

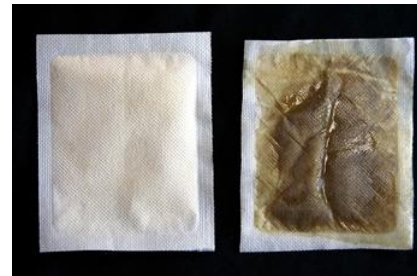
One highly effective patch product is the *Fu Zheng* foot pouch. An important part of the effectiveness of this pouch is the proprietary method used to bind the wood vinegar to the base, which allows it to retain 99% of the effectiveness. It is also designed to be effective for a longer period of time. This results in both a better capacity for emitting the far-infrared energy and a greater capacity to absorb what the body throws off.

The visual evidence after using the lymphatic patches is compelling. The progress is apparent when used over a few consecutive days. Multiple samples of pads have been sent to a highly accredited environmental laboratory. The results demonstrated absorption into the patch of nickel, arsenic and mercury, amongst other metals.

Directions for Use

Place three patches on the sole of each foot for the first one to two weeks of use. Afterwards, one patch can be placed on the most noticeable areas for an additional six to eight weeks; a maintenance dosage of two to three times a week can be followed thereafter.

When applied to the soles of the feet at bedtime, visual residue will be seen in the patches the next morning. Extended use can result in improved health from detoxification and stimulation of the body's systems. The image to the right shows 'before' and 'after' results overnight.



CHAPTER 9: THE POWER OF *CELLULAR* DETOXIFICATION

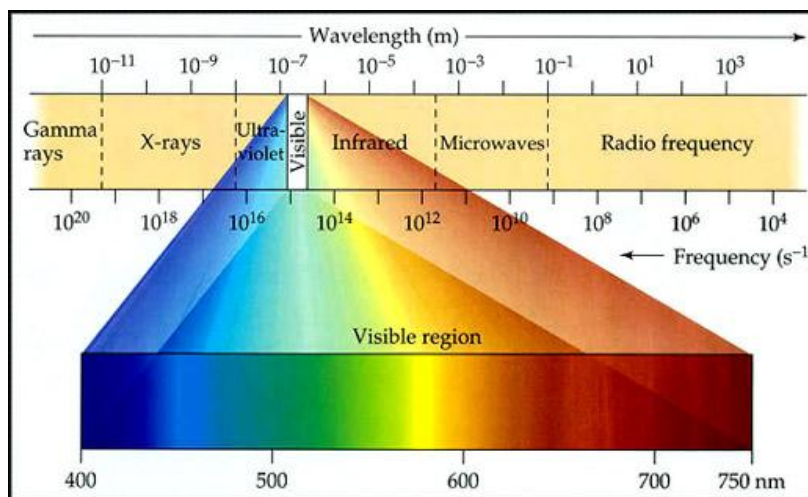
Have you ever been outside on a partly cloudy spring day of about 50° F and felt quite comfortable when the sun suddenly disappeared behind a cloud? Although the air temperature had not dropped, you felt chilled. Did you ever wonder why? It's because the cloud would not let the warming infrared rays of the sun – the principal source of radiant energy we experience daily – through to reach you.

Sunlight exposure makes us feel healthier owing to the natural energy contained in the segment of the spectrum that is far infrared rays. All life-forms on this planet – animals, plants and humans – need far infrared energy to be completely vital, tranquil, and healthy. In fact, if we don't receive enough far infrared light, we become ill and depressed. It surrounds us, penetrating deep into our joints, muscles and tissues, and detoxifying and purifying our cells – especially fat cells where our bodies store waste and harmful toxins.

We feel energetically rejuvenated and balanced from contact with far infrared waves. So it should come as no surprise that the human body needs a continuous supply of FIR, and that the intensity of each person's emission varies based on their health. The human body becomes less able to defend against attacks by ailments and diseases as health status declines. When we reach a terminal condition (death), the FIR we emit is close to zero.

What Exactly Is FIR?

Infrared (also known as *radiant heat*) was discovered by the English astronomer Sir William Herschel in 1800. Herschel found, by putting a thermometer at various points in a prismatic spectrum*, that ordinary light transmits some heat but that the effect is even more marked beyond the red end of the spectrum (far-infrared).



Everything in the universe emits and absorbs certain wave energies. If you look at a graphic representation of the electromagnetic spectrum (see illustration), you see that infrared waves are longer than those in the visible range, falling just below visible red

* The electromagnetic spectrum is the entire range of radiant energies, measured as waves or frequencies. Electromagnetic refers to the ability to exist as both particle (matter) and wave (energy).

light in the spectrum. Although the wavelengths of far-infrared are too long for our eyes to perceive, we experience the energy as gentle radiant heat.

Infrared light has a range of wavelengths, just as visible light has wavelengths that range from red light to violet. Near infrared light is closest in wavelength to visible light. These microscopic, shorter wavelengths are the size of cells; while the longer, far infrared wavelengths are about the size of a pinhead (NASA). The name infrared means 'below red' from the Latin *infra*, 'below'. (Red is the color of visible light of longest wavelength.)

The healthiest rays of the sun, infrared waves, are able to penetrate deeply into your skin, dissolving harmful substances that have accumulated in your body and revitalizing your cells.

The 'Light of Life'

The body's use of infrared rays is literally as old as our species, and the healing properties of far infrared rays have been recognized for centuries. Energy medicine dates back at least as far as the first Qi Gong masters and other ancient practitioners of healing touch

Did You Know?

A study at the National Yang-Ming Medical College showed that emitted infrared Qi, or Chi, has positive effects on human fibroblasts and also stimulated a significant increase in cell growth, DNA synthesis, and protein synthesis in cells.

therapies. These healers all had at least one thing in common – the ability to emit energy through their hands. And contemporary researchers have proven that the form of healing energy used is – you guessed it – in the infrared range. You see: far infrared consists of rays of similar wavelength as those which are emitted naturally by our bodies.

Soil, minerals, the bodies of animals, and the human body are all able to give off FIR rays under specific conditions (Dong). Our bodies radiate infrared energy out through the skin at 3-50 microns, with

most of the output at 9.4 microns. Our palms emit infrared energy at between 8-14 microns. And these FIR emissions are powerful healing agents – often referred to as *vital rays* because of their regenerative effects on the body.

It's no wonder that palm healing, which is a 3,000 year-old tradition in China, is based on the healing properties of these natural infrared rays. The Chinese Qi Gong masters mentioned previously have utilized their own body emissions of FIR rays to ease the ailments of others for ages. And the Yogis of India also use palm healing and recommend it especially for relieving eye strain.

But the curative powers of FIR are not just folk medicine – healing touch therapies have been scientifically proven to have beneficial effects on human health. In a study at the National Yang-Ming Medical College in Taipei, Taiwan, published in the *American Journal of Chinese Medicine* in 1991, researchers measured the energy that Qi Gong masters emit from their palms. The researchers employed electronic detection equipment but were also able to detect infrared energy by a rise in air temperature near the masters'

palms. The study showed that emitted infrared Qi, or Chi (pronounced ‘chee’ and essentially meaning energy in Traditional Chinese Medicine), has positive effects on human fibroblasts (the cells that rebuild connective tissue). The study also showed that infrared Chi stimulated a significant increase in cell growth, DNA synthesis, and protein synthesis in cells (*McGraw/Hill Encyclopedia of Science and Technology*).

Researchers in Japan have also performed studies of this infrared energy from the human palm, which they call Kikoh. And scholars have come to believe that the deep heat of the *Ondol* (the traditional warm floors of Korea) is good for health because the materials for the Ondol are stone and earth – both of which radiate far infrared waves when heated.

So power are the advantages of FIR rays that in Asian countries, where their therapeutic use first became common, the people have bestowed upon far infrared a unique name: the ‘*Light of Life*’.

Far Infrared – Far More than Skin Deep

Traditionally, we have received our daily dose of infrared from sunlight. Today we're seeing new technologies employing far-infrared energy in a variety of health and personal care products.

At the molecular level, FIR exerts strong rotational and vibration effects that are either biologically benign or, in certain processes, biologically beneficial. This healing ability stands in contrast to the damaging effects of short wavelengths, such as X-rays and gamma rays. The molecular effects of FIR are actually measurable through IR spectroscopy, a method of analyzing the emission and absorption of infrared light that reveals changes in atoms and molecules caused by IR energy. In healthcare, these effects are being harnessed to promote healing. Not surprisingly, when the efficacy of far infrared waves was recently studied by NASA, researchers found that among the infrared waves, the far infrared rays, which have a wavelength of 8-14 microns, are especially good for the human body.

But is the warming effect of FIR different from that of a hot water bottle or heating pad? Yes, the vibration-energy of far-infrared light is unlike that of the heat energy we use, for example, in cooking. Think of it as the difference between leaning over a pot of boiling water and standing outside in the sunlight. Steam from boiling water can burn the skin but it doesn't heat *internal* organs. Sunlight heats us in a profound way, however, because it contains penetrating far-infrared rays as well as the full range of energy in the electromagnetic spectrum.

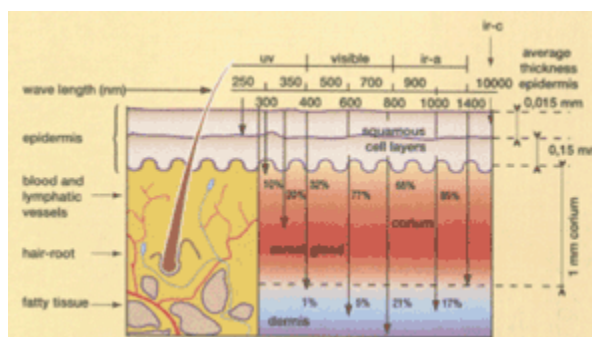
This phenomenon is called *Resonant absorption*. It occurs when the body reaches its fullest healing response to the external production of far infrared energy. Tissues needing repair electively absorb the rays while the remaining rays pass on harmlessly. The rays that are absorbed by the cells invigorate cellular activities and stimulate blood vessels allowing increased oxygen to reach the joints and extremities and carrying greater amounts of nutrients to the cells and to the skin. This warm, soothing, invisible light causes toxins to be dropped off into the blood stream. These toxins are then released out

of the body through sweating, as well as through feces and urine. Thus, one of the reasons FIR has beneficial results in a variety of illnesses is the ability of FIR waves to remove toxins which are often at the core of many health problems.

Here is another example: Let's say that you are exposed to a toxic gas such as carbon dioxide, or a potentially fatal heavy metal such as mercury. When this toxin meets up with a large water molecule in your body, it is encapsulated by clusters of water and trapped there. That is why toxins in our body appear in water as clumps or globules. Blood circulation becomes blocked and cellular energy impaired where these toxins accumulate. However, when a 7 to 14 micron FIR wave is applied to these large water molecules, the water begins to *vibrate*. This vibration reduces the ion bonds of the atoms which are holding together the molecules of water. This releases the encapsulated gases and other toxic materials back into the bloodstream where they are removed naturally by the body's normal detoxification processes.

Humans, like other living organisms, have evolved to have a unique absorption spectrum and to respond specifically to particular electromagnetic wavelengths (EMWs). German professor Fritz Hollwich, Ph.D., conducted a study in the 1970s showing that individuals who sat under cool-white fluorescent lighting had elevated levels of the stress hormones ACTH and cortisol. There was no such stress response in individuals who sat under full-spectrum lights that simulated sunlight. (As a result of studies such as this one, fluorescent lights are legally banned in German hospitals and medical facilities.) Dr. Hollwich's study is one of many that have shown that light has stimulatory and regulatory effects on biological systems.

Leon M. Silverstone, D.D.Sc., Ph.D., B.Ch.D., L.D.S., R.C.S., is a contemporary expert on many of the effects of EMWs. Much of his research, first in England and now in the US, has focused on developing non-invasive devices for *neuromodulation* of disorders such as clinical tremor and chronic pain. Dr. Silverstone explains that solar light energy is transmitted to the brain by nerve endings in the skin. "These energy impulses stimulate the hypothalamus," he says, "and this has an important controlling effect on the production of neurochemicals. Given that neurochemicals regulate processes such as blood pressure, immune response, sleep, mood, and so on, there is little doubt that we exacerbate a wide range of health problems by spending the greater part of our lives indoors under inadequate lighting conditions."



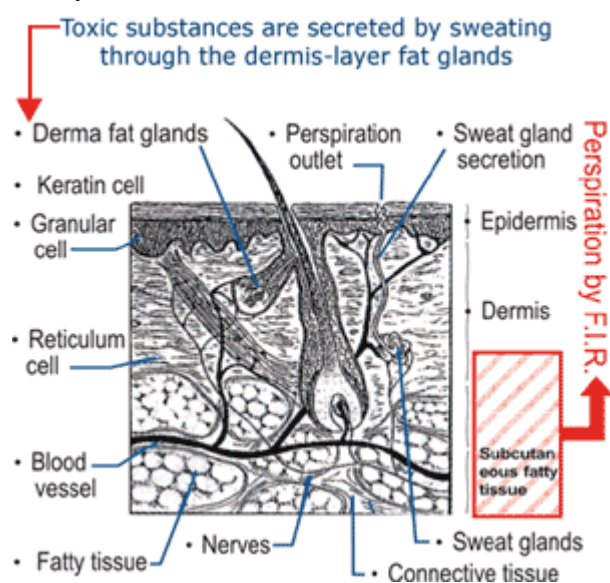
Far-infrared light penetrates beyond the skin level and is absorbed efficiently by cells below, whereas visible light is mostly bounced off the skin surface. Near-infrared is mostly absorbed at the skin level and raises the skin temperature. Far-infrared can penetrate up to 4 centimeters (about 1 ½ inches), exciting the vibration energy of molecules and resonating with cellular frequencies. We can't exactly perceive the deep

heating effects of FIR, though, because our body's ability to sense heat is mainly at the skin level. Nonetheless, the effects of FIR rays promote bioprocesses such as increased metabolism and blood circulation, and can raise core body temperature.

NASA certainly understood some of these effects when it developed FIR materials for radiant heat during space travel. Hospitals have also taken advantage of some of these properties to keep newborn babies warm using FIR incubators.

Sweat it Out!

While it may come as a surprise to you, your skin is actually an organ. In fact, it is the largest organ in the human body, containing millions of sweat glands. As such, it is a vital means of toxin elimination, acting as a 'third' kidney and eliminating up to 30% of body waste.



And sweat is the only proven method for getting the most damaging toxins out of the body, including pesticides. Perspiration is capable of performing 27% of our total detoxification ability.

Sweating eliminates a wide range of toxins efficiently – including the most dangerous toxins such as PCB – with no stress on your liver or kidneys, while cleansing the skin and the underlying connective tissues for baby-soft, healthy, glowing skin.

Heat stress detoxification is one of the most widely used and effective methods of detoxification, relaxation and rejuvenation. Dr. Cline points out that methods to induce sweating have been used for centuries to bring about improved health and relief from disease. "Over 2,000 years ago the famous Greek physician, Parmenides, stated 'give me a chance to create fever, and I will cure any disease.'"

This traditional wisdom has certainly stood the test of time. Individuals have long enjoyed the revitalizing effects of induced *hyperthermia* – the artificial elevation of body temperature. Using methods ranging from hot mineral baths and sweat lodges to saunas and steam baths, perspiration therapy has been used for thousands of years around the world. From the Roman baths to Native American sweat lodges, to the traditionally very hot bath (called *furo*) that the Japanese take every night for relaxation and health, to the Scandinavians saunas – nearly every culture has used heat therapy regularly for their health.

And now, science is finally taking a serious look at hyperthermic therapy as a means to detoxify. For example, sweat therapy has been used for many years by miners in Europe to prevent and treat occupational heavy metal poisoning. Studies are now demonstrating

that hyperthermic therapy can bring about significant detoxification from heavy metals including mercury. At long last, organizations such as the US Environmental Protection Agency are investigating hyperthermic therapy as a means to detoxify individuals who are ill from exposure to environmental poisons.

As mentioned previously, research by NASA indicates that within the broad infrared radiation spectrum, those in the 8-14 micron range are most effective in penetrating the human body. It then naturally follows that when FIR of this frequency range is used in therapeutic treatment, it will have the greatest beneficial effect on the patient. This is because it is the frequency best able to produce the warmth necessary to expand capillaries and stimulate blood circulation. In clinical protocols, these *hyperthermic* treatments have proven to be especially beneficial for ailments such as environmental toxicity and cancer, among many others, which are reviewed in detail in the next chapter. The waves penetrate into the body, allowing for deep heat and raising the body temperature from deep inside.

The Only Finnish Word in the English Dictionary

Saunas have been enjoyed as a way of life for over 2,000 years in Finland where they were invented. Pronounced ‘sow nah’, it is the only Finnish word in the English dictionary. It means ‘bath’ or the ‘bathhouse’. The Finns used sauna in their old religion as a ceremony for mental, spiritual and physical cleansing. This religion came with the Finns when they migrated from an area northwest of present day Tibet, between 5,000-3,000 BC, to their present location in Finland. And the Finns who settled in Delaware in 1638 first brought the sauna to America. In fact, one of the first saunas was built where the Philadelphia City Hall now stands.

With its many health benefits, it’s no wonder that today – some 350 years later – the sauna is more popular than ever in America. Medical studies have shown that frequent sauna bathing:

- helps reduce stress
- keeps your system toned
- and eliminates body toxins through perspiration

Unfortunately, traditional saunas have one big disadvantage – they are generally heated to well above 160° F – a damaging temperature to the eye lens and other delicate tissues. It makes no sense to push the body to unhealthy temperatures or to make someone who is already sick even more uncomfortable.

Fortunately, modern science is revolutionizing this age old healing method thanks to the development of the FIR sauna. One study done by American researchers showed that the sweat released by users of a FIR sauna (80-85% water) was different from the sweat released by users of a conventional sauna (75-95% water). The non-water portion of

Did You Know?

Far Infrared is up to seven times more effective at detoxifying heavy metals, cholesterol, nicotine, alcohol, ammonia, sulfuric acid and other environmental toxins, as conventional saunas.

sweat released in a FIR sauna was cholesterol, fat-soluble toxins, toxic heavy metals, sulphuric acid, sodium, ammonia and uric acid (Kyujo).

Additionally, far Infrared is thought to be *seven times more effective* at detoxifying heavy metals (mercury, aluminum, etc.), cholesterol, nicotine, alcohol, ammonia, sulfuric acid and other environmental toxins, as conventional heat or steam saunas.

Modern Science Improves Age-Old Healing Therapy

In the last forty years, scientific evidence has validated what ancient people knew thousands of years ago – that deep heat can enhance the beneficial effects of healing therapy. Unfortunately, traditional forms of heat therapy can be hazardous, uncomfortable, unhygienic, inefficient and ineffective. Thermal compressions and wraps are problematic and inconvenient – the heat is easily lost, and the temperature does not remain constant. And when it comes to traditional saunas, the people who need to detoxify the most are often very uncomfortable due to the high heat. (Traditional saunas create exposure to extremely high temperatures causing heat stress which can have detrimental effects on health, especially for people with a heart condition or high blood pressure.)

And, despite the higher temperature in conventional saunas and steam baths, less sweat is produced and fewer toxins are eliminated in the sweat. This is because the heat in a traditional sauna is transmitted by the air to the *surface* of the skin only. Traditional sauna relies on indirect means of heat: first on *convection* (air currents), and then on *conduction* (direct contact of hot air with the skin) to produce heating effects.

Scientists have looked for ways to develop more effective forms of thermal treatment that enable deep heat penetration. Research and development in the sixties, notably most extensively in Japan, introduced far infrared ray thermal technology. This revolutionized thermal technology to an effective, safe, natural, hygienic, and efficient approach to thermal treatment.

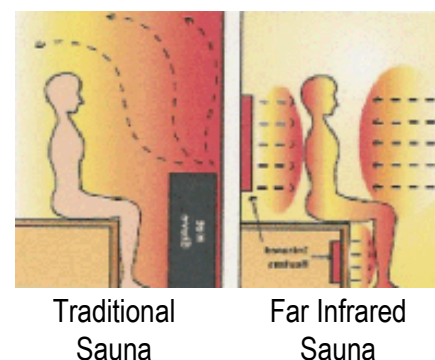
Dr. Tadashi Ishikawa, a member of the Research and Development Department of Fuji Medical, received a patent in 1965 for a zirconia ceramic infrared heater used in the first healing infrared thermal systems, but only medical practitioners in Japan were using infrared thermal systems until 1979, when they were finally released for public use. The technique has been further refined into infrared thermal systems that have been sold in the USA since 1981.

Far Infrared technology is generating outstanding results and is rapidly gaining worldwide recognition and acclaim. The benefits are truly phenomenal – far beyond just the initial feelings of well being and relaxation. To date, there have been over 700,000 infrared thermal systems sold in Asia for whole body treatments. An additional 30 million people have received infrared treatment in Asia, Europe, and Australia. And therapies and healthcare products based on far-infrared technologies are *finally* making their way into mainstream North America.

And yet, far infrared treatments are nothing new – over the last 25 years, extensive research has been carried out worldwide on the medical benefits of far infrared particularly from countries like Japan and China. The Japanese even have their own "Infrared Society" consisting of a team of highly qualified medical professionals, doctors, and therapists who are dedicated to FIR research. And there is no lack of data on this subject that has remained *a secret cure* for decades.

FIR Saunas – the Key to Cellular Healing

Now, far infrared technology has improved on the Finnish key to good health by increasing the beneficial effects of sauna and reducing the less tolerable attributes. So powerful is the energy emitted in FIR saunas that it may induce two or three times the sweat volume as compared to that of a conventional sauna, yet they operate at a much cooler air temperature range. FIR saunas liberate chemicals out of the body *at the cellular level* and enable many individuals who cannot tolerate a conventional sauna, steam room or sweat lodge to lounge comfortable in this improved sauna's health-enhancing environment. The lower heat range is also safer for those with cardiovascular risk factors or fragile health because lower temperatures don't dramatically elevate heart rate and blood pressure (Fletcher).



The infrared sauna offers several other advantages over the conventional sauna. Most conventional saunas employ a unit that heats the air through convection (air movement) and conduction (direct heat transfer). These saunas typically operate at between 180° F and 220° F. They are almost like sitting in an oven. They heat only the skin until it becomes too uncomfortable to sit any longer. These saunas do not allow the person to sit in them long enough to receive the health benefits associated with the infrared sauna.

In contrast, far infrared is radiant energy, which heats objects by direct resonant absorption, without heating the air in between. Far infrared saunas produce invisible infrared heat – the same type of heat that is produced by the sun and our bodies. Additionally, only 20 percent of the energy is used to heat the air, leaving the rest of it to penetrate deep into the body tissues providing healing where you need it the most to depurate stored toxins. Tests have shown that the energy output is tuned so closely to the body's own radiant energy that our bodies absorb as much as 93% of the far infrared waves that reach our skin! And FIR saunas leave you feeling invigorated, not depleted like conventional saunas.

The infrared heat in a FIR sauna is just like the heat from the sun – just like the heat our own bodies produce as they burn fuel to keep us warm. They warm the body in the same manner as natural sunlight. Traditional saunas raise the temperature of the air to a very high level within the chamber to warm the body. Some people have difficulty breathing in this extremely warm air. FIR saunas work differently. The result is deeper tissue penetration. In the FIR sauna, the body perspires and receives all of the healthy benefits

but avoids the harmful and extremely hot air of a traditional steam sauna. And instead of using energy to convert air to higher temperatures, as for example in a steam sauna, the energy is converted directly to heat the body. This is one of the reasons for the unprecedented benefits reported for the FIR Sauna system.

The temperature inside an infrared sauna is adjustable and averages a comfortable 100 °F to 140 °F. This allows a person to sweat faster and to tolerate a longer period of time inside of the sauna, allowing for therapeutic effects to occur. The volume of perspiration induced by FIR saunas is up to three times the volume obtained from a conventional sauna, yet the FIR sauna operates at a significantly cooler air temperature. Best of all - we can be exposed to far infrared heat for hours and it will never cause our skin to burn. It is safe and natural for all living things.

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CHAPTER 10: NEW TECHNIQUES IN ENERGY MEDICINE

In addition to fasting, proper supplementation and a healthy diet, FIR sauna is the final key to a newly detoxified you! And the best part of this natural healing technology is that it has absolutely no side effects when used properly.

Literally decades of poisons can be released with FIR sauna treatments. In fact, FIR sauna users have reported smelling chemicals that they were exposed to decades before! These nasty chemicals can be lodged in fat cells and organs for decades, causing problem after problem over the years. Most of us are totally unaware that exposure long ago is still impacting our health today.

How Does FIR Detoxify?

Far infrared is excellent for detox. Scientists in Japan report that in the FIR treatment of clogged capillary vessels, heat expands the capillaries and then initiates the start of a process to dissolve hidden toxins. Far infrared thereby promotes elimination of fats, chemicals and toxins from the blood, including:

- ✓ Poisons
- ✓ Heavy metals
- ✓ Toxic substances from food processing
- ✓ Lactic acid
- ✓ Free fatty acids
- ✓ Subcutaneous fat associated with aging
- ✓ Excess sodium associated with hypertension
- ✓ Uric acid which causes pain.

Furthermore, if sebaceous glands are activated, accumulated cosmetics in pores can be eliminated through the skin (sweat and oil glands) rather than by the kidneys.

"Today I am prescription free, thanks for my FIR sauna. I used to take Prozac, Flexeril for muscle spasms, amitriptyline for severe depression, and Vicodin ES for pain."

- B. Miller, Knoxville, TN

Many health practitioners now recognize far infrared saunas as one of the most effective methods of reducing the body's burden of chemicals and heavy metals with minimum strain on the body's organs. Resonant absorption of far infrared energy causes toxins to become soluble. They are then released from storage in the cells and connective tissue and they move into the lymph. Sweat is then produced from this toxic lymph fluid. This detoxification process bypasses the other routes of elimination: liver, kidneys, bowels, lungs and sinuses – a major advantage for those with stress in any of these areas.

The FIR process is ingeniously simple and effective, relying on heat to cleanse your system. You see, at 110° F, your body fat melts and becomes miscible with body fluids.

That means that you can actually excrete it through the glands of the skin, and pump it out through the lymph by exercising after a sauna warm-up. Best of all - you'll feel totally relaxed during your sauna as you read, listen to music, or meditate in a comfortable degree of warmth. Getting healthy has never felt so good!

By combining nutritional and FIR sauna detoxification treatments, you will enable your body to eliminate 10.1% to 65.9% of the fat-soluble-toxins your body has accumulated, including:

- Acid toxins
- Alcohol
- Aluminum
- Cadmium
- Environmental chemicals (77,000)
- Food additives (3,000)
- Food processing solvents, emulsifiers and preservatives (10,000)
- hexachlorobenzene (HCB): 30% reduction
- Lead
- Lipophilic toxins
- Mercury
- Nicotine
- Organic toxins
- PCBs (polychlorination-biphenyls): 16% to 63% (adipose-tissue) reduction
- Pesticides
- Pharmaceutical drugs
- Polybromination-biphenyls (PBBs): 58.7% reduction ($p < 0.05$) at a decade in the body-tissues, with no change at the 5 and 10-year-marks)
- Salt
- Sodium
- Street drugs

"I realized that my health had been stolen from me, and I am now taking it back, thanks to my FIR sauna!"

- D. Boonse, Tulsa, OK

In addition, the following are eliminated:

- Cellulite (fat, water and waste products trapped in the skin)
- Cholesterol

- Excessive fluids
- Subcutaneous fat

The Many Health-Giving Properties of FIR

Imagine relaxing in a FIR sauna for 20 to 30 minutes as you burn as many calories and perspire as much as you would if you ran 6 miles, yet without any strain on your joints or spine. Your cardiovascular system gets a workout as your nervous system relaxes. Your immune system gets stronger because hyperthermia acts as an artificial fever, helping to eliminate bacteria and other invaders. The profuse perspiration also cleanses and rejuvenates your skin and other tissues.

Calorie-Burning Reference Guide (Based on 30 minutes of effort)	
Bowling	120
Chopping Wood	265
Cycling (10mph)	225
Golfing (without a cart)	150
Jogging	300
Racquet Ball (vigorous)	510
Rowing (peak effort)	600
Running (marathon)	593
Swimming (crawl stroke)	300
Tennis (fast game)	265
Walking (3.5 mph)	150

In the 1980's, NASA researchers concluded that far infrared helped astronauts to maintain cardiovascular conditioning during long space flights. Back on earth, chronically ill patients who cannot get meaningful exercise have benefited tremendously from far infrared saunas. Heart rate, cardiac output, and metabolic rate all increase as the body cools itself by diverting blood from internal organs out to the extremities and skin.

Far infrared sauna technology is effective for burning calories, controlling weight, and even helping remove cellulite. Medical practitioners make use of infrared radiant heat to treat sprains, strains, bursitis, peripheral vascular diseases,

arthritis, and muscle pain (*Encyclopaedia of Science and Technology*). The increased blood flow also helps aching muscles to recover faster because the metabolic and toxic waste products are purged faster from your system and through the skin when perspiring. With the extra nutrients reaching your skin, the sought-after 'glow' is obtained while promoting healthy tone and texture, and helping the body to ward off invading organisms.

Conditions Benefited by FIR Treatment

It is clear that increased wellbeing and better health can be enjoyed by regular use of the FIR sauna. On the following pages, you will find information about the benefits of FIR treatment, real-life stories about health improvements, and supporting research from prominent international studies.

- **Acne:** Three or four infrared treatments may open pores that have not been functioning in years, forcing out clogging cosmetics and loosening dead outer skin. The sauna is thus a boon to teenage skin, clearing acne and blackheads.

- **Allergies**
- **Anti-aging:** Studies suggest that far infrared light stimulates the production of cell tissue and rapidly promotes the regeneration of skin and blood tissue (Ghaly).
- **Anxiety**
- **Arteries:** When the normally smooth, firm lining of the arteries becomes thickened and roughened by deposits of fat, fibrin, calcium and cellular debris, it lessens the arteries' ability to expand and contract, and slows the blood movement through these narrowed channels, making it easier for blood clots to form, blocking the arteries and stopping blood flow completely. FIR is able to neutralize blood toxicity and smooth the walls of arteries, capillaries and veins.
- **Arthritis:** Substantially relieved or improved.

Real Life Reports:

*"I'm pain-free! I've seen how arthritis can rob me of a normal life, and I've felt the pain and stiffness that goes with it. After using a FIR sauna, I'm a better and healthier person. **My range of motion is greatly improved and I can move my neck without pain.** Thanks to my FIR sauna, I'm beating the odds."*

- C. Alcantaras, Paris, Texas

*"A lady came in [to my gym] with very bad osteoarthritis; one hand was nearly closed. So, I told her to go into the sauna and hold her hand right up to the heater. **When she came out, she was opening and closing her hand completely and was in complete awe. She told me that it was the first time in five years that she could actually make a fist.** I was very impressed to say the least – this was proof positive that infrared heat really penetrates and does a good job of loosening up joints and increasing elasticity."*

- D. Collins, Dayton, OH

- **Autonomic nervous system:** Balance
- **Blood-pressure:** Regulation (normalization)
High Blood Pressure: Reported safe in 40°C to 50°C range. Regular use helps to lower hypertension.
Low Blood Pressure: Regular FIR sauna use assists the body to raise blood pressure to normal levels.

Studies:

German medical researchers reported in *Dermatol Monatsschr* in 1989 that a single whole-body session of infrared-induced hyperthermia lasting over one hour had only beneficial effects on subjects with stage I-II essential hypertension. Each subject experienced a rise in core body temperature to a maximum level of 101.3°F. **All of the subjects in one experiment had significant decrease in arterial, venous and mean blood pressure that lasted for at least 24 hours and was linked,**

according to the researchers, to a persistent peripheral dilation effect.
An improvement in plasma viscosity was also noted.

Another group of similar hypertension patients was also studied under the same conditions of infrared-induced hyperthermia, with an eye toward more carefully evaluating the circulatory system effects induced by this type of whole-body heating. **During each infrared session, there was a significant decrease of blood pressure**, cardiac ejection resistance, and total peripheral resistance in every subject. There was also a significant increase during each session of the subjects' heart rates, stroke volumes, cardiac outputs and ejection fractions. The researchers cite these last three effects as evidences that the stimulation of the heart during infrared-induced hyperthermia is well compensated, while the prior list of effects clearly shows the microcirculatory changes that lead to the desired result of lowering blood pressure.

Case:

A case of a diabetic is reported with **a systolic decrease from 180 to 125** and a concurrent weight loss of ten pounds after infrared treatment.

Real Life Report:

*"I have had problems with my high blood pressure for over 21 years. When I went to the doctor [after using my FIR sauna] and he checked my pressure, he said to me, "You're going to live a long time; **you have the pressure of a child.**" He did not rewrite my prescription, for I no longer needed it."*

- L. Anderson, Colorado Springs, CO

- **Body odor:** By improving the function of the skin, infrared treatments may eliminate the cause of offensive body odor. It definitely reduces body odor induced by occupational exposure to odorous chemicals.
- **Brain contusion:** Accelerated healing
- **Brain damage:** Accelerated repair in brain contusions (Yamajaki)
- **Burns:** Relieves pain and decreases healing time, with less scarring (Yamajaki). Infrared therapy is used routinely in burn units throughout Asia.
- **Bursitis:** Eliminated
- **Cancer:** Cancerous cells cannot exist if blood circulation is smooth and continuous. A cancerous cell has to stop moving to proliferate. The cancerous cell's positioning is directly related to the capillaries (at the end of the blood vessels). The cancer cell tries to position itself by going through the capillary. Good blood circulation of the capillaries – without functional disorder – leaves no way for the cancerous cell to settle down and position itself. The cell will then be killed by the immunocyte (the immunity cell).

Study:

In a research laboratory at Meiji University in Japan, researchers evaluated the possible therapeutic benefits of far-infrared rays on breast cancer.

They examined combined effects of the chronic exposure to FIR at ambient temperature (26.5-27.5°C) and the whole-body hyperthermia (WBH) induced by FIR (35-41°C) on the growth of spontaneous mammary tumors in mice. **Whole-body hyperthermia with FIR strongly inhibited tumor growth without deleterious side-effects.** This WBH regimen may serve as a useful animal model for long-term studies of a noninvasive treatment of breast cancer (Udagawa, Nagasawa, Kiyokawa).

Case:

The Klinik St. George Hospital in Bad Aibling, Germany treats 2500 German patients and 2500 foreign patients each year. Their cancer treatment regime is a week of detoxification and strengthening of the immune system with diet and nutritional supplements, followed by two weeks of localized infrared hypothermia treatment and low dose chemotherapy. This regime has produced great success in treating cancers. The cancerous cell has a weakness: heat. It will die if the temperature goes above 107.6°F. Far infrared treatment raises body temperature to 107.6°F, penetrates through the body, and kills existing cancerous cells. Far infrared heat enables capillaries to expand, thus enabling good circulation and combating the potential existence of cancer cells. Far **infrared thermal therapy can alleviate pain and prolong life when conventional cancer treatment fails.**

- **Cardiac:** Owing to the deep penetration of infrared rays, there is a heating effect deep in the muscular tissues and the internal organs. This beneficial heart stress leads to a sought-after cardiovascular training and conditioning effect. Medical researches confirm the use of a sauna provides cardiovascular conditioning as the body works to cool itself and involves substantial increases in heart rate, cardiac output and metabolic rate.

Studies:

Far Infrared strengthens the cardiovascular system by causing heart rate and cardiac output to increase, and diastolic blood pressure to decrease. Extensive research by NASA in the early 1980's led to the conclusion that **far infrared stimulation of cardiovascular function would be the ideal way to maintain cardiovascular conditioning** in American astronauts during long space flights.

In a study by the First Department of Internal Medicine at Kagoshima University in Japan, researchers sought to determine whether sauna therapy, a thermal vasodilation therapy, improves endothelial function in patients with coronary risk factors such as hypercholesterolemia, hypertension, diabetes mellitus and smoking. Twenty-five men with at least one coronary risk factor (risk group: 38 +/- 7 years) and ten healthy men without coronary risk factors (control group: 35 +/- 8 years) were enrolled. Patients in the risk group were treated with a 60°C far infrared-ray sauna for 15 minutes and then kept in a bed covered with blankets for 30 minutes once a day for two weeks. To assess endothelial function,

brachial artery diameter was measured at rest, during reactive hyperemia, again at rest and after sublingual nitroglycerin administration using high-resolution ultrasound. Researches concluded that **repeated sauna treatment improves impaired vascular endothelial function** in the setting of coronary risk factors, suggesting a therapeutic role for sauna treatment in patients with risk factors for atherosclerosis (Imamura et al).

Regular use of a sauna may impact a similar stress on the cardiovascular system, and **may be as effective a means of cardiovascular conditioning and burning of calories as regular exercise** (JAMA).

- **Carpal tunnel syndrome:** Responds well
Study:

Dr. Wayne Good, the plant physician at General Motors Flint Assembly, has treated close to 600 patients (with FIR) and achieved positive results in over 70% of patients.

- **Cerebral hemorrhages:** Recovery is both sped up and significantly enhanced (Yamajaki)
- **Chronic middle-ear inflammation or infection** (Nakamura)
- **Circulation:** Blood flow is increased by inducing expansion of capillaries promoting quick muscle recovery (*Therapeutic Heat & Cold*). In Asia it is believed that far infrared waves help improve blood circulation and recovery from fatigue. Heating of muscles produces an increased blood flow level similar to that seen during exercise. Heating of one area of the body produces reflex-modulated vasodilatation in distant-body areas, even in the absence of a change in core body temperature. Temperature elevation produces an increase in blood flow and dilation directly in capillaries, arterioles, and venous, probably through direct action on their smooth muscles. Blood flow during whole-body hypothermia is reported to rise from a normal 5-7 quarts per minute to as much as 13 quarts per minute.
- **Chemical sensitivities**
- **Chronic fatigue syndrome**

Study:

At the Respiratory and Stress Care Center at Kagoshima University Hospital in Japan, researchers described the successful treatment of two patients with chronic fatigue syndrome (CFS) using repeated thermal therapy. **METHODS:** Two patients with CFS underwent treatment with prednisolone (PSL), with no satisfactory effect. They were subjected to thermal therapy that consisted of a far-infrared sauna at 60° C and post-sauna warming. The therapy was performed once a day, for a total of 35 sessions. After discharge, these subjects continued the therapy once or twice a week on an outpatient basis for one year. **RESULTS: Symptoms such as fatigue, pain, sleep disturbance, and low-grade fever were dramatically improved after 15 to 25 sessions of thermal therapy.** Although PSL administration was discontinued, the subjects showed no relapse or exacerbation of symptoms during the first year after discharge.

The patients became socially rehabilitated 6 months after discharge. These results suggest that repeated thermal therapy might be a promising method for the treatment of CFS (Masuda et al).

- **Colds and flus:** Infrared therapy in both Japan and China has proven to be outstanding for asthma; bronchitis; colds; flu; sinusitis; and congestion, as it clears inflammation, swelling and mucous clogged passages (Kyo).
- **Concentration**
- **Congestive Heart Failure (CHF)**

Studies:

In Japan, far infrared sauna was not only tolerated very well with no adverse reactions, it also got rid of so many of the underlying chemical triggers of CHF that **these end-stage heart patients actually reversed and improved and were able to discard some of their medications** (Tei, Kihar, Imamura)!

In studies published in *Circulation* and the *Journal of Cardiology*, physicians at the Mayo Clinic used the worst classification of congestive heart failure patients to demonstrate the safety and therapeutic value of the far infrared sauna. The study used patients who were end-stage heart patients who were maximally medicated and unable to walk across the room without shortness of breath, and unable to tolerate warm baths, much less tolerate a sauna. There were no further therapeutic options available. But, not only did these serious end-stage heart patients all tolerate the FIR sauna, they had no side effects from it. Furthermore, in getting rid of chemicals that were the underlying causes of their diseases, they improved their heart function. **The FIR sauna literally saved their lives.** During the sauna, no patients had dyspnea (shortness of breath), angina (chest pain) or arrhythmia (irregular heartbeat), nor did they complained of excess heat. Diastolic blood pressure (the low number) decreased but systolic pressure (the top number) was unchanged. This means they did not get hypertensive, and, in fact, the work of the heart was lessened. Furthermore the stroke volume and ejection fraction increased, meaning the heart beat more efficiently with less effort. In a regular sauna, the arrhythmias increased 20%, whereas in the FIR sauna, arrhythmias decreased or disappeared entirely. Other cardiovascular improvements unique to the FIR sauna included decreased pulmonary arterial and capillary wedge pressure as well as right atrial pressure, and in some cases disappearance of mitral regurgitation. The ECHO (echocardiogram) showed smaller left ventricular and left atrial dimensions, and epinephrine levels did not change, but norepinephrine increased. And FIR actually increased the core and intrapulmonary arterial temperature to 38.2 +/- 0.4 C (normal body temperature is 37° C).

- **Dandruff:** Increased blood flow through the scalp (Nakamura)

- **Depression**

Study:

At the Psychosomatic Medicine, Respiratory and Stress Care center at the Kagoshima University Hospital in Japan researchers observed that repeated thermal therapy improved appetite loss and general well-being in patients with chronic heart failure. The purpose of this study is to clarify the effects of repeated thermal therapy in mildly depressed patients with appetite loss and subjective complaints. 28 mildly depressed inpatients with general fatigue, appetite loss, and somatic and mental complaints were randomly assigned to thermal therapy or non-thermal therapy. Patients in the thermal therapy group were treated with 60° C far-infrared sauna for 15 minutes and were then kept on bed rest with a blanket for 30 minutes once a day, 5 days a week for a total of 20 sessions in 4 weeks. Four weeks after admission, somatic complaints, hunger, and relaxation scores significantly improved and mental complaints slightly improved in the thermal therapy group compared with the non-thermal therapy group. Furthermore, the plasma ghrelin concentrations and daily caloric intake in the thermal therapy group significantly increased compared with the non-thermal. These findings suggest that **repeated thermal therapy may be useful for mildly depressed patients with appetite loss and subjective complaints** (Masuda, Nakazato, Kihara, Minagoe & Tei).

- **Diarrhea:** Over 90% success in Chinese studies

- **Digestive disorders**

Real Life Report:

“For as long as I can remember, I have suffered from severe stomach problems; my stomach hurt on a daily basis. I would get extremely bloated to the point of my clothes not fitting. Every doctor would give me a new name for this illness. The diagnoses ranged from spastic colon to hiatal hernia to irritable bowl syndrome. Then my wife purchased a FIR sauna. I have not had a stomachache in ages, and I am completely off all drugs!”

- D. Stanners, Los Angeles, CA

- **Dizziness**

- **Eczema with infection:** Over 90% success in Chinese studies

- **Edema:** Assists in resolution of inflammatory infiltrates, edema and exudes. The increased peripheral circulation provides the transportation needed to help evacuate the edema, which can help stop inflammation, decrease pain and help speed healing. With post-operative edema, treatment with infrared has been so successful that hospital stays were reported to have been reduced by 25 percent.

- **Environmental illness**

- **Enzyme dysfunctions**

- **Facial paralysis (Bell's Palsy):** Over 90% success in Chinese studies

- **Fibromyalgia**

Real Life Report:

"Who would of thought about buying a sauna in Florida! When Rene developed Fibromyalgia, we went though scores of treatments with little or no effect until we talked to a naturopath doctor from Clearwater. He suggested we try a FIR sauna to see if there were some toxicity issues. Sure enough, he had hit the magic button. Although Fibromyalgia does not appear to ever go away, Rene's 'cycles' are shorter-lived and much milder and, best of all, they are getting better all the time. We would recommend to anyone with Fibromyalgia to start out slow in your sauna and be prepared to feel worse before you will feel better. Hang in there, there is hope!"

- P. & R. Harris, Miami, FL

- **Fitness:** As an exercise-enhancement (warming for a stretch) or replacement in the case of a trauma, safety, ability, or weather

Study:

Tissues heated to 45°C and then stretched exhibit a non-elastic residual elongation of about 0.5 to 0.9% that persists after the stretch is removed. It does not occur in these same tissues when stretched at normal tissue temperatures. Thus, 20 stretching sessions can produce 10 to 18% increase in length in tissues heated and stretched. This effect would be especially valuable in working with ligaments, joint capsules, tendons and fascia. **The cited experiment clearly shows that low-impact stretching can produce a significant residual elongation when heat is applied together with stretching or range-of-motion exercises,** which is also safer than stretching tissues at normal tissue temperatures. This safer stretching effect is crucial in properly training competitive athletes to minimize their down-time from injuries.

- **Frostbite with inflammation:** Over 90% success in Chinese studies
- **Gout:** Substantially relieved or improved
- **Growth-hormone**
- **Headache**
- **Healing:** Processes, including open wounds, sprains and strains

Study:

At the First Department of Surgery and Regeneration Research Center for Intractable Diseases at the Kansai Medical University in Japan, researchers investigated not only the hyperthermic effect of FIR, but also the biological effects of FIR on wound healing. To evaluate the effect of FIR on a skin wound site, the speed of full-thickness skin wound healing was compared among groups with and without FIR using a rat model. We measured the skin wound area, skin blood flow, and skin temperature before and during FIR irradiation, and we performed histological

inspection. **Wound healing was significantly more rapid with FIR.** Histological findings revealed greater collagen regeneration and infiltration of fibroblasts that expressed transforming growth factor-beta1 (TGF-beta1) in wounds in the FIR group than in the group without FIR (Toyokawa et al).

Case:

Auto accident-related soft tissue injury. Daily sessions with FIR treatment were used until best healing was attained; then infrared systems were used to deal with permanent residuals. The pain control effect on the chronic residuals from such injuries lasted three days before another treatment was necessary. **Infrared healing is now becoming the leading edge in the care of soft tissue injuries to promote both relief in chronic or intractable "permanent" cases, and accelerated healing in newer injuries.**

- **Heart rate**
- **Hormonal imbalances**
- **Immune system:** Far Infrared strengthens the immune system by stimulating increased production of white blood cells (leukocytes) by the bone marrow and killer T-cells by the thymus. Thirty minutes in the sauna will causes a temporary 1 to 3° F increase in your body temperature, which triggers more white blood cells and more killer cells, thus improving your immune system. (Fevers are Nature's way of killing viruses, bacteria and fungi.) It also enhances white blood cell function, thereby increasing immune response and the elimination of foreign pathogens and cellular waste products.

Study:

In findings published in 1993 in the International Journal of Biometeorology, it was reported that materials emitting far-infrared (FIR) energy appear capable of potentiating functions of white blood cells. These functions include increased immune defense response in which white blood cells surround and ingest small living things (such as bacteria) and cell wastes (Fletcher).

- **Infections:** Post surgical, pelvic; over 90% success in Chinese studies
- **Inflammation:** Arrested (*Therapeutic Heat & Cold*)
- **Insomnia**
- **Joint stiffness:** Decrease in thickened connective tissues for greater flexibility and full range of muscular motion (*Therapeutic Heat & Cold*)
- **Lumbar strain:** Over 90% success in Chinese studies
- **Low body temperature**
- **Memory loss:** Use is reported to improve short-term memory retention
- **Menopause symptoms:** Relieved chills, nervousness, depression, dizziness,

headaches and stomach aches (Yamajaki)

- **Menstruation pain:** Relief – over 90% success in Chinese studies
- **Metabolism rate**
- **Mind clarity**
- **Mood swings**
- **Multiple Chemical Sensitivity**
- **Muscle tension and spasms:** Muscle spasms have long been reduced through the use of heat, be they secondary to underlying skeletal, joint, or neuro-pathological conditions. This result is possibly produced by the combined effect of heat on both primary and secondary afferent from spindle cells and from its effects on Golgi tendon organs. The effects produced by each of these mechanisms demonstrated their peak effect within the therapeutic temperature range obtainable with radiant heat.
- **Nose bleeding:** Reduced (Nakamura)
- **Nutrition imbalances:** Enhances the delivery of oxygen and nutrients in the blood cell to the body's soft tissue areas
- **Overweight:** Weight loss first, through sweating and the energy use needed to produce the sweat and second, through direct excretion of fat (Yamajaki)

Studies:

A moderately conditioned person can easily sweat off 500 grams in a sauna, consuming nearly 300 calories, which is equivalent to running 2 to 3 miles. While the weight of the water loss can be regained by drinking water, the calories consumed will not be (*Journal of American Medical Association* – JAMA). Since an IR sauna helps to generate 2 to 3 times the perspiration produced in a traditional sauna, the implications for increased caloric consumption are quite impressive. Assuming a sauna as mentioned in the JAMA lasts for 30 minutes, then some interesting comparisons may be drawn. **The FIR sauna may enhance the loss by burning about 900 to 2400 calories in a 30-minute session** (consume energy equal to that expended in 6 to 9 mile run). For those who do not exercise, or who cannot exercise, this is a very valuable and effective way to achieve weight control, or maintain a fitness program. This may also apply to the elderly, or those who are otherwise unable to exert themselves to achieve cardiovascular training effect.

Researchers at the Department of Cardiovascular, Respiratory and Metabolic Medicine at the Graduate School of Medicine at Kagoshima University in Japan found that, in obese patients, the **body weight and body fat significantly decreased after 2 weeks of sauna therapy** without increase of plasma ghrelin concentrations (Biro, Masuda, Kihara, Tei.).

Real Life Report:

*"I can say that [my FIR sauna] has helped me with stress relief, and weight loss, and I love the refreshing feeling I get when I come out of the sauna. **I didn't change my diet or my workout habits, but I still lost 7 pounds in about 2 weeks of using my [FIR] sauna.** It's also the first time I can start to see some 'rippage' in my abs! I think I'll have to use it a lot more when I compete in bodybuilding to give me an edge in weight loss over the other competitors."*

- D. Collins, American Gym, Dayton, OH

- **Pain:** Relieved through increased endorphin production and dilation of blood vessels brought about by direct heat application on tissue and nerves (*Therapeutic Heat & Cold*). Pain may be relieved via the reduction of attendant or secondary muscle spasms. Pain is also at times related to tension, which can be improved by the hyperaemia that heat-induced vasodilatation produces. Localized infrared therapy using lamps tuned to the 2-25 micron waveband is used for the treatment and relief of pain by over 40 reputable Chinese Medical Institutes.

Studies:

Heat has been shown to reduce pain sensation by direct action on both free-nerve endings in tissues and on peripheral nerves. In one dental study, **repeated heat applications eventually led to abolishment of the whole nerve response responsible for pain** arising from dental pulp.

Researchers at Nishi Kyusyu University in Japan hypothesized that systemic warming may decrease pain and improve the outcomes in patients with chronic pain. The purpose of this study was to clarify the effects of systemic thermal therapy in patients with chronic pain. Group A patients with chronic pain were treated by a multidisciplinary treatment including cognitive behavioral therapy, rehabilitation, and exercise therapy, whereas group B patients were treated with a combination of multidisciplinary treatment and repeated thermal therapy. A far-infrared sauna therapy and post-sauna warming were performed once a day for 4 weeks during hospitalization. We investigated the improvements in subjective symptoms, the number of pain behavior after treatment and outcomes 2 years after discharge. After treatment, the number of pain behavior was slightly smaller and the anger score was significantly lower in group B. Two years after treatment, 17 patients (77%) in group B returned to work compared with 12 patients (50%) in group A. These results suggest that **a combination of multidisciplinary treatment and repeated thermal therapy may be a promising method for treatment of chronic pain** (Masuda, Koga, Hattanmaru, Minagoe, & Tei).

- **Pediatric pneumonia:** Over 90% success in Chinese studies
- **Periarthritis** of the shoulder: Over 90% success in Chinese studies
- **Peripheral vascular disease**
- **Psoriasis**

- **Radiation sickness:** Relieved signs and symptoms
- **Raynaud's Syndrome:** Significant improvement

Study:

There have been numerous studies on the therapeutic effects of FIR products. One clinical study done by Dr. Gordon Ko and Dr. David Berbrayer at Sunnybrook and Women's College Health Science Centers at the University of Toronto, published in the August 2002 issue of *Alternative Medicine Review "Journal of Clinical Therapeutics"*, showed that **there are significant improvements in both subjective measures of pain and discomfort associated with Raynaud's Syndrome.**

- **Recovery:** Collagen tissue increase in extensibility needed for repair and recovery for injuries involving ligaments, joint capsules, tendons, fasciae and synovium (*Therapeutic Heat & Cold*)
- **Rheumatoid arthritis**

Study:

There was a **20% decrease in stiffness at 45° C as compared with 33° C in rheumatoid finger joints**, which correlated perfectly to both subjective and objective observation of stiffness. Any stiffened joint and thickened connective tissues should respond in a similar fashion.

Cases:

A clinical trial in Japan reported the **successful solution in seven out of seven cases of Rheumatoid Arthritis treated with whole-body infrared therapy**. These case studies and clinical trials indicate that further study is warranted on the usage of whole-body infrared therapy in the care of patients with Rheumatoid Arthritis.

A Swedish case study on a 70-year-old man with Rheumatoid Arthritis secondary to acute rheumatic fever reports that he had reached his toxic limit on Gold injections and his Erythrocyte Sedimentation Rate was still at 125. Within 5 months of undergoing an infrared treatment, his ESR was down to only 11.

In another case of rheumatic arthritis, that of a 14-year old Swedish girl who couldn't walk comfortably downstairs due to knee pain since she was eight years old, her Rheumatologist told her mother that the child would be in a wheelchair within 2 years if she refused gold corticosteroid therapy. **However, after 3 infrared sauna treatments, she became more agile, and subsequently took up folk dancing, without the aid of the conventional approach in her recovery.**

- **Scars:** Reduction of the formation; softening of the keloids and scar-tissue
- **Sciatica:** Over 90% success in Chinese studies
- **Skin:** Rejuvenation of the elasticity, tone and enhancement of firmness. Clogged pores are unplugged of cosmetics creating a skin texture and tone of unexcelled quality.

Study:

Researchers in the Department of Dermatology at the Yonsei University College of Medicine in Korea investigated the effects of infrared on collagen and elastin production in dermal fibroblasts, as well as the clinical and histopathologic effects of infrared on photo-aged facial skin lesions. In order to determine the effects of infrared on collagen and elastin production, dermal fibroblasts were exposed to infrared for varying lengths of time and collagen and elastin contents were subsequently determined. Additionally, 20 patients with mild to moderate facial wrinkles and hyperpigmented lesions received daily treatments of far infrared for six-months. During the treatment, patients and a medical observer conducted independent photographic and clinical evaluations every 4 weeks, and skin biopsies were obtained for histological analysis at baseline and one month post-treatment. We found that the content of collagen and elastin produced by the fibroblasts increased after infrared, and that this increase was proportional to the duration of exposure. Following 6 months of treatment, all patients reported good (51-75%) improvements in skin texture and roughness. Additionally, patients noted fair (25-50%) improvement in color tone of the skin. Objective medical evaluation of the patients indicated that roughness and laxity were fairly improved. These results suggest that **infrared may have beneficial effects on skin texture and wrinkles by increasing collagen and elastin contents from the stimulated fibroblasts**. Therefore, skin treatment with infrared may be an effective and safe non-ablative remodeling method, and may also be useful in the treatment of photo-aged skin (Lee JH, Roh MR, Lee KH)

Real Life Report:

"I've been thoroughly enjoying [my FIR sauna] since the first evening it was installed. Within seconds, I was completely relaxed, and after 30 minutes, I felt like a new person. Afterwards my skin always feels great and my cheeks are rosy. I must say I've tried other saunas in the past but none are like the infrared."

- R. Marrielli, TX

- **Soft tissue injury:** Infrared healing is now becoming the leading edge in the care of soft tissue injuries to promote both relief in chronic or intractable "permanent" cases, and accelerated healing in newer injuries.

Case:

Auto accident-related soft tissue injury - daily sessions were used until best healing was attained; then infrared systems were used to deal with permanent residuals. The pain control effect on the chronic residuals from such injuries lasted three days before another treatment was necessary. (Yamajaki)

- **Sore throats** (Nakamura)
- **Sprains**

- **Strains**
- **Stress**
- **Sunburn:** Infrared is the only antidote to excessive ultraviolet radiation (*Clayton's Electrotherapy*)
- **Sweating**

Real Life Report:

*"I am thrilled with my FIR sauna! I just got out of a 25-minute sauna session and it worked; meaning that I actually sweat! I've always had a difficult time sweating with any activity (running, weightlifting, etc.). **Within 15 minutes [in the sauna] I was dripping with sweat.** I had hoped to stay in for 30 minutes, but I felt like that was all that I needed the first time around. I feel refreshed and ready to exercise or stretch after being out of the sauna for 10minutes."*

- B. Broussard

- **Tinea:** Over 90% success in Chinese studies
- **TMJ:** Reduced or eliminated
- **Vascular dilation**
- **Virus:** Reduction of the reproduction rate
- **Vision disturbances**

CHAPTER 11: SOAKING UP THE BENEFITS OF FIR SAUNAS

We've talked a lot about why detoxification is extremely important in this day and age due to the high levels of toxins that are found in our daily existence. Therapy using a far infrared sauna draws out these toxins in a way that traditional hot steam sauna simply cannot accomplish. Now it is important for you to know how to make the most out of your sauna sessions.

Eight Tips for a GREAT Sauna

1. Meals: Avoid heavy meals for two hours before a sauna session.
2. Fluids: Avoid alcohol or other intoxicating substances. Drink 8 ounces of water or fruit juice prior to and following the sauna.
3. Sweating: Bathing or showering prior to a sauna session may increase sweating. Use two or three folded towels as a cushion, place one on the floor, and keep one on your lap for wiping off the sweat.
4. Nutrients: Add sea salt and two tablespoons of kelp to your diet, especially if the water you drink is mineral-free.
5. What (Not to) Wear: Remove metal jewelry before entering the sauna, as it could become very hot. Unlike traditional saunas where light clothing can be worn, it is not recommended in an infrared sauna.
6. Relax!: Read a nice book, meditate, or enjoy a CD to put you in a relaxed mood. Visualize your body absorbing the heat and energy. Incorporate slow breathing. And finally, try some aromatherapy to enhance the sauna session. (See the end of this chapter for specific recommendations on therapeutic essential oils.)
7. Heat Evenly: It is important while in the sauna to turn every few minutes to heat the body evenly.
8. Bulb Caution: Never touch any of the bulbs or look directly into the bulbs.

Optimum Dosage (I.e.: How Often?)

As you know, far infrared rays are normally present in sunlight and our natural biological environment. Just as with nutrients, we require a certain amount of this *radiant heat* for optimum health. And, as with all health programs; dosage is the key.

For example, it is no secret that we need water to sustain life. *But*, if you drink too much water all at once, you drown. The kidneys cannot eliminate it fast enough to maintain the proper concentration of electrolytes in the blood, so the lungs fill up with fluid.

The situation with far infrared is similar. Low, physiological amounts stimulate circulation, mineral functions and detoxification. Where infrared dosage becomes a

concern is with either acute or chronic high levels of exposure, such as looking at the sun without adequate protection.

How often you should use your sauna depends on your own personal needs. Some people need to use a sauna twice a week; some need to use it twice a day. If you are debilitated, begin with once a week, as your body may overheat and not tolerate much time in the sauna. Over time (a few weeks to a few months), your body may become acclimated to the sauna and regulate body temperature, thus making sweating easier.

Your body is intelligent and will inform you by sensations of comfort when you are exposed to beneficial levels of FIR. And just as with other health programs such as fasting or exercise, it is always wise to stop at the onset of any discomfort.

Temperature Regulation

Preheating: Before entering your far infrared sauna you can either preheat it to 100°F or enter it as soon as you turn it on.

Setting Range: 100-140°F at the maximum level with comfort.

Warming-Up:

- For stretching before exercising for injury-reduction, while wearing clothing, keep the door open and stay in the sauna until the first outbreak of sweat.*
- For maximum stretching benefits, start with a 40-minute sauna. 40 minutes or more is necessary for the maximum heating of connective tissues for lasting changes with stretching or yoga. (Tolerance may fluctuate. Some people may achieve comfortable sessions of up to 90 minutes at times.) As noted above, be sure to end your session when your body seems ready.

Finishing Up

Here are some additional tips to reap the full rewards of your sauna after every session:

1. Hydrate: After a sauna session, be sure to drink eight ounces of water and sit quietly for at least ten minutes.
2. Cooling: Open the roof-vent, window, and/or door for fresh, cool air as you desire.
3. Exfoliate*: Wipe off sweat with a skin brush or loofa all over, including your face. And be sure to brush your hair. Brushing enhances the cleansing effect.
4. Rinse off the Toxins: Take a warm or cool shower after your treatment (but not hot). The sweat you are covered in is filled with the very toxins you have been trying to rid yourself of!

* Note: A 20-minute sauna session results in an immediate gain in flexibility of 10%.

* Note: You may find this painful at first – but hang in there! You will soon find it to be a wonderful experience!

5. Personal Care Products: Avoid them. You will be very clean from the sauna and soap leaves a film that can clog the pores. Additionally, shampoo and conditioner should only be used as needed as most of them contain chemicals that are toxic to the body. Finally, skip using most oils, lotions and creams, as they also contain chemicals that may clog the pores.

Supervision and Safety

There are a few conditions that are contraindicated for sauna. However, you should always consult with a health professional before beginning any new therapy, including sauna, especially if you have a health condition or you are taking prescription medication:

- Pregnant and nursing women, and children should not use saunas.
- If you have a recent (acute) joint injury, it should not be heated for the first 48 hours after the injury; or until the hot and swollen symptoms subside. (If you have a joint that is chronically hot and swollen, it may respond poorly to vigorous heating of any kind.)
- Hemophiliacs and anyone predisposed to hemorrhage should avoid any type of heating that could induce vasodilatation, which can lead to the tendency to bleed.
- Vigorous heating is strictly contraindicated in cases of enclosed infections.
- It is considered inadvisable to raise the core temperature in someone with adrenal suppression or auto-immune conditions, such as lupus and MS (multiple sclerosis).
- Metal pins, rods, artificial joints or any other surgical implants generally reflect infrared rays and thus are not heated by this system. Nevertheless, you should consult with your surgeon prior to using a FIR sauna. Discontinue use of a sauna if you experience pain near any such implants.
- Silicone does absorb infrared energy. However, implanted silicone or silicone prostheses for nose or ear replacement may be warmed by the infrared rays. Since silicone melts at over 200°C (392°F), it should not be adversely affected by the usage of FIR saunas, however, it is advisable to check with your surgeon and/or a representative from the product manufacture to be certain.
- Heating of the low back area of women during the menstrual period may temporarily increase the menstrual flow. (A woman may choose to experience this short term effect without worry, or simply temporarily avoid sauna usage.)
- If any condition worsens with use of an infrared treatment, the use of the system should be discontinued.

Finally, it is important to note that you will not get a tan in an infrared sauna, but your skin may be red for an hour afterwards. This is normal.

Adding Aromatherapy: Therapeutic Essential Oils

<u>Essential Oil*</u>	<u>Benefits</u>
Anise (<i>Pimpinella anisum</i>)	Swallowing air, migraine, palpitations
Bergamot (<i>Citrus bergamia</i>)	Intestinal colic & parasites
Black Pine (<i>Pinus sylvestris</i>)	Respiratory tract, urinary tract, infection, gallstone, impotence
Cinnamon (<i>Cinnamomum ceylanicum</i>)	Debility from flu, slow digestion, GI spasm, impotence
Clary Sage (<i>Salvia sclarea</i>)	Exhaustion, dyspepsia, low BP, menopause, thrush, scanty periods, wound healing, night sweats in TB
Clove (<i>Eugenia caryophyllata</i>) Bud	Toothache, sores, lupus, debility, amnesia, indigestion, scabies, ulcers
Coriander (<i>Coriandrum sativum</i>) Seed	Nerve or GI pain, gas, anorexia nervosa
Eucalyptus (<i>globulus, radiata</i> or <i>smithii</i>)	Congestion, UTI, fever, diabetes, migraine, worms
Fennel (<i>Foeniculum vulgare</i>) Bitter	Weight loss, gas, vomiting, urinary stones, frequent urination, scanty periods, slow digestion
Geranium (<i>maculatum</i>)	Weak adrenals, urinary stones, gastric ulcer
Ginger (<i>Zingiber officinalis</i>)	Loss of appetite, GI pain/gas/diarrhea, scurvy
Grapefruit (<i>Citrus paradisi</i>)	Obesity, cellulite, cleansing, PMS, headache, stiffness, hair loss, drug/alcohol withdrawal
Holy Basil	Mental fatigue, GI spasm
Lavender (<i>Lavendula officinalis</i> or <i>angustifolia</i>)	All wounds, burns, insect bites, flu, migraine, vertigo, asthma, spasmodic cough, enteritis, gonorrhea, leucorrhea, paralysis
Lemon (<i>Citrus limonum</i>)	Atherosclerosis, liver, varicose veins, stones, infection, debility, rheumatism, hemorrhage
Lemongrass (<i>Cymbopogon citratus</i>)	Anxiety, colitis, sympathetic stress, lice, sagging skin

Essential Oil*	Benefits
Lime (<i>Citrus aurantifolia</i>)	Deodorant, astringent, antiseptic, antiviral, diuretic
Marjoram (<i>Origanum marjorana</i>)	General and nervous debility, migraine
Mountain Savory (<i>Satureia montana</i>)	GI pain, mental fatigue/eye strain, impotence, diarrhea, anti-bacterial, anti-fungal
Neem Oil	Parasites
Nutmeg (<i>Myristica fragrans</i>)	Chronic diarrhea, halitosis, toothache, gallstones, rheumatic pain, gas, debility
Orange (<i>Citrus aurantium</i>)	Heart rhythm, chronic diarrhea, insomnia
Peppermint (<i>Mentha piperita</i>)	Gall bladder, IBS, palpitations, migraine, painful period, debility
Sandalwood (<i>Santalum album</i>)	Urinary tract infection, gonorrhea, bronchitis, diarrhea
Spearmint (<i>Mentha spicata</i>)	Bronchitis, sinusitis, nausea, headache, flu, fatigue
Sweet Birch (<i>Betula lenta</i>)	Rheumatism, wounds, uric acid, muscle cramp, cellulite, hair growth
Sweet Orange (<i>Citrus aurantium</i>)	Heart rhythm, chronic diarrhea, insomnia
Tangerine (<i>Citrus reticulata</i> or <i>madurensis</i>)	Muscle spasm, liver, lymph, calming
Thyme (<i>Thymus vulgaris</i>)	Debility, infection, flu after chill, GI parasite, sleep
Wintergreen (<i>Gaultheria procumbens</i>)	Chronic muscle/joint pain, fever, cellulite
Ylang Ylang (<i>Cananga odorata</i>)	Hypertension, tachycardia, impotence

* Dose with caution; do not use essential oils internally; use only with the support of your health practitioner.

CHAPTER 12: ALL SAUNAS ARE NOT CREATED EQUAL – DEMAND THE BEST!

The very heart of the FIR sauna is its heating element. The majority of FIR saunas are fitted with ceramic heating elements, or ceramic semi conductors. Yet, ceramic-type elements can use up to 70 percent of the available oxygen inside the cabin or enclosure. Breathing the oxygen-depleted air may lead to considerable discomfort for the user. Even if the user's head is outside of the cabin, researchers have stated that the lack of oxygen taken in through the skin is still felt significantly, especially since heat causes skin pores to open.

Know the Technology!

When you are looking for a FIR sauna, it is important to look for the best heating technology. There are patented, ultra-thin, super-conductive FIR-emitting heating elements that use just five percent of available oxygen inside of the cabin.

Dr. Tadashi Ishikawa, who had worked in the Medical Research & Development Department at Fuji for five years, received a patent on the zirconia ceramic infrared heater used in certain FIR saunas in 1965. The same infrared systems based on these heaters were used exclusively by medical practitioners in Japan until they were released for public use in 1979. The technology was then further refined and has been used in better FIR saunas in the United States since 1981.

Is It Real or Is It Incoloy?

In order to achieve true health benefits it is important to know what heaters actually deliver. High quality FIR saunas will use less than 20 percent of the infrared energy to heat the air. In other words, more than 80 percent of the FIR should be available to be directly converted to heat within our bodies.

The only heater that will deliver the quick and satisfactory benefits of far infrared is 100% ceramic. Ceramic is considered a raw natural earth element, while Incoloy is a highly processed element. What does that mean? Ceramic heaters are known to emit 95 percent or more of their total heat in far infrared form. Yet, Incoloy is known to emit only 50-60 percent of its heat in far infrared form.

Additionally, the best heaters emit about one-third of their output in the middle infrared band (from 2-5.6 microns) for super-deep penetration. The other two-thirds are in the long band (from 5.6-25 microns) with that part of the output evenly spread around the 9.4 micron pivot point of peak human output. This distribution maximizes the higher penetration of the middle-band waves, while using the long waves to produce a resonant absorption amplification of healthy tissue output. The Chinese researchers consider the band from 2-25 microns as the most therapeutic.

Ceramic has been shown to emit the majority of its FIR between 7-12 microns (as shown below). Incoloy emits the majority of its FIR between 0-7 microns. While it is arguably true that you *will* benefit from both ceramic and Incoloy, it is important to recognize that you will get a much higher concentration of 9.4 microns from ceramic and very little

from Incoloy. Therefore, you will get a far deeper and more intense sweat from ceramic emitters.

In conclusion, it is also important to always make sure that any product you buy has been thoroughly tested by a reputable source. But this is especially true in the case of FIR saunas. Recent books, such as *Cross Currents* by Robert O. Becker, MD, have detailed the hazards of exposure to certain kinds of electromagnetic fields that can be produced by poorer-quality saunas. Be sure that the sauna you choose to trust your health with has been tested and found free of any toxic electromagnetic fields before you touch that dial!

CHAPTER 13: DETOXIFICATION – A FEW FINAL WORDS

As you cleanse your body of unwanted toxins, either through a detoxifying technique or simply through a positive change in your lifestyle, you may experience what is called a *healing reaction* or *healing crises*. These are temporary symptoms that occur as toxic substances are brought to the surface and eliminated; and as chronic conditions start to heal. Symptoms may be mild or severe, depending on the body's original toxicity, but they are definitely temporary. They can occur immediately, within several days, or even several weeks of a cleansing program.

Also known as *Herxheimer Reaction*, a healing crisis can occur when toxins stored in the body are released at a faster rate than they can be properly eliminated. The more toxic your body is, the more severe the detoxification and the more intense the reaction will be. Thus, a healing crises can last for a few days, or it may leave as quickly as it comes.

The Skinny on Fat Cells

As our bodies store fat, the chemistry of the fat reflects the internal body conditions at the time the fat was stored. For example, every cold or flu that you have ever caught has left a small residue of that virus or bacteria in your fatty deposits. The toxins your body absorbed or that you ingested left their mark as well, as has been noted regarding the EPA biopsies showing that 100 percent of all people studied had dioxins, PCBs, dichlorobenzene and xylene in their fat cells. These 'deposits' have been kept on record in your fat cells.

Fat cells are formed in the developing fetus during the third trimester of pregnancy, and later at the onset of puberty. Amazingly, fat cells do not multiply after puberty – in other words the number of fat cells remains the same. "So, how do you gain weight?" you ask. The same way that a dry sponge grows larger when put in water. Your fat cells soak up substances that you take into your body – both good and bad. Now think of that fat cell as a sponge that has soaked up spilled grease, dirty water from the floor, a sticky glob of something on the counter, etc. When you squeeze out that sponge, some very unsavory liquid comes out. The same thing happens with your fat cells as you detoxify. As you squeeze out those fat cells, some very unsavory stored toxins and pollutants will be dumped into your system. You will be releasing the toxins, bacteria, and viruses that were built up in your fatty deposits over many years.

Symptoms of a Healing Crisis

A healing crisis can have a variety of possible symptoms, depending on what the body underwent during the initial toxic encounter.

Symptoms can include:

- Muscle cramps or pain
- Arthritic flair ups
- Extreme fatigue
- Restlessness
- Headaches
- Insomnia
- Sinus congestion
- Fever
- Skin eruptions
- Strong emotions or mood swings
- Gas
- Temporary constipation or diarrhea
- Yawning
- Tight muscles

As they are released, you may experience symptoms that you experienced when you initially dealt with that particular malady or event – albeit in a milder form. You may get a runny nose, feel tired, develop body aches or even develop a fever as your body works its way through years of toxins and disease. In fact, the symptoms you experience will likely be in the reverse order of when you first experienced them. (I.e., toxins that you were exposed to in recent years will show their effect first, then they will be followed by things that occurred earlier in your life.)

Since fasting is one of the most effective forms of whole body detoxification, it is also the most likely to cause a healing crisis. Fasting can release toxins or diseased cells that were stored in your fat deposits from quite some time ago. Additionally, some of these deposits may get reabsorbed during their journey through your colon, thus introducing toxins back into your body that may have been suspended for years by your liver. This may cause allergy or flu like symptoms, or cause acne, or even aches and pains as your body tries to eliminate these toxins.

Relieving Symptoms of a Healing Crisis

Continued cleansing will help the body rid itself of released toxins and diseases forever. The good news is that symptoms of a healing crisis do not last long, and there are a number of things you can do to reduce your discomfort:

- Drink plenty of pure water (it helps the body eliminate released toxins).
- Increase your fiber intake (this will help accelerate the elimination of toxins).
- Eat lightly (steamed vegetables, fresh fruits, and a small portion of protein). Digestion is an extra stress during healing reactions. (You may notice that symptoms subside after eating a meal. Energy must be diverted from healing to digest the meal, so symptoms temporarily diminish while you digest your food.)
- Take supplements to cleanse the colon and kidneys.
- Rest lying down as much as possible.
- Reduce stress and strain, and reduce mental and physical activity to conserve energy for healing.
- Go outside in the sunshine.
- Exercise lightly.
- Breathe deeply and slowly to calm your nervous system.
- Meditate to help manage strong emotions and mood swings.
- Use active charcoal to remove toxins from the gastrointestinal (GI) tract. The charcoal adsorbs unabsorbed poison still present in the gut. It also adsorbs* chemicals that are secreted in bile, thereby preventing their enterohepatic recirculation. Finally, the charcoal binds any drug that diffuses from the

* As opposed to *absorption*, *adsorption* is the adhesion of molecules to the surfaces of solid bodies or liquids with which they are in contact.

circulation into the gut cavity. You can purchase activated charcoal from your local natural food store.

On rare occasions, the side effects of detoxification may become too intense to handle. If you experience this, simply slow down on the detoxification method. Once you begin to feel better, slowly and gradually ease back into it. If you are unsure of how to handle a healing reaction, call someone who is familiar with them for advice.

At times, reactions are not due to healing and indicate a worsening of a health condition. This usually occurs when someone is not following the diet, lifestyle and other aspects of a complete healing regimen. It may also occur if someone is chronically ill. It is important to know if a reaction is due to healing or because of a worsening of a condition. Healing reactions usually do not last long. They may be vigorous but end in a few hours or at most in about a week. If a reaction or flare-up lasts more than several weeks, it may be a worsening of a condition.

Ending Detoxification

Just as you eased into detoxification, you will also need to ease back out gradually. This part of the process is just as important, if not more so, than getting started. Therefore, you want to plan carefully to avoid becoming sick. In fact, if it took you a week to move into the detoxification, plan a week to move out.

CHAPTER 14: CONCLUSION

As with any new system that you wish to embark on, it is important to discuss every aspect of a plan with your doctor or health practitioner. The information that has been provided in this book was meant to provide you with information about our environment and the many toxins that are present in our bodies. By providing you with more knowledge, you will be able to make more educated choices about your health.

By looking within, you can we begin to improve your own personal environment and look to alternative choices to ensure that you live a fuller, more vibrant and healthier life.

By choosing to detoxify your body and energize it through technology, such as far infrared sauna, you can intensify the removal of the toxins that lead to diseases that you were never meant to experience.

You Determine How Much You Stockpile

Through what you have read, you now know that there are thousands of inescapable environmental chemicals that are found in everything from the air we breathe, to the food we eat and the water we drink. Making matters worse is that they are now found in excessive amounts in our bodies.

The logical first step in detoxifying is to take your daily detox cocktail in order to improve your body's ability to get rid of the toxins inside of you.

Environmental poisons simply overwhelm our body's ability to detoxify, and they are slowly accumulated within the bloodstream and gut. Cancer and heart attacks simply do not happen overnight; they are caused by stockpiling unwanted chemicals – many of which we can harbor in our bodies without showing any potential symptoms.

Our environment determines how much we are exposed to. How protective our diet is in antioxidants, and how strong our detoxification system is determines how fast we succumb to these symptoms.

No matter what types of diseases or symptoms you are fighting, the choice is yours every day. You can go to bed knowing you have made your total cumulative load better, or worse, but, in the end, only you will be able to make that decision.

REFERENCES

- Agency for Toxic Substances & Disease Registry (ATSDR). Department of Health and Human Services 4 December 2006 <<http://www.atsdr.cdc.gov>>
- American Cancer Society. Known and Probable Carcinogens (Including Industrial Processes, Occupational Exposures, Infectious Agents, Chemicals, and Radiation). What Is a Carcinogen? Cancer.org. 3 February 2006. 5 December 2006.
<http://www.cancer.org/docroot/PED/content/PED_1_3x_Known_and_Probable_Carcinogens.asp?sitearea=PED>
- American Heart Association. AmericanHeart.org. 4 December 2006
<<http://www.americanheart.org/presenter.jhtml?identifier=4776>>
- Aspartame Archives. 19 December 2006 <<http://www.aspartamearchives.org/aspartame-side-effects.htm>>
- Bamberger, Lynn, DC. "Symptoms of Toxicity, BDRM - Bamberger Detoxification and Renewal Methods" 2004-2006. 20 December 2006
<http://www.neurodetox.com/toxicity_symptoms.htm>
- Bennett, Peter, ND, Barrie, Stephen, ND, and Faye, Sara, *7-Day Detox Miracle: Restore Your Mind and Body's Natural Vitality with This Safe and Effective Life-Enhancing Program*. Prima Lifestyles. 1999.
- Biro S, Masuda A, Kihara T, Tei C. "Clinical implications of thermal therapy in lifestyle-related diseases." PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). November 2003. 23 December 2006.
<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=14610268&query_hl=22&itool=pubmed_docsum>
- Bland, Jeffrey, Ph.D., *The 20-Day Rejuvenation Diet Program*. Illinois: Keats, NTC Contemporary Publishing Group, Inc. 1999.
- Buhner, Stephen. "The Health Benefits of Water Fasting" The Foundation for Gaian Studies. GaianStudies.org. 2003. 18 December 2006
<<http://www.gaianstudies.org/articles4.htm>>
- Burkemper, Cathy. "Detoxify Your Body." The Healthy Planet, A Natural Living Magazine (January 2001)
- Cabot, Sandra, MD. "Leaky Gut Syndrome." 2003. 22 December 2006.
<http://www.liverdoctor.com/04_leakygut_syndrome.asp>
- Centers for Disease Control and Prevention. Department of Health and Human Services 9 December 2006 <<http://www.cdc.gov/az.do>>

- Connett, Paul, PhD. "50 Reasons to Oppose Fluoridation" Fluoride Action Network. 2 April 2004. 19 December 2006. <<http://www.fluoridealert.org/50-reasons.htm>>
- Detox.org. "Do You Need to Detox?" 2000. 19 December 2006 <<http://www.detox.org/whoshould.html>>
- Environmental Protection Agency (EPA) 4 December 2006 <<http://www.epa.gov/>>
- Fife, Bruce, ND. *The Detox Book, How to Detoxify Your Body to Improve Your Health, Stop Disease and Reverse Aging*. Colorado: Piccadilly Books, Ltd., 2001.
- Fletcher, DJ. "Warming Up to Far Infrared." *Alternative Medicine Magazine* 16 December 2006 <<http://www.balancedlives.net/altmed.htm>>
- Frei, Balz, Ph.D. "Reactive Oxygen Species and Antioxidant Vitamins." The Linus Pauling Institute 1997. 19 December 2006 <<http://lpi.oregonstate.edu/f-w97/reactive.html>>
- Freudenrich, Craig, Ph.D. "How Fat Cells Work." HowStuffWorks. 23 December 2006. <<http://health.howstuffworks.com/fat-cell1.htm>>
- Haas, Elson, MD. "General Detoxification and Cleansing." <<http://www.healthy.net/scr/article.asp?ID=1558>>
- Haas, Elson, MD. *Staying Healthy with Nutrition: The Complete Guide to Diet and Nutritional Medicine*. California: Celestial Arts. 2006.
- Hayton, Bill. "Agent Orange 'caused gene damage'" *BBC, International Version on BBC.co.uk* 28 July 2006. 9 December 2006 <<http://news.bbc.co.uk/2/hi/asia-pacific/5224690.stm>>
- IMAGERS, *The Electromagnetic Spectrum, The Infrared*. National Aeronautics and Space Administration (NASA) 2 December 2006 <<http://imagers.gsfc.nasa.gov/ems/infrared.html>>
- Imamura M, Biro S, Kihara T, Yoshifuku S, Takasaki K, Otsuji Y, Minagoe S, Toyama Y, Tei C. "Repeated thermal therapy improves impaired vascular endothelial function in patients with coronary risk factors." PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). October 2001. 23 December 2006. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=11583886&query_hl=13&itool=pubmed_docsum>
- Jin, Yong Hwan, Ph.D., Clark, Alan B., Slebos, Robbert J.C., Ph.D., Al-Refai, Hanan, Taylor, Jack A., Ph.D. "Cadmium Studies Suggest New Pathway to Human Cancer." *NIH News, US Department of Health and Human Services, National Institutes of Health* 8 June 2006. 5 December 2006. <<http://www.niehs.nih.gov/oc/news/newpath.htm>>

- Johnstone, Heather, Ph.D., R.N., A.P.N., “Are You Clean Inside” 1998-2006. 29 December 2006. <<http://www.drnatrura.com/>>
- Kim, Ben, DC. “Fasting” 15 December 2006. 17 December 2006. <<http://drbenkim.com/fasting.html>>
- Lee JH, Roh MR, Lee KH. “Effects of infrared radiation on skin photo-aging and pigmentation.” PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). 31 August 2000. 23 December 2006. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16941737&query_hl=3&itool=pubmed_DocSum>
- Mass Moments*. Massachusetts Foundation for the Humanities. Massmoments.org. 5 December 2006. < <http://www.massmoments.org/moment.cfm?mid=143>>
- Masuda A, Kihara T, Fukudome T, Shinsato T, Minagoe S, Tei C. “The effects of repeated thermal therapy for two patients with chronic fatigue syndrome.” PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). April 2005. 23 December 2006. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=15992574&query_hl=15&itool=pubmed_docsum>
- Masuda A, Koga Y, Hattanmaru M, Minagoe S, Tei C. “The effects of repeated thermal therapy for patients with chronic pain.” PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). 2005. 23 December 2006. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16088266&query_hl=24&itool=pubmed_docsum>
- Masuda A, Nakazato M, Kihara T, Minagoe S, Tei C. “Repeated thermal therapy diminishes appetite loss and subjective complaints in mildly depressed patients.” PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). 2005. 23 December 2006. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=16046381&query_hl=17&itool=pubmed_docsum>
- Mercola, Joseph. “Mercury Detoxification Protocol.” <http://www.mercola.com/article/mercury/detox_protocol.htm>
- Minnesota Department of Health*. Health.state.mn.us. 5 December 2006. <http://www.health.state.mn.us/divs/eh/water/com/fs/copper.html>
- National Cancer Institute, Annual Report to the Nation on the Status of Cancer 1975-2001, with a Special Feature on Survival: Questions and Answers*. US National Institutes of Health. Cancer.gov. 2 June 2004. 5 December 2006. <<http://www.cancer.gov/cancertopics/factsheet/2001-annual-report-survival-qa/print?page=&keyword=>>>

National Institute of Mental Health (NIMH). National Institutes of Health 2006. 23 December 2006. <<http://www.nimh.nih.gov/publicat/adhd.cfm#cause> >

Opara, Emmanuel, Ph.D. "Free Radicals and Aging: Part I." *The Vitamin News*. 12 December 2006. <<http://www.vrp.com/art/572.asp?c=1167623082421&h=55&k=/vrpsearch.asp&m=/vrpwebstyle.css&p=no&s=0>>

Pitchford, Paul. *Healing with Whole Foods*. California: North Atlantic Books, 2002.

Proceedings, EPA Science Forum 2003: Partnering to Protect Human Health and the Environment. United States Environmental Protection Agency. 6-8 May 2003

Rogers, Sherry A., M.D. *Detoxify or Die*. Florida: Sand Key Company, 2002.

Soffritti, Morando; Belpoggi, Fiorella; Esposti, Davide Degli; Lambertini, Luca; Tibaldi, Eva; Rigano, Anna. "First Experimental Demonstration of the Multipotential Carcinogenic Effects of Aspartame Administered in the Feed to Sprague-Dawley Rats" *Environmental Health Perspectives* 114.3 (March 2006) Ramazzini.it. 15 December 2006. <http://www.ramazzini.it/fondazione/docs/EHP_Aspartame_Ramazzini.pdf>

Spence, T. H. "Detoxification Details." <<http://chetday.com/spencedetox.html>>

Sutton, Barbara. "Copperfield Says He's Found Fountain of Youth." *Boston Globe on Boston.com* 15 August 2006. 2 December 2006 <http://www.boston.com/news/nation/articles/2006/08/15/copperfield_says_hes_found_fountain_of_youth/>

The-Natural-Path.com. "Body Cleansing / Detox Plan & Natural Cures for Good Health" 16 December 2006 <<http://www.the-natural-path.com/index.html>>

Third National Report on Human Exposure to Environmental Chemicals. Department of Health and Human Services Centers for Disease Control and Prevention. July 2005

Toyokawa H, Matsui Y, Uhara J, Tsuchiya H, Teshima S, Nakanishi H, Kwon AH, Azuma Y, Nagaoka T, Ogawa T, Kamiyama Y. "Promotive effects of far-infrared ray on full-thickness skin wound healing in rats." PubMed.gov. United States National Library of Medicine (NLF) and National Institutes of Health (NIH). June 2003. 23 December 2006. <http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=12773705&query_hl=20&itool=pubmed_docsum>

Tubero.com. "Natural Detoxification." <http://www.tubero.com/Detoxification.html>

Udagawa Y, Nagasawa H, Kiyokawa S. "Inhibition by whole-body hyperthermia with far-infrared rays of the growth of spontaneous mammary tumours in mice." PubMed.gov. United States National Library of Medicine (NLF) and National

Institutes of Health (NIH). 1999. 23 December 2006. <
http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=10628363&query_hl=8&itool=pubmed_docsum>

US Department of Health and Human Services. Mental Health: A Report of the Surgeon General. Rockville, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, 1999.

United States. Senate Subcommittee on Wildlife, Fisheries and Drinking Water: Vice President of EPA's Scientist Union Testifies Against Fluoridation. Statement of Dr. J. William Hirzy. 29 June 2000.

US Food and Drug Administration (FDA). Center for Food Safety & Applied Nutrition. Food Allergies, Rare but Risky. *FDA Consumer* (December 2004) FDA.gov. 15 December 2006 <<http://vm.cfsan.fda.gov/~dms/qa-adf9.html>>

Wikipedia. 3 December 2006 < http://en.wikipedia.org/wiki/Main_Page>

Wong, Cathy. "Your Guide to Alternative Medicine." *About.com* 20 December 2006 <<http://altmedicine.about.com/>>