

The REDDI Plan[®]



A Five-Step Program for Optimal Aging

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Introduction

When we are young, we take our health for granted. We run, jump, skip, roll and fling ourselves at the world with vitality.

Then we age.

We run a bit slower. We jump a bit lower. Our bodies don't heal as quickly, and we move into our middle years with a bit more trepidation.

Humans are living much longer. That's for sure. But now that trepidation is reaching millions—people working longer, dreaming bigger, retiring later, and having families well into their forties.

The U.S. Department of Health:

“The dramatic increase in average life expectancy during the 20th century ranks as one of society's greatest achievements.”

National Institute on Aging

Projections support a 1000 percent increase for people living to 100 years of age in the next forty-years.

This doesn't mean that aging hurts any less.

One thing we know for certain: As we age, vital hormone levels decline, and this leads to a direct causal correlation: Loss of sex hormones equals a decline in body function and overall health.

A miracle cure?

No. But *they are* powerful opponents to the aging process.

With hormones you are able to support the body's natural systems **and** prime your body for a longer life.

While *Hormone Replacement Therapy* is still an uncharted frontier, it has the potential of stabilizing and/or increasing our vitality well into our advanced years. With “bio-identical” hormones—compounds extracted from wild yams—we now have the ability to replenish missing hormones with chemically identical counterparts.

With effective hormone replacement we...

- . **Slow the Aging Process**
- . **Reduce Age Related Diseases**
- . **Maintain Optimal Health**

Start Hormone Therapy Early

Research suggests that people should begin to replace their declining hormones earlier rather than later. When we maintain optimal hormone balance without incurring a gap in hormone function, most individuals experience beneficial health results.

Along with an optimal diet, robust exercise, critical immune support, and reduction of toxicity, the implementation of the **REDDI** Plan will help you age (and live) as optimally as possible.

The pages ahead will define a health program that has improved the lives of hundreds of my patients, while guaranteeing the potential of a full and vigorous life.

Step 1:

Replace Missing Hormones:

**Bio-identical Hormone
Balancing for Men and
Women**



Hormones: Why You Need Them

Recently, I treated a 48-year-old woman, who struggled with severe health concerns. She experienced deep depression and unexpected weight gain. Her sleep was sporadic, if at all. But the most debilitating symptoms manifested in constant sweating—surges of heat, which rampaged throughout her body.

Her life no longer felt manageable and was spinning out of control.

The cause?

Zero hormones.

People need them for normal physiologic function and optimal health. When hormones are balanced and serving the body's needs, we eat better. We think better. We sleep better. We love better... we live better.

When men and women reach the age of 40, their hormones are already in decline. For men, it's a gradual process. Women are more dramatic, sometimes losing their hormones in only a few months.

Blame it on Mother Nature

Patients say to me "I've always been so healthy. Why do I feel so terrible?"

This is NOT a condition to feel at fault. You can blame it on Mother Nature.

Hormones evolved for one simple reason:

Procreation. And that's it.

Mother Nature doesn't care about your skin or hair or weight or brain function or libido, unless it is related to your ability to make babies.

“The primary purpose of hormones is procreation.”

Humans were genetically designed 300,000-400,000 years ago. And that genetic profile has not changed. Life expectancy in those days was 20-30 years. Women didn't live long enough to go into menopause.

Mother Nature didn't plan on such an increased life span, and now, as a result, we have to attend to our decline in normal body hormone production as we age.

Hormones Function Like Messengers in the Body

Hormones function as messengers in the body. They attach to receptors on the cell wall like the space module docking at the base station. When the hormone attaches to the receptor site on the cell wall, it sets off a series of reactions inside the cell, controlling how that cell will function.

Since the primary purpose of hormones is procreation, every message the hormone transmits to the various body tissues has to do with either helping the woman conceive, breast feed, or just remain healthy and capable of raising the children.

For men hormones help maintain robust health so he can successfully support "the brood" by being vital enough to provide food, protection and shelter.



Normal Hormone Pattern in Pre-Menopausal Women

Notice progesterone is almost zero for half the month and only goes up after day 14—after ovulation. Progesterone is needed to help develop the lining of the uterus to be able to accept a fertilized ovum. Ovulation occurs around day 14. Now notice the little bump in testosterone.

What's that for?

LIBIDO!

When testosterone goes up, so does women's interest in sex. Mother Nature only wants women to be interested in sex when they are ovulating, so she can reproduce.

By day 21, the hormones are highest, and the lining of the uterus is built up, prepared for conception.

Given the optimal conditions, life happens.

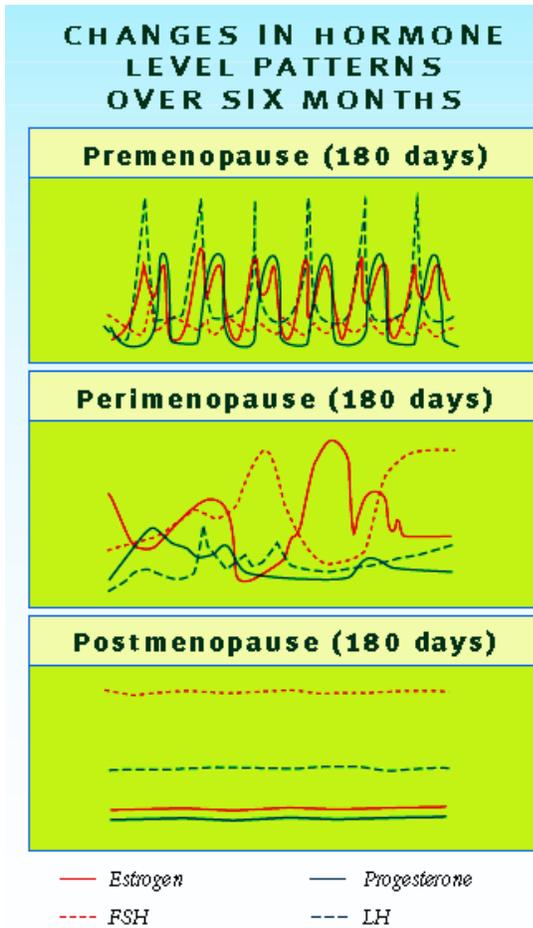
If a woman doesn't conceive at that point, then the hormones rapidly drop and the lining of the uterus is shed due to the withdrawal of the hormones.

Menses occurs.

Hormones drive this physiological occurrence month after month, year after year, until the body moves past the reproductive years.

Menopause occurs.

Post Menopausal Decline in Women's Health



Excerpted from the September 1999 issue of the *Harvard Women's Health Watch*, ©1999, President and Fellows, Harvard College.

When women reach the age of about 50, their ovaries run out of eggs and they stop ovulating. When this happens the reproduction factory is closed and shuttered for good.

After menopause women can't procreate. Mother Nature has no use for her anymore. She especially doesn't want her having sex with a fertile man, and wasting his time and sperm when he could be fertilizing a woman who can reproduce.

Once the ovaries stop producing hormones, all the various body tissues stop receiving the messages of what they need to do to stay healthy for procreation.

Tissues begin to deteriorate faster— brain, bones, skin, hair, libido, heart function, sugar metabolism— everything is affected. (Mother Nature just discards women who are no longer able to reproduce.)

When They're Gone... They're Gone

Hormone Loss Means:

- Decreased Stamina
- Cognitive Decline
- Decreased Libido
- Loss of Muscle and Increase in Body Fat
- Reduced “Zest for Life”
- Lack of Energy
- Slower Metabolism (rise in cholesterol and blood sugar)

This inevitability impacts both men and women differently. Women go through menopause and lose just about all of their progesterone, estrogen and testosterone.

Many consider this a “natural” transition in life. However, this “transition” doesn’t end. There’s a misconception that when hot flashes and night sweats subside, menopause is over.

Not true.

Once a woman enters the menopause, she is there for the rest of her life.

Both men and women, however, can slow this deterioration and neutralize some of the negative health effects of low hormones.

The Benefits of Bio-Identical Hormones

[Bio-identical Hormones](#) are hormones that are chemically identical to the hormones in our body. They are extracted from

plants, specifically wild yams. Then they are blended into creams or gels by compounding pharmacists. They are also available in commercial pharmaceutical preparations as patches that are precisely dosed.

Bio-Identical hormones, if properly administered, can perfectly recreate the menstrual cycle and “trick” Mother Nature into thinking the woman is still able to reproduce. Therefore all the tissues in her body receive the same messages as before.

The aging process *slows down*.

The most effective method of hormone replacement after menopause is to recreate the same premenopausal pattern.

When we put hormones back in the ***same premenopausal pattern***

in women, every cell in the body functions as it did before menopause, including the uterus. A normal three or four day menses in a woman on bio identical hormones is a good sign that her hormones are well balanced. That will be reflected by how good she feels.

“The only way to alter the deterioration in the body from the loss of critical hormones is to replace them.”

Maintain a Vital Body After Menopause

Women remain healthier longer, because their body thinks they are still of reproductive age. Cells are getting the messages the way they were designed to.

With hormones, the body responds:

- **Lower Risk of Heart Attacks and Stroke**
- Better Cholesterol Levels
- Lower Blood Sugar
- **Lower Blood Pressure**
- Improved Bone Density/Less Osteoporosis
- **Improved Cognition/Less Alzheimer's**
- Less Vaginal Atrophy
- **Possibly Less Risk of Breast Cancer**

Men and Hormones

Hormone loss for men is different. Men's primary sex hormone is testosterone. Although it steadily declines from around age 30, it never completely goes to zero. Men will also suffer from significant health deterioration due to the decline in testosterone.

Over a hundred research studies have demonstrated that [low Testosterone](#) (Low T) is associated with **serious health issues:**

Heart Disease

Prostate

Problems

Decline in Libido

Bad Cholesterol

Loss of Muscle

Mass

Cognitive Decline

Irritability

Loss of Bone

Density

Further, research studies attempting to connect testosterone with prostate cancer demonstrated the opposite effect. It was shown that men with **higher** testosterone levels had healthier prostates, in general.

Another study, which looked at the prevalence of prostate cancer, evaluated a random group of men age 50-70.

“Testosterone is a health-enhancing hormone that is critical in preventing a decline in men’s health.”

These men exhibited normal testosterone levels; they had **no** abnormal symptoms, **no** abnormal blood tests and normal prostate exams.

Testosterone Improves Quality of Life

These men were randomly subjected to prostate biopsy. Eleven percent of them were found to have an early, undetectable prostate cancer. So if these men had been prescribed testosterone, one would have assumed the testosterone caused the cancer, which was pre-existing.

Studies have also shown that, except for the most aggressive metastatic prostate cancer, giving men testosterone with low-grade prostate cancer does not worsen the prognosis and [significantly improves the quality of life.](#)

You are not any more wet in the ocean than you are in a bathtub just because there is more water around you.

Being wet is the same in a small body of water or a large one. Having low testosterone is no different than high testosterone for the cancer. Men with prostate cancer don't have zero testosterone, which used to be a form of treatment but was shown to not significantly change the course of the illness, *except for the widely metastatic type*.

Safety Concerns

There has been recent media attention questioning whether testosterone replacement is safe for men.

Attention has been focused mostly on two published medical journal articles claiming that testosterone increases the risk of heart attack and stroke.

These were poorly done studies.

“Testosterone replacement is a safe and health enhancing protocol for men in multiple parameters.”

There are hundreds of medical papers reporting the health benefits of testosterone over the past 20 years. A consortium of hormone experts submitted a letter to the Journal of the AMA, who published the study to rescind this study based on the poor quality of the research.

How to Take Testosterone

Testosterone for men comes in various forms—creams, gels, patches, injections and pellets. I prefer the injections or pellets. Most of the commercially available creams and gels such as Androgel are too weak for men. I give women similar concentrations.

The injections (1x per/wk) produce excellent results and are the most popular. I teach my patients how to self-administer in the upper thigh or buttock muscle.

Some men are opting for pellets. They produce the best consistent levels. They are the size of a 'tic-tac'. Typically 5 to 7 pellets are needed. They are implanted under the skin in a simple 10-minute office procedure and maintain excellent hormone levels for 4-5 months. At that time they will have dissolved and would need to be replaced.

Other Options to Boost Testosterone

Another popular option for boosting testosterone in men is HCG. HCG or Human Chorionic Gonadotropin is a pregnancy hormone. However it functions in the body exactly like Luteinizing Hormone (LH). LH is a pituitary hormone that stimulates the testes to produce testosterone. By administering HCG as a simple shot into the skin twice per week, we can replicate the pituitary stimulation of the testes.

This technique works very well in younger men with low testosterone. In older men, they often cannot produce more testosterone even if stimulated. Some men do well with a combo of both. HCG also prevents testicular atrophy sometimes seen with testosterone supplementation.

Both HCG and testosterone are classified as performance enhancing substances and are thus highly regulated by the DEA because of their potential for abuse.

Supplements for Men

I recommend a few supplements to help maintain prostate health:

- Saw Palmetto 320 mg/day and Plant Sterols 1000-1200 mg/day can help balance the various testosterone subfractions to avoid prostatic stimulation.
- Some men convert testosterone into estrogen if they have a large amount of belly fat (Beer Belly). They require an aromatase inhibitor to control this, in addition to losing weight. Chrysin, zinc and Melatonin are some natural aromatase inhibitors. Others on the market are Myomin.
- I particularly like Melatonin for men as it also helps with sleep as well as having anti oxidant properties (dosage at bedtime 3-20mg).

Occasionally I will prescribe a very low dose of anastrozole if the above supplements don't lower the estrogens.

Be Nice to your Prostate

The prostate is irritated by alcohol, caffeine and spicy foods. So limiting or avoiding these food products will help maintain optimal prostate health.

DHEA

DHEA is an excellent supplement for men. It is an adrenal hormone. It supports energy, testosterone production and libido. It

is “over the counter” so does not require a prescription. The usual daily dose is 25-50 mg.

I have formulated a custom proprietary supplement, which incorporates all of these ingredients in one convenient bottle. (6 caps per day) [Men's Hormone Balancing Formula](#)

Breast Cancer and Hormones

The greatest concern for women taking postmenopausal hormones is breast cancer risk. The common belief is that estrogen causes breast cancer.

This is not the case.

The causes for breast cancer are multifactorial. If estrogen was such a culprit, then why don't more young women get breast cancer when their hormones are sky high?

It has also been shown that women who don't get pregnant, don't breast feed and who take birth control pills have higher risk.

“All of these scenarios are consistent with low hormone levels, *not* high estrogen.”

Breast cancer doesn't just pop up overnight. It starts off and grows slowly. By the time it comes to detection it has probably been present for years. The incidence of breast cancer increases

year by year AFTER menopause when women have NO estrogen.

Unfortunately, like the 11% of men with undetected prostate cancer, if you give these women estrogen with undetectable early cancer, it may enhance the growth of the tumor.

“Many breast cancers have positive estrogen receptors making them more sensitive to stimulation by estrogen.”

French Study on Bio-Identical Hormones Demonstrates Benefits

[A French study using bio-identical hormones](#) placed 3,175 women on a hormone replacement regime BEFORE menopause. This means once they move into menopause they will never experience a significant drop in estrogen.

After 9 years these women are not showing any increase breast cancer.

Perhaps the connection between hormone replacement and cancer begins with timing.

Cancer may start to grow in an environment of low estrogen but remain undetected for years. Then when women begin estrogen

replacement, it feeds the small cluster of abnormally growing cells.

Begin Hormone Replacement *Before* Menopause

The longer women with low estrogen wait, the greater the chance that a cancer may start to grow in a low estrogen environment. I see women who have been in menopause for 10 years without ever having taken hormones. They decide at that time that they are aging too quickly and want hormones to slow it down.

These women are at higher risk of developing breast cancer than a woman who started hormones before her own hormones disappeared. Treatment is certainly possible, but it must be done with close monitoring and aggressive follow-up.

Hormone Issues

The Women's Health Initiative (WHI) study evaluated a subgroup of women who had hysterectomies. These women were only given premarin (estrogen from pregnant horses urine). There was no increase in the incidence of breast cancer observed in this group of women compared to the general population.

[This study involved 94,000 women, aged 50-79](#), a large sample group. The study was stopped prematurely because of the increase in breast cancer in the women who were taking both premarin and progestin.

The study concluded that estrogen is not the primary cause of breast cancer as previously thought. The continuous progestin was the culprit. (Not a real progesterone as used in bio identical hormones, but a derivative also from pregnant horses urine)

Natural Progesterone Reduces Cell Proliferation

Studies on natural progesterone show that it reduces cell proliferation in the breast and uterus and if used cyclically can reduce the risk of cancers in these tissues.

The hormone pattern used in the study above was extremely unnatural. The only time in a woman's life she would have continuous progesterone (and not an artificial progestin) is during pregnancy. Both estrogen and progesterone stimulate the breast tissue to produce milk for the newborn.

If you continuously stimulate the breast receptors with two hormones, especially when it is an unnatural pattern, there may be problems. In addition, other complications seen in pregnancy may arise such as high blood pressure, insulin resistance, excessive weight gain and even diabetes.

I do not recommend continuous progesterone.

Menstruation During Menopause

One inconvenience from cycling progesterone is menstrual bleeding. When progesterone is stopped in the cycle, the uterus responds just like it did before menopause, by having a

“progesterone withdrawal bleed”, but it’s a relatively minor inconvenience for safer hormones.

Many women don’t mind, and say that it makes them feel younger. They cannot get pregnant, as they are not ovulating, but everything else about the cycle is very similar to pre-menopause.

Bio Identical and Synthetic Hormones Compared

Most hormone data for women is derived from information gathered from studying synthetic hormones taken orally.

- *Synthetic hormones are metabolic end products of pregnant horse hormones excreted in the urine.*

They are not the same as human hormones and they were previously administered orally, and continuously.

“Women’s hormones are not designed to pass through the liver and digestive track”

Further, the only time women would have both estrogen and progesterone continuously is during pregnancy.

By administering both hormones continuously, the effect will reproduce similar complications as pregnancy such as high blood pressure, risk of stroke, diabetes and excessive breast stimulation to produce milk.

Normal pregnancy only lasts 40 weeks. Yet women were being administered continuous hormones for YEARS. No wonder they had problems.

Conclusions from the WHI is that it is not the estrogen component that causes breast cancer, but the continuous stimulation from the artificial synthetic progestin.

The Benefits of Testosterone for Women

Testosterone has been shown to be extremely beneficial for women.

- Maintains bone density
- **Lean muscle tone**
- Improves Sugar metabolism
- **Better brain function**
- Possibly down regulates breast estrogen receptors to reduce the risk of breast cancer

Testosterone also boosts the LIBIDO that Mother Nature doesn't want you to have!

Some patients are anxious that they will lose their hair.

Don't worry. You won't lose your hair.

When hormones are balanced, testosterone can actually *help* increase the number of hair follicles and reduce the loss of follicles in women.

The Ideal Hormone Replacement Regime

When I replace women's missing hormones, I give women estradiol and testosterone every day as a cream or pellet and then cycle in the progesterone for 12-14 days each month as a cream or oral capsule.

I see great results in multiple parameters including cholesterol, blood sugar and body composition.

Some women who use transdermal hormone cream develop what I refer to as "skin fatigue". Over time, the skin builds resistance to the absorption of hormones. Even after having good levels, I sometimes find hormone levels plummet.

The skin is just doing its job.

The skin is a barrier separating our inner body's environment from the harsh outside world. It's not designed to pass hormones across its surface. However, we don't have many options for administering hormones.

“The key to hormone replacement is to listen to the patient and not to just treat the lab tests.”

While transdermal creams have become very popular due to their ease of application and maintenance, the efficiency of this “barrier” only allows absorption of about 10% of what is lathered on.

The rest of it goes out to the ocean.

How to Improve Absorption of Transdermal Hormones

Exfoliate the skin in the areas where the creams are applied. Rotate the application sites. Don't apply any other cream or moisturizer to these areas. If all else fails, apply cream to mucus membranes.

Mucus membranes absorb the hormones significantly better than dry skin. These areas are the vaginal labia, rectum and perineum (the bridge of skin between the rectum and vagina). Hormones are much better absorbed here, sometimes so well that doses need to be adjusted down.

The Benefits of Pellet Implants

Pellets are tiny rice sized pulvules that are implanted under the skin on the buttocks in a 10-minute office procedure using local lidocaine. They slowly dissolve releasing low but steady levels of hormones directly into the blood stream similar to ovaries.

They typically last 4-5 months and then disappear completely, requiring new ones at that time. Typically estradiol, estriol, and

testosterone are used in pellets at varying doses, customized for each patient.

Progesterone is administered orally at bedtime for only 12 days each month to reproduce the normal hormone cycle.

Often the low level of the continuous hormone from the pellets is not enough to build up the lining of the uterus and therefore there is no menses. Dosing is very variable depending on each woman's individual needs.

Monitoring Hormone Replacement

Blood levels on my patients are monitored every few months until the correct levels are attained. After that, I check blood once or twice per year to monitor absorption and signs of other problems.

The uterus and the breast are the two most critical tissues responding to hormones and they need to be monitored to avoid any complications of abnormal tissue growth.

All women on hormone replacement should have a yearly pap smear, yearly pelvic ultrasound to measure the lining of the uterus and be sure it is not getting too thick, and some type of breast imaging (Either mammogram every 2-3 years, MRI every 2-3 years, Ultrasound yearly or Thermography yearly).

Some supplements that have been shown to help lower the risk of breast cancer:

- ❖ **DIM** 200 mg / day is an extract of cruciferous vegetables like brussel sprouts, cauliflower and broccoli.
- ❖ **Calcium D Glucarate** helps absorb and excrete excess estrogen from the digestive track. Dosage varies from 1000-4000 mg per day.
- ❖ **Iodine** 12.5-15 mg per day helps produce the protective estrogen Estriol.

“Studies found Japanese women have the lowest breast cancer rates in the world due to their consumption of iodine from kelp and seaweed.”

Overall, more research is needed in the area of hormone replacement therapy, and it is forthcoming. In the meantime I believe it is possible to safely take bio identical female hormones with proper monitoring, following natural patterns, healthful supplements and regular screenings with a doctor who is well versed in prescribing them.

Other Hormones:

All hormones in the body interact with each other and influence the collective function. In order to balance and improve hormone function, it is important to evaluate ALL hormones.

Hormones interact in the body like the musical instruments in an orchestra. If one instrument section is missing or not correctly tuned, the orchestra won't sound as well. So goes the balance of hormones in the body.

For this reason I suggest looking at all the hormones together when working to balance the primary sex hormones. They all decline with age, and need support to get the body to function optimally.

Three Essential Hormones to Consider:

- **Thyroid**
- **Adrenal Hormones**
- **Growth Hormone**

Thyroid

When thyroid function is off, other hormones will not work well.

The thyroid is a small heart shaped gland that sits in the anterior neck just under the Adam's apple. It is responsible for stabilizing and maintaining normal metabolism.

I see many people with low thyroid function from Hashimoto's thyroiditis. This is an autoimmune condition, where the body makes antibodies against its own thyroid gland as if it were a foreign tissue. There are many theories why this happens.

Sometimes it's due to a poor diet and the resultant gut inflammation (Leaky Gut). We are all genetically designed in the Paleo Era, and we are eating a lot of foods we were not genetically designed to eat. Many of us are living every day with gut inflammation without knowing it.

Gut Inflammation Produces Leaky Gut

Leaky gut is a condition resulting from the inflammation in the digestive track allowing undigested food proteins to “leak” out between the cells that line the gut and get into the blood stream. When these proteins are abnormally present in the blood, the body’s immune system recognizes them as foreign and attacks them by creating antibodies.

The thyroid continuously filters the blood. These abnormal circulating antibodies get “stuck” in the thyroid gland. The body’s immune system attacks these antibodies and damages the thyroid as an innocent bystander, thus damaging the gland.

Over time, this damage compromises the gland’s ability to produce thyroid hormone and as the

“Thyroid function must be optimized for other hormones to function well”

gland is weakened under the attack, thyroid hormone levels in the blood fall and the person ends up with low thyroid function.

Symptoms and problems from down stream chain reactions of other hormones not working efficiently are the result of all this.

Thyroid dysfunction must be corrected to balance the sex hormones. I check all hormones when I evaluate someone for hormone replacement.

I also run food intolerance tests, and work with my patients to make their digestive tracks healthier.

Oxidative treatment modalities combat the ravages of the autoimmune process. Both of these strategies will be discussed in more detail, later.

Symptoms of Low Thyroid Include:

- Lethargy
- Waking up not feeling rested
- Feeling like one is moving in molasses
- Difficulty with calculations (Dull thought processing)
- Dry skin and hair
- Brittle nails
- Difficulty losing weight
- Constipation
- Feeling colder than other people
- Generalized sluggishness and lack of energy

Many people have low thyroid hormone without the Hashimoto's autoimmune problem, just from the aging process. Thyroid hormone is rather easy to replace. It comes as an oral tablet, taken once a day in the morning on an empty stomach. There are multiple preparations.

Some are synthetic and others are derived from pig thyroid gland. I prefer the later as it is closest in composition to our own natural

thyroid hormones. I commonly use a preparation called Nature Thyroid. It is available in different strengths by prescription only.

Like any other hormone, when it is prescribed, follow up blood tests are needed to check the levels and properly monitor and adjust the dose.

Iodine is a major nutrient for thyroid hormone production in the body. Sometimes by taking an iodine supplement of about 10-15 mg per day or eating kelp and seaweed products, thyroid function will improve.

- *Low thyroid symptoms can often be confused with other gland systems, and there is a lot of overlap with female hormones, men's hormones and adrenal gland issues. It is best to run blood tests or a 24-hour urine analysis to clearly determine which hormone is the cause of the problem.*

In contrast the thyroid can also be hyperactive. This can occur spontaneously or can also result from taking too much thyroid hormone. This is called [hyperthyroidism](#) and can lead to a condition known as thyrotoxicosis, or even thyroid storm.

This situation can be very dangerous and even fatal as it can cause life threatening heart rhythm abnormalities.

Symptoms of an overactive thyroid:

- Palpitations
- Feeling hot when other people are comfortable

- Unexplained weight loss
- Jitteriness
- Irritability and nervousness
- Unusual sweating
- Diarrhea and, yes, bulging eyes

As one can see there are many symptoms here that are similar to menopause symptoms, so if in doubt it is safest to be checked by a doctor and have some simple blood tests performed.

Adrenal Hormones

The adrenal glands are two walnut sized glands that sit one on each kidney.



They may be small but don't underestimate them. They produce some of the most powerful hormones in the body.

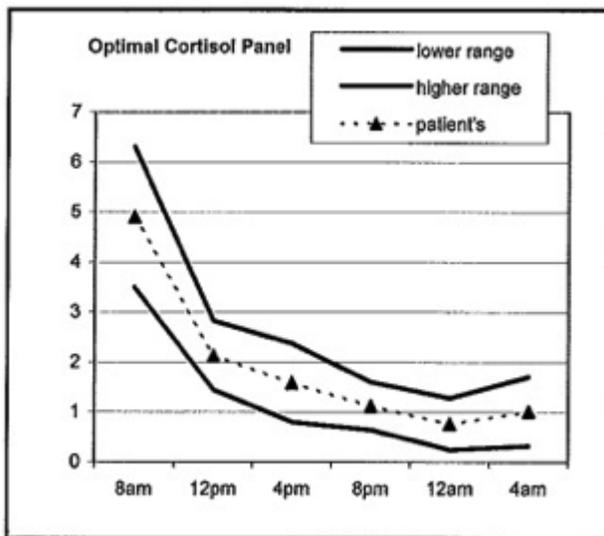
When they malfunction from either too much or too little production of hormones, they wreck havoc in the body.

Cortisol and Adrenaline

They make scores of different hormones that have many different functions. Two of the most well-known hormone groups they produce are **cortisol**, and the fight or flight hormone **adrenaline**.

These hormones have a tremendous effect on our energy levels and our ability to respond to stress or illness. Deficiencies can result in issues as diverse as severe allergies to chronic fatigue, weight gain or weight loss and even blood sugar irregularities.

Adrenal hormones are difficult to measure and evaluate since they fluctuate so easily. Even the stress caused by sticking a needle in the arm to draw blood in some people can raise the stress hormones. That is why I don't believe in measuring the adrenal hormones with a blood test.



Why You Need to Pay Attention to Your Hardworking Adrenals

This is a normal adrenal cortisol curve for one day. It follows the pattern of our Paleo ancestors.

Notice how it starts out high in the morning, which causes us to wake up, and then gradually declines through the day.

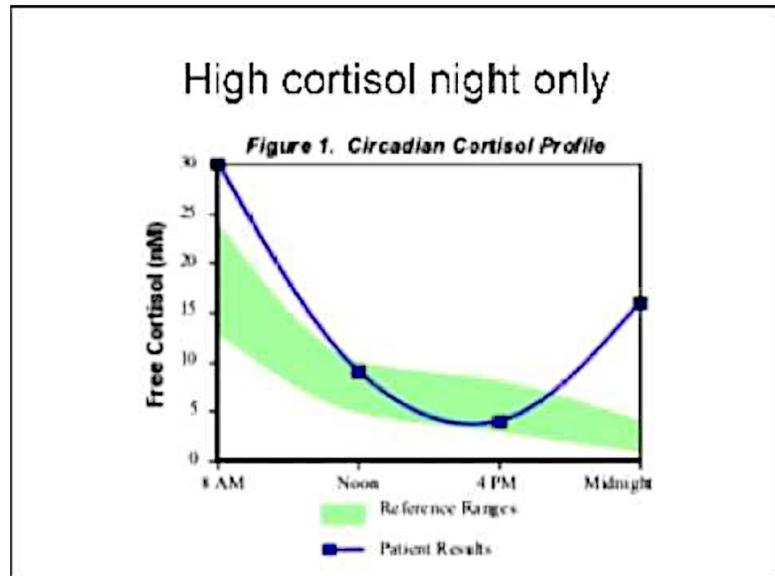
Cortisol reaches its lowest level in the evening, which allows our metabolism to slow down for us to go to sleep.

Our Paleo genes once again are designed for us to wake up in the morning and go to sleep when it gets dark. Just like our ancestors before the invention of light bulbs and computers.

Now we stay up well into the night demanding our adrenal glands to produce more cortisol later in the day so we can stay awake and continue to function. This is not how we were designed, and often results in abnormal cortisol production curves, like below.

Notice the rise in the right side of the curve. This represents abnormal adrenal cortisol production late in the day.

A cortisol rise helps us wake up in the morning.



So guess what a cortisol surge late in the day can do to us?

It makes it very difficult to get to sleep and sleep soundly. Not only that, it also causes us to get hungry, and have sugar cravings. When we push our bodies beyond what we are naturally programmed to do, our brain needs to be fed.

The brain is the organ that consumes the most sugar, and it is very greedy. If the sugar level falls, we can lose consciousness. So our built in defense to protect the brain from blacking out is the adrenal response.

When cortisol rises, it stimulates our hunger response so we will eat to produce more sugar for the brain. This allows blood sugar to go up. When blood sugar goes up, insulin goes up and suppresses the cortisol.

Since cortisol is our primary anti-inflammatory hormone, high insulin levels results in producing inflammation in the body.

Sleep disturbances are one of the most common problems I hear from my patients on a daily basis. A lot of it has to do with what is referred to as “poor sleep hygiene”.

What this translates to is a complicated array of conditions that prevents our bodies from following their programmed sleep patterns. They become so chronically deranged that it can take years of concentrated effort to restore them.

In the meantime, the adrenal glands are having unusually extenuating demands put on them over extensive periods of time.

“Inflammation is the cause of every disease from heart attacks to cancer.”

Just like any over used piece of equipment, they can poop out. This is known as chronic adrenal ‘burnout’. Before that happens we have endured years of high cortisol, high insulin, high blood sugar, weight gain, inflammation, which all can lead to high blood pressure, diabetes, heart disease, cancer or stroke.

Once our bodies have reached this state it's very hard to cure. In certain people, it's impossible without changing their lifestyle habits.

For some people this could mean a career change if they are required to work nights, or frequently change time zones, like pilots, or have to work in different time zones like stock brokers.

Want Healthy Hormones? Change Your Lifestyle

I deal with a lot of adrenal burnout in my patients who are in the entertainment industry. They are often required to work exceedingly long hours with little time to sleep, exercise or eat correctly.

Our Paleo designed bodies can only last so long before they start to demonstrate all sorts of problems. The root of the problem is not the hormones, but the lifestyle. I have advised some of my patients to change their jobs if they want to get healthier. Lifestyle change is crucial in order to have any hope of healing exhausted adrenal glands and returning metabolism back to normal.

Stressed and burnt out adrenal glands sometimes never recover, even with a lifestyle change. Those people may face years of what I call 'metabolic damage'—everything from sugar metabolism, cholesterol metabolism, blood pressure, heart function and all of their sex hormones may not be able to be balanced.

Hopefully, I am able to intervene before the damage becomes irreversible.

Maintaining healthy adrenal glands is definitely the preferable way to go. This is accomplished by following our genetic road map. We need to go to sleep at a reasonable hour in the evening and get a minimum of 7/8 hours of “quality sleep” every night. Quality sleep means it is uninterrupted and we are able to get into the deep REM zone.

Good sleep hygiene is simple:

Go To Sleep When You're Tired

- Listen to your body's [natural diurnal rhythm](#).
- Don't push yourself to stay awake late into the night.
- Sleep in a very dark room, or use eye shields.
- Even the little bit of light from LED's on TV's and clock radios is enough light to pass through the eyelids to the retina and prevent deep REM sleep.
- Don't drink alcohol or fluids close to bedtime.
- Avoid watching disturbing TV shows or upsetting work on the computer close to bedtime.

➤ **Great** book for learning about sleep hygiene: [Lights Out](#) by T.S. Wiley

Even then, it could take years of dedication to work. There are some supplements that can help, but they are only in conjunction with improved sleep.

“Good quality sleep is the foundational key to healing the adrenal glands.”

Adrenal Support Supplementation

Good quality high potency B vitamins are helpful. Good quality free-range protein is helpful. There are a myriad of supplements that may help with symptoms of fatigue and burnout such as Adrenotone or Adrenal Complex by Designs for Health.

DHEA 10-50 mg per day and Pregnenolone at doses of 30-90 mg per day may help. Pregnenolone is called ‘the mother of all hormones’. It is actually the precursor to all the adrenal hormones including cortisol.

I often recommend a series of 10–12 intravenous vitamin infusions in my office of vitamin C and B. I offer Hyperbaric Ozone therapy, which is very helpful in healing the adrenals. In the very most extreme cases, I will put the person on Cortisol medication by prescription.

“Cortisol supplementation should be considered very carefully.”

It is a tricky thing to do, because once someone has gone down this path, their adrenals may not recover to produce cortisol on their own. Usually patients need this hormone to function normally.

I don't make this decision lightly, as it is often a life long decision. It needs to be administered like other hormones, in the same pattern as it is generated naturally in the body.

Typically that means dosing it mostly in the morning and then again at noon. Rarely it is given in the afternoon. Remember by three or four in the afternoon cortisol is naturally declining, so if it is administered at that time it may interrupt sleep.

Growth Hormone

Growth Hormone (HGH) is the Rolls Royce of hormones.

It deserves that analogy for two reasons:

1. It is very expensive, and getting more expensive all the time.
2. It has a dramatic and powerful effect on the body.

The effects are extensive:

- HGH is the hormone most abused by body builders to help them get those huge muscles. It has a dramatic effect on lean muscle mass at the same time helping to melt away fat mass.

HGH Enhances: Bone density, **cardiac function**, lung capacity, **kidney filtration rates**, tightens the skin, **boosts energy**

Growth hormone is a naturally occurring hormone produced in the [pituitary gland](#) in the brain. Its physiological function is responsible for normal growth of children. It peaks during our youth—somewhere in the mid-twenties.

“Boosting HGH is desirable in middle-aged people as it can help maintain a more youthful physique as well as helping maintain energy and brain function.”

As we age, the hormone declines just like many other hormones in our bodies. The loss of Growth Hormone has a major impact on causing our bodies to LOOK and ACT old.

It is measured by checking one of its metabolites called IGF-1. IGF-1 in growing children is usually in the 300-400 range. Ideal for an adult is around 200. Many people in their

70s or 80s have levels around 70.

In my practice I often see levels ranging from 70 to about 160. I rarely find someone with a level over 200.

The best way to boost HGH is to just take it. It is provided as an injection into the skin every night just before bed. It is very easy to do, practically painless and very effective.

This regime is a life long commitment or certainly as long as one would desire the benefits. Once it is stopped, levels decline back to their baseline with the physiologic changes in the body to follow.

I call this The Cinderella Syndrome, as the chariot turns back into the pumpkin!

Cost runs as high as \$1000/month or more to maintain optimum levels of HGH. Improvement in body composition is usually not evident for at least 3 months.

More Affordable Growth Hormone

There are some alternative methods to boost growth hormone naturally that are more affordable. There are many 'secretagogues' on the market. These are numerous combinations of amino acids and nutrients that have varying amounts of success in stimulating the pituitary gland to produce more HGH. Good quality amino acids are often part of these formulas such as arginine, ornithine, and N acetyl cysteine.

There is also a new product called [Sermorelin](#), which is a peptide.

Sermorelin is the active terminal end of a growth hormone releasing hormone (GHRH) that stimulates the pituitary to secrete its own natural growth hormone.

It is almost as effective as HGH in raising IGF-1 levels at a fraction of the price. It is a growth hormone releasing hormone. It is only available by prescription. Costs run approximately \$200/month as opposed to HGH at \$1000.

Sometimes it can be found on the Internet marketed from China, but not entirely trustworthy.

Sermorelin is applied into the skin as a shot, usually every night at bedtime when the pituitary generally produces HGH, or after exercise. Strenuous exercise is known to raise HGH as well as eating good quality protein. That is why you may often see body builders gulping protein shakes after a strenuous weight lifting session.

Growth hormone and sermorelin have been administered to growth-stunted children for many years and is considered safe. HGH is highly regulated by the DEA because of its risk for being abused, mostly in the bodybuilding world.

[Secretagogues](#) vary in price and effectiveness.

I readily use HGH, sermorelin or secretagogues in various combinations when indicated with my patients, as there are multiple health benefits to maintaining good HGH levels.

These treatments may have concerns with cancer risk. All of these elements should be explored with a doctor experienced in these treatments before pursuing any course of action.

More Art Form than Science

People do not function like machines.

There is no “one way to do things”, and everybody responds differently from treatment to treatment.



Careful application of hormone replacement therapy requires multiple considerations, and, for many, an entire lifestyle change.

The pages ahead will introduce some valuable prescriptions with the hope that they will contribute to a larger conversation between patients and care providers, along with the steps necessary to pursue a protocol of safe and effective hormone replacement therapy.



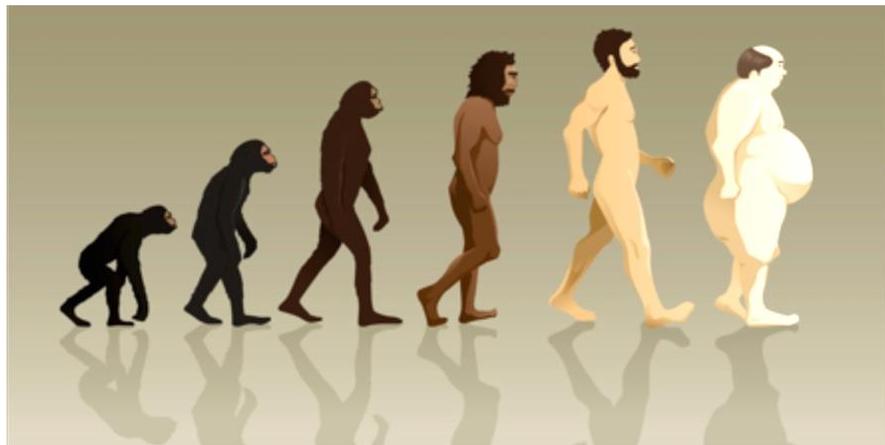


Step 2: Exercise

Humans were designed to be physical.

In Paleolithic times men, women and children needed to be extremely physical for daily survival.

We scavenged for food, built shelters, ran from predators, climbed mountains, walked long distances,



hunted, cleaned the kill, and skinned animals for clothing. Everything had to be done by everyone.

As humans evolved, along with the emergence of agriculture, mass production, and mechanized conveniences, life became largely sedentary. Now we move from couch to the car, the office chair to the café.

Technology and mechanization means we do less physically, which messes with our Paleo designed bodies.

Many recent studies report increased mortality from all diseases in persons who lead sedentary lives.

For those who prefer the couch to the treadmill, you're in danger.

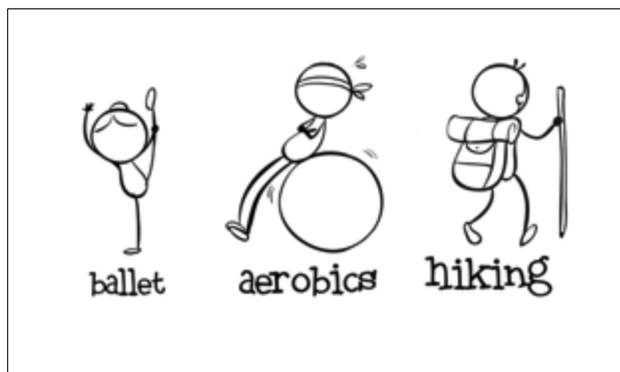
Don't Walk the Dog

When I ask my patients what they do for exercise many of them tell me: I walk the dog.

That's not exercise.

That's walking the dog.

The dog doesn't even get enough exercise.



“Now wait a minute!” you're saying: Walking the dog makes me happy (and the dog), and I get some exercise in the process.

That's true, but it's not the kind of physical activity that translates to longevity *and* reduced health risks.

Regular (Daily) use of our skeletal muscles is necessary to maintain health. Inactivity has been linked to everything from **obesity, diabetes, high blood pressure, heart disease, and even cancer.**

If we are to lead sedentary lives, then it's critical that we make a concentrated effort to do regular, daily and *strenuous* exercise.

Here's what the Surgeon General says:



*“A regular, preferably daily regimen of at least 30–45 minutes of brisk walking, bicycling, or even working around the house or yard will reduce your risks of developing coronary heart disease, hypertension, colon cancer, and diabetes. And if you’re already doing that, you should consider **picking up the pace**: people who are already physically active will benefit even more by increasing the intensity or duration of their activity.”*

If you want to enjoy a long and vital life, it's time to get busy. Get out of the house. Get out of the elevator (and take the stairs). Get out of your car (and walk a brisk ten-minutes to the market).

Get moving.

The Benefits of Core and Resistance Training



You can get a much ‘bigger bang for your buck’ in the same amount of time or less doing **core and resistance** training.

When you're using your core, all the other muscles in your body can work more efficiently, doing their job. If you're doing any other kind of serious exercise, a strengthened core will support you *and* prevent injuries.

Core exercises workout the muscle groups around the center of the body. These are the *biggest muscles* in the body. If you don't

have a lot of time, you can get the most benefit by exercising these large muscles.

Working large muscle groups will boost your metabolism. This lowers blood pressure, lowers blood sugar, burns fat calories and boosts growth hormone to support lean body mass.

Important Big Muscle Groups to Maintain:

- ✓ Abdominal muscles
- ✓ Back muscles
- ✓ Hip flexors
- ✓ Quads
- ✓ Hamstrings and upper chest and back

Many of these muscle groups can be exercised well without any equipment. Push ups, sit ups, leg lifts lying on the back, scissor kicks lying on the side, plank pose from yoga, holding legs up lying on the back, bicycle motion lying on the back... these are all exercises that engage the core and build strength.

The Balanced Workout



You achieve the most balance for your system when you warm up with a 10-15 minute cardio routine on the treadmill or elliptical and then spend another 30 minutes doing core training.

This is where many patients get that glazed look on their face.

How am I going to commit to that?

Enter the personal trainer

Whenever we condition our bodies, it's beneficial to have someone hold us accountable. Sometimes this means showing up for a class (Pilates and Yoga are great too as long as they increase your heart rate, at some point).

- ✓ Schedule a one-on-one session with a fitness expert or commit to a regular schedule of aerobic movement.
- ✓ When you're alone, the Internet is a great resource:
 - Check out the 8 Minute ABS YouTube videos. They're free. You don't need equipment or a gym membership. You can do them in your bedroom, hotel room, on a train or in a plane.

Best Time to Exercise

Is there a best time of the day to exercise?

Does it matter?

The best time of the day to exercise is in the morning. If you remember from the Adrenal hormones curve, cortisol spikes in the morning and then gradually declines throughout the day. It is lowest in the evening, thus allowing the body to calm down to go to sleep.

“It is best to try to synchronize our activities with the natural rhythms of the body.”

Many people exercise late in the day after work. I don't think this is a good idea as it revs up the cortisol again just when it is supposed to be declining. This elevated cortisol will again pose

problems with sleep and weight loss. I think the concept of 24 Hour Fitness allowing people to exercise any time of the night is ludicrous.

Benefits From Regular and Committed Workouts

Longevity

So... get sweating (if you don't, you're not working hard enough).

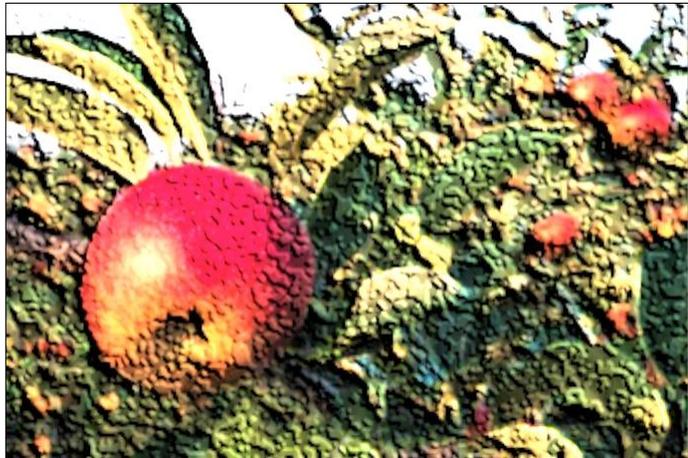
Get sore.

Get Moving.

Get living.

Step 3: Diet

Diet is the foundation upon which the rest of the REDDI Plan is built. If you don't follow an optimal diet, *nothing else works*.



I am a strong proponent of the [Paleo Diet](#).

This is not a fad diet like so many others. It makes scientific sense.

We Share Genetic Characteristics of Paleolithic Man

Humans evolved genetically as a successful species in Paleolithic times. This was about 300,000 years ago. Recent research reports that many of us still harbor up to 2% of Neanderthal DNA in our genetic make up.

While we live in a drastically different environment, the basic tenet of this diet declares that our genetics have not changed significantly since then, therefore, we should still be eating the way we were genetically designed to eat.

Frozen, packaged, boxed, freeze-dried, bottled, zip locked, genetically combined... you name it: **Manmade food defines us.**

If we compare our food to that of Paleolithic times, the most significant difference is the pure volume of “man made” food we ingest.

Processed foods such as grains, cereals, baked goods and dairy products did not exist in Paleolithic times. We have artificially created a modern nutritional framework, which causes disease.

“Our “Paleolithic bodies” were never designed to metabolize the large amount of carbohydrates we are now ingesting.”

High Sugar Diet Means More Inflammation

When we eat excess carbohydrates, they are converted into sugar by our body. Since we are not physically active enough to utilize the sugar, it doesn't get burned off as fuel. All these extra starch calories convert into fat.

- A high sugar load (glycemic load) in our bodies also triggers an inflammatory cascade through the interaction between insulin (the hormone that lowers sugar levels) and cortisol—our primary stress hormone.

Processed Carbs = Sugar = Inflammation

Too many carbs converted into sugar contributes to inflammation, which is responsible for virtually every disease, including high

blood pressure, heart disease, cancer, diabetes, stroke, autoimmune disease and arthritis.

The Paleo Diet Offers an Alternative

Here's a simple Wikipedia definition:

- . *“Paleolithic nutrition is based on the premise that modern humans are genetically adapted to the diet of their Paleolithic ancestors and that human genetics have scarcely changed since the dawn of agriculture, and therefore that an ideal diet for human health and well-being is one that resembles this ancestral diet.*
- . *Centered on commonly available modern foods, the ‘contemporary’ Paleolithic diet consists mainly of meat, fish, chicken, fresh vegetables and fruits, roots, and nuts; **and excludes grains, legumes, dairy products, salt, refined sugar, and processed oils.**”*

Our modern day staples evolved about 7,000-10,000 years ago at the dawn of the Agricultural Revolution.

When agriculture happened, civilizations flourished and man learned how to cultivate land, harvest crops, mill wheat into flour, bake bread, and *domesticate* cattle, goats and sheep.

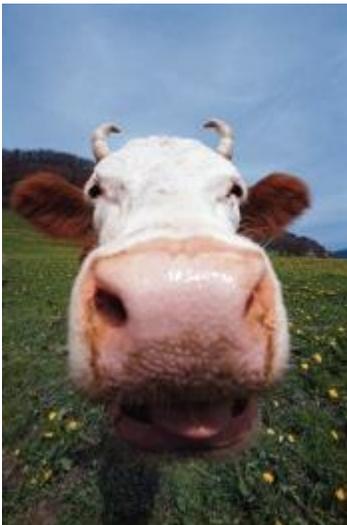
“Humans thus radically shifted their behavior from being hunters and gatherers who continuously roamed vast expanses of terrain driven by the seasons into farmers tending to the same small parcel of land dependent on the weather”.

In short: when the seeds were sown for the grilled cheese sandwich, the Fat Burger, the Double Decker, and the tuna casserole our health took a “nose dive”.

“Wheat, grains and dairy based foods are modern foods”

Paleolithic Man Never Ate Wheat or Dairy

Why would he? Milk is a food that supports mammals only during infancy. No mammalian species drinks milk or eats milk products after infancy.



Dairy was unobtainable until man learned how to make an animal stand still long enough to milk it (10,000 years ago - domesticated farm animals).

“Modern man is the only animal that drinks milk from another animal”

If you’ve ever tried to milk an ornery cow, you’d understand that Paleolithic man was never capable of obtaining milk from a wild animal.

Our bodies managed quite well for over 200,000 years before we began to ingest wheat and dairy products.

Milk NOT Good For Every Body

A recently published [Swedish study](#) **revealed that milk drinkers had higher mortality** from all illnesses compared to non-milk drinkers.

The study determined a direct correlation between the number of glasses of milk consumed per day and degree of illness.

The prevalence and frequency of many diseases of modern man can be directly linked to the development of “modern” food, or “foods of affluence”. Some cultures, which eat a plant based ‘paleostyle’ diet, so rarely have heart attacks, that they are reported in the local newspaper when they occur.

Calcium and Osteoporosis

Another Swedish study also evaluated the relationship between dairy consumption and osteoporosis.

“The study found that women who ate the most dairy products had the highest rate of fractures.”

The *benefits* of dairy are the great misconception, when research has determined that eating dairy products *weakens* your bones (in addition to producing inflammation and insulin resistance).

How Do I Get My Calcium, then?

- **Food and supplements**

Dark leafy greens are a great source of calcium, such as kale or spinach. Eating small fish bones is also an excellent source of calcium too, such as found in sardines.

- Paleo people regularly ate BONES and MARROW for that matter, which provided much needed calcium and fat.

Vitamin D

Vitamin D is a critical element for maintaining bone density. Everybody needs vitamin D.

But...

Warning: →

“Dairy products are NOT a natural source of vitamin D”

So, here's a solution.

Get more sun.

Many people are understandably concerned about skin cancer, so we protect our skin from the sun. But this tendency has kept us away from an excellent source of vitamin D—the sun—which has resulted in Vitamin D deficiency.

- Vitamin D is made *in our skin from sun exposure*.

Again, “think” Paleo man. He was constantly outside, didn't use

sunblock... or an umbrella.

Other Sources of Calcium

Another great source of vitamin D is supplementation. I tell my patients every day: “you do not need to drink milk to get vitamin D”. It’s much healthier to get it from a pill.

I recommend Vitamin D3 with Vitamin K2 at a dose of 5000 iu per day for most people, unless, again, you are out in the sun a lot. Your skin can make it with about 20 minutes of unprotected sun exposure a day.

The healthiest form of calcium to take as a supplement is Microcrystalline Hydroxyapatite at 250-500 mg per day.

So put down that yogurt container.

It’s making you sick!

Diet Related Illnesses Accepted as the Norm

We have become so accustomed to people having heart attacks, it is considered “normal” or acceptable. Likewise with the numbers of cancers we see.

We have grown to accept the diseases that afflict us, just as we embrace the “artificial diet” we eat.

This tendency is built into the social and economic fabric of our culture. Imagine what would happen to our economy if we shut down the dairy and wheat industries in this country?



“Our tax dollars are used to support a food industry that’s making us sick”

- *Our government subsidizes these industries when they are not doing well. In other words, our very same tax dollars that support our unhealthy food industry are then also used to pay our health care bills. Isn’t that Ironic? We are paying to support a SICK food industry that is making us SICK!*

We’re Eating Too Much Meat

Paleolithic man never had the opportunity to eat the massive volume of meat or type of meat and animal products we consume today. Check out the meat section in any grocery store and witness the overconsumption.

Paleolithic man was lucky if he could track and kill an animal once every few weeks. Once he captured the prize, the hunter ended up with a lean, wild, grass fed animal with very little body fat, after expending extensive amounts of his physical energy to get it. (Sometimes a hunt would last for many days. Contrast that to driving to the grocery store)

Furthermore, there was extensive competition for the kill. Many vicious carnivores would have been attracted by the smell of fresh

blood. The clever but puny human would have been no match for them. He was lucky to hack off a slab of meat and quickly depart the scene.

The Domestication of Diet: Our meat today comes from confined animals that do nothing all day but eat GMO processed grain feed loaded with antibiotics and hormones to increase their fat. Contrast that to wild game roaming meadows and pastures eating organic grasses.

Many of these unfortunate animals (like veal, calves and pigs) are prevented from walking their entire lives so as to maintain their muscles in a tender state. Contrast that to wild game that roams over hundreds of square miles.

The result is that our meat is heavily laden with the unhealthiest type of fat, which we consume in large quantities, and this consumption has a cost.

- **Refined Sugar & Alcohol Critically Linked to Disease**

There are many good scientific studies confirming the direct connection between alcohol consumption and cancer. These include oral cancer, esophageal cancer, colon and rectal cancer as well as prostate and breast cancer.

Live Longer with an Optimal Diet

When we change our eating habits to follow the diet that we are genetically designed to eat, all health parameters improve.

- . Reduced cholesterol
- . Reduced blood sugar
- . Lower Weight
- . Healthy blood pressure.

Most important:

- . No more inflammation

We **feel** better, have more energy, have better libido and our brain function improves.

We need to base our diet on foods derived from plant material, roots, nuts, seeds, fruits and a small amount of lean animal protein. Simply put, when you consider eating something, ask: “Was this food available 300,000 years ago?”

If your answer is “No”, ***don’t eat it!***

It’s not complicated. It’s not “Rocket Science”. It’s about returning to our Paleolithic Genetic foundation, and eating food our bodies were designed to function optimally on. I call this ‘Functional Nutrition’.

By eating this style of diet virtually every disease known to man can be avoided.

Let’s **really** enjoy our food, food designed to give us abundant energy and radiant health.

The Optimal Healthy Eating Day

At Breakfast Drink: [The Liebowitz Paleo Smoothie](#)

I suggest using a high-speed blender such as the Blend Tec or Vita Mix

- . 1 cup coconut water
- . 1 cup regular water
- . 1 cup frozen greens
 - o *FREEZE Your Own Organic Veggies Use kale, spinach, collards, or rainbow chard mustard greens, etc*
- . ½ cup frozen berries (Organic blueberries, strawberries, black berries)
- . 1 large scoop psyllium husk
- . 1 large scoop Whole Flax Seed
- . 10-15 chlorella tablets and add Spirulina
- . juice from ½ fresh squeezed lemon
- . 1 large scoop Liebowitz Longevity Paleo Protein Powder
- . <http://www.liebowitzlongevity.mybigcommerce.com/>

Lunch: *Keep it simple*

- . Eat a large green salad with grilled chicken, shrimp, turkey or fish

Drink Water!

4-6 cups of fresh filtered or alkaline water per day

Snacks: *Keep it Paleo*

- . 1 piece of fruit, ¼ cup almonds or other raw nuts. Raw Veggies dipped in hummus or babaganoush

Dinner:

- . ¼ lb piece of chicken, fish, turkey, beef patty or similar protein.
- . Grilled or sautéed veggies, large salad

Dessert or Snacks:

- . 1 piece of fruit; small piece of ultra dark chocolate

Step 4: Detoxification

Every day we are exposed to external toxins from our environment. Unfortunately we live in a “Toxic Soup”.

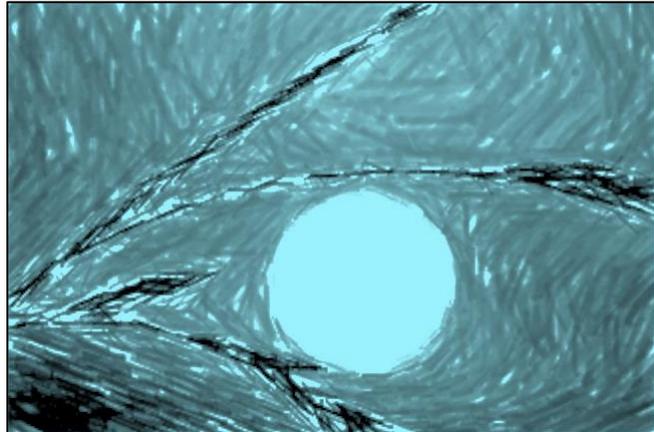
Toxic and unwanted chemicals are found in our foods, water, and air in the form of fertilizers, pesticides, heavy metals, and other artificial chemical compounds produced from our industrialized world.

Climate controlled environments like offices and homes are a breeding ground for airborne microorganisms such as molds. The off gassing from paint, carpet and new furniture can trap caustic fumes in a closed space.

Everything from plastic containers to dry cleaning clothes, cosmetics, and skin and

hair care products expose our bodies to unwanted pollutants.

All of these fall into the category of *external* toxins.



“If the body is producing and taking in more toxins than it can safely eliminate, a state of chronic toxicity will occur.”

Our Bodies Produce Internal Toxins

Internal toxins are unwanted substances, which result from normal byproducts of our digestion and metabolism. Internal toxins are also the waste products of any infectious microorganisms living in our bodies.

Normally, this shouldn't be a concern.

When our bodies have the proper nutrition in sufficient quantities but also have organs capable of eliminating toxins, we can eliminate these unwanted substances, safely and efficiently.

But if the body is producing and taking in more toxins than it can safely eliminate, a state of chronic toxicity will occur.

When the body has been overburdened with toxic substances for a prolonged period of time, it loses its ability to detoxify the toxins being produced and ingested.

The Beginning of Toxic Overload

A prolonged state of toxicity undermines organ and cellular function. The result of years of toxicity is chronic disease. ***Herein lies the need for focused, regular medical detoxification.***

Consequences of the accumulation of toxins:

- Impaired energy production and metabolism
 - Direct relationship to fatigue, brain fog, aches and pains

- Difficulty losing weight
- Increased risk of many types of cancer (colon, lung, liver, bladder)
- Immune system impairment: autoimmune disease, brain degeneration, and impaired memory



The Road to Detoxification

"Detoxification" refers to the body's process of neutralizing and safely eliminating harmful chemicals.

Detoxification is designed to enhance the body's innate ability to handle toxins.

Since we are bombarded with modern toxins constantly, it is unrealistic and virtually impossible to eliminate external toxins completely.

The body can be supported so that it is better able to cope with the daily stresses of modern life and thereby establish a higher level of health.

Detoxification has a beneficial effect on chronic illnesses because it has an impact on all systems of the body: cardiovascular, nervous, immune, reproductive, gastrointestinal, urinary, integument (skin), musculoskeletal and endocrine.

The Many Benefits of Detoxification

- ✓ Increased Energy, Vitality and Stamina
- ✓ Increased Immunity and Resistance to Infection

- ✓ Reduced Aches and Pains
- ✓ Reduced Allergy Symptoms
- ✓ Improved Digestive Functions
- ✓ Enhanced Liver Function
- ✓ Better Circulation
- ✓ Improved Sleep
- ✓ Heightened Mental Clarity
- ✓ Greater Sense of Calm

What is Detoxification?

A focused detoxification program is a specific period of time during which the individual “gives his body a break” from the normal daily routine of toxic exposure and performs specific tasks to enhance the elimination of toxins from the body.

Detoxification consists of 3 phases:

1: The Elimination Phase

First, you must limit your diet to only those foods that help detoxification and elimination. The acceptable foods (below) are easily digested, freeing up energy for healing.

Restrict all foods that are unhealthy, or put a strain on your body’s detoxification system.

Supplementation supports blood sugar, detoxification, elimination and energy levels.

“The elimination phase stimulates the release of toxins from the body at a deep level.”

Although you may experience some detoxification symptoms during this time, they will pass and you will soon begin to feel the benefits of increased health and vitality.

2: The Reintroduction Phase:

Here you gradually reintroduce previously restricted foods back into your diet. One food is reintroduced every 1-2 days. This helps to gain awareness of food sensitivities.

3. The Maintenance Phase:

This phase signals the time for transition back to a more balanced diet. At this time, some supplements may be continued to support the digestive, detoxification and elimination organs.

THE DETOX DIET:

- **All non-starchy veggies:** Broccoli, cauliflower, Brussel-sprouts, avocado, watercress, cabbage, kale, garlic, onions, shallots, zucchini, summer squash, asparagus, artichoke, leeks, leafy greens, salad greens, cucumber, etc.
- **Root vegetables**:** sweet potato, yams, carrots, beets, parsnips, etc.
- **Low glycemic fruit:** berries, apples, pears, peaches, cherries, grapes, pomegranate, citrus - especially the inner peel (but not grapefruits).

- **Spices:** Caraway, Clove, Cayenne, Turmeric (curcumin), Cinnamon, Ginger, Cumin
- **Fresh herbs:** all are excellent (Rosemary, Basil, Dill).
- **Grains:** Quinoa, buckwheat, brown/Wild Rice
- **Beans:** Best soaked prior to cooking; also, bean sprouts, green beans.
- **Seeds:** Pressed seed “crusts” and crackers (in place of bread and flour products).
- **Nuts:** Pine nuts, pecans, walnuts, soaked almonds.
- **Oils:** Olive Oil, coconut oil, krill/fish oil, sesame oil, nut oils, ghee (clarified butter).
- **Seaweed**
- Real fermented sauerkraut or kimchi
- **Condiments:** Apple cider vinegar/lemon juice and olive oil, Bragg’s aminos, Bragg’s Vinaigrette dressing, Vogel’s vegetable 'salt', unrefined sea salt.
- **Natural sweeteners:** stevia, xylitol
- **Beverages:** Green tea, rooibos (red tea), herbal teas, detox teas (Yogi Tea, Traditional Medicinal, Seelect).
- **Water:** Spring water, filtered, Alkalinized or distilled water with electrolytes replaced via lemon/lime or electrolyte drops. Ozonated water is fantastic.
- **Vegetable juice:** Only 25% - 50% sweet (carrot, beet, apple), the remainder should be celery, cucumber, and leafy greens.

****Avoid if insulin resistant**

In addition to the “acceptable foods” you may consume two Detox Smoothies per day as meal replacements for protein supplementation and detoxification support.

The Detoxification Smoothie© Liebowitz Longevity Medicine

Detoxifying and Healing Shake Recipe:

Drink this 2 times per day for the first week and once per day for the second week.

You can take an extra scoop of protein powder (PaleoCleanse or Ultraclear Plus pH and/or Mineral Force) anytime your blood sugar/energy feels low.

- ❑ 2 scoops UltraClear Plus pH (Metagenics) or Paleo Cleanse(DFH)
- ❑ 1-2 teaspoon “Greens” powder or Spirulina
- ❑ 1-2 teaspoon MSM
- ❑ ½ to 1 Tablespoon Phosphatidyl Choline
- ❑ 2 teaspoons GI Revive(DFH) or L-Glutamine
- ❑ ½ to 1 Tablespoon fiber- Flax or Psyllium(Too much fiber can cause constipation in some people, start with a small dose and work up)
- ❑ Sun Chlorella 1-2 sachets or 12 tablets
- ❑ Add Cilantro and Fresh squeezed Lemon juice for extra Zing

Mix above ingredients in blender or cup/jar with tight fitting lid, you may add the following to improve flavor and texture:

- ❖ ½ to 1 ½ Cups of organic, low glycemic fruit or berries
- ❖ ½ Cup of apple, pear or other low glycemic juice
- ❖ 1-2 Cups of water or almond milk
- ❖ For sweetening: xylitol, ground cinnamon, vanilla extract; a scoop of almond (or other nut) butter can be used for added thickness.

Take these capsules/tablets:

- ❑ Probiotics (UltraFlora or Flora Stor from Metagenics) – 1 capsule 2x per day
- ❑ Aloe 200/X (DFH) – 1-3 capsules am and pm; increase dose if necessary. 2-3 bowel movements per day is optimal.

Metagenics and **Designs for Health (DFH)** products can be found at LiebowitzLongevity.com. By clicking the Store tab on the menu bar, you will link to both of these catalogues.

I offer additional support for detoxification with *intravenous vitamin drips of B vitamins, Vitamin C, and Glutathione*. *Hyperbaric Ozone infusions are very helpful as well in helping up-regulate liver detoxification pathways*.

Additional benefits can be achieved from Far Infra Red Sauna sessions and Colon Therapy.

Heavy Metal Toxicity

More advanced detoxification may be needed in cases of heavy metal toxicity.

First the proper testing must be done. This is accomplished in two stages: First, you avoid all seafood for a week and then you analyze a 6-8 hour urine collection after ingesting a provoking chelation agent.

If heavy metals are found to be present, then a series of chelation treatments are needed to cleanse the body of the toxic metals. This can usually be done in the office with EDTA intravenous infusions or sometimes oral DMSA or DMPS given in a monitored series. Intravenous infusions of vitamin C, and glutathione are also helpful in promoting the clearance of heavy metals during chelation.

Repeat heavy metal testing is required to determine when the metals have fallen to a safe level.

Heavy Metal Toxicity is one of those problems that if it is not considered and tested for it will not be properly resolved.

“Toxic levels of heavy metals in the body can create symptoms ranging from severe chronic fatigue, immune weakness, headaches, difficulty concentrating, or difficulty losing weight.”

A common cause of heavy metal toxicity originates from dental amalgams, which create toxic levels of mercury. Sometimes people will have the amalgams removed. But proper care must be taken during the removal process to prevent absorption of the mercury. This can result in toxic levels of mercury, which can last for many years.

Testing for heavy metals is easy and inexpensive. Anyone suffering from unexplained headaches, fatigue, difficulty losing weight, neurologic problems, autoimmune problems or lack of concentration should be sure to have this correctible problem ruled out.

Foods to Avoid During Your Detoxification Program

- **Oils:** No hydrogenated oils/trans fats, butter or margarine.
- **Beverages:** Avoid all forms of alcohol including beer and wine and all caffeine (except green tea), coffee, black tea, and all soft drinks.

- **Condiments:** sugar, honey, molasses, artificial sweeteners, chocolate, ketchup, mayonnaise, Worcestershire sauce, barbeque sauce, all other packaged relishes, dressings and seasonings.
- **“Convenience” Food:** Any packaged, canned, boxed, or commercially prepared food.
- **Sugar in all forms:** White sugar, high-fructose corn syrup, sucrose, glucose, maltose, corn syrup, white grape juice concentrate, dextrose, lactose.
- **Gluten Products:** Wheat, rye, oat, barley, spelt, kamut, including pasta and bread.
- **Processed Grains:** White flour, white bread, and white rice.
- **Dairy Products:** (milk, cheese, butter, yogurt, cottage cheese)
- **Eggs**
- **Soy** including edamame and soy sauce
- **Grapefruit**
- **Nightshade Vegetables:** Potato, tomato, eggplant, bell peppers

AVOID ONLY DURING FIRST WEEK: Animal protein such as meat, fish, and poultry.

Step 5: Immune Support

The immune system is critical for all of our health issues. It is intimately affected by our diet, by toxic exposure, by stress, and by our hormones. Even exercise has been shown to have a beneficial effect on the immune system.



How Diet Impacts Our Immune System

- **“Seventy percent of the immune system follows the digestive tract.”**

Lymph nodes, the spleen and the liver are all situated in close proximity to the mouth, throat, and stomach, small and large bowel. What we put into our mouth represents the greatest interaction we have between the outside world and our inner environment.

Mother Nature built our bodies so that we would have our greatest level of defense along this route.

It's no surprise that our food is so critical to our health.

Eating foods that we are not genetically designed to eat, and ingesting toxins on a regular basis can eventually distress the immune system to the point of failure.

Get Your Body *Immune Ready*

One common test I offer my patients is the *Comprehensive Food Intolerance Panel* from ALCAT Lab. This test analyzes hundreds of foods, spices and even additives, and stratifies them into high, moderate, low, or no intolerance.

When one follows the recommendations gleaned from this information, many symptoms of digestive disturbance and general inflammation resolve. We ingest so many things, which contain unknown substances.

“Our Paleolithic digestive tracks were never designed to process the modern toxins and additives we are regularly exposed to.”

The same goes for our Paleolithic Immune systems.

What Happens When the Immune System Breaks Down?

Our immune system functions like a surveillance system—similar to the rocket defense system America has in place to protect us from incoming ballistic missiles.

The immune surveillance system is constantly seeking and destroying foreign and harmful invaders. These may be in the form of viruses, bacteria, yeast, or cancer cells.

Protect from Cancer and Other Illness

We are constantly being exposed to cancer cells. Our healthy immune system recognizes these abnormal cells and destroys them as foreign invaders before they can get a foothold and grow into a tumor.

When the immune system gets overwhelmed, its defense grows weakened by toxins, fatigue, stress, or even low levels of essential hormones. These 'breakdowns' in the immune system allow viruses such as herpes, Epstein Barr, Hepatitis C, and HIV to become "established" in the body.

“A robust immune system defends itself from these invaders.”

The same can be said for cancer cells. Under optimal conditions, when cancer cells spring up (due to mutations of normal cells), our immune system should knock them out. But as we age, so does our defense system.

As we lose our hormones, cells stop receiving certain messages. Add the high levels of toxins we ingest and the immune system grows weaker. Optimal function is impossible.

Then, when an invading cell comes along, we are not strong enough to fight it off and it gets a foothold and begins replicating.

❖ **The end result: Chronic illness or cancer.**

Along with the first four steps of this program, there are effective approaches you can take to help boost your immune function to keep it as robust as possible.

The Benefits of Oxidative Medicine



Normal breakdown products of foods and toxins produce what are called Free Radicals.

These free radical by-products can have a deleterious effect on normal cell function including the immune system.

Antioxidants help to up-regulate the body's normal mechanism for clearing them out of the body. There are many antioxidants one can take orally such as Vitamin C, Vitamin E, Resveratrol, Curcumin, and NAC, which is a precursor to glutathione, one of the most powerful antioxidants.

With the proper balance of everything and antioxidants, one should be able to keep the immune system healthy.

Specialized Treatments

Unique treatment modalities have existed for almost a hundred years and have been demonstrated to be extremely safe.

- Ozone Therapy
- Ultra Violet Blood irradiation (UVBI)
- Intravenous antioxidants such as Vitamin C, Hydrogen Peroxide and Glutathione.

The beauty of these treatments is that they are extremely damaging to abnormal cells like cancer, viruses, bacteria, and yeast, but completely innocuous to normal tissue.

“Ozone therapy and Ultra Violet Blood Irradiation (UVBI) were developed and used over 80 years ago prior to the discovery of antibiotics.”

They were extremely effective in treating all sorts of infections included severe gangrene in war wounds from WWI. *[Recently a group of doctors brought these treatments to Sierra Leone to help combat the Ebola outbreak]*

When antibiotics were discovered, interest in alternative treatments rapidly faded, as it was much easier to just take a pill.

In Russia and Germany, many practitioners kept the modalities alive, where they are still readily available and have been in practice continuously since the early 1900s.

A Resurgence Of Old Fashion Treatments

There is a resurgence of interest in these treatments. As bacteria emerge with resistance to antibiotics, more “alternative” methods are sought to fight unrestrained growth.

“There has never been an organism resistant to treatment with Ozone or Ultra Violet light.”

Interest is being directed to these treatments as they demonstrate beneficial effects on autoimmune diseases such as Lupus, Rheumatoid Arthritis and Scleroderma.

The [American Cancer Society](#) recently funded a \$200 million study on UVBI and now recommends it on their web site for multiple conditions. It is FDA approved for skin manifestations of T cell lymphoma.

➤ **HOW CAN THESE SIMPLE, HARMLESS TREATMENTS BE SO EFFECTIVE FOR SO MANY ILLNESSES?**

First of all, they are toxic to bacteria, viruses, yeast and cancer cells, but completely harmless to normal cells. In addition to that, they have a powerful effect on up regulating and boosting the immune system.

While these treatments are helping to eradicate these abnormal cells from the body, they simultaneously boost the immune system to add a double whammy to the attack.

These treatments are easy to do in the office. They take about 30 to 40 minutes. Most people start to feel better almost immediately.

An intravenous line is started on the arm. Blood is extracted through the tubing into a sterile bottle or bag. The blood is then exposed to either pure ozone gas or the ultraviolet light source as it is being returned to the patient. When the infusion is complete the intravenous line is removed, and the patient can go right back to their usual activities.

➤ **IF THESE TREATMENTS ARE SO EFFECTIVE, WHY AREN'T THEY MORE COMMONLY UTILIZED?**

Blame it on the multi billion-dollar pharmaceutical industry in our country. This industry works diligently through their well paid lobbyists in Washington D.C. to suppress any successful treatments that might offer an alternative to prescribing medications—even if those medications are less effective and fraught with numerous serious side effects.

Here in the US, treatments such as ozone therapy or ultraviolet light are considered “Alternative”. In most other countries they are the mainstream of medical care.

Doctors in Germany, Italy, Russia and Switzerland readily offer Oxidative treatments to their patients. There is no downside or adverse reaction to them, and only benefits. Many conditions can be cured in as little as 2 or 3 treatments.

“Complications from medications are the fourth most common cause of death in hospitalized patients in America, right behind, heart disease, cancer and stroke.”

In addition to using Ozone and UVBI for treating specific illnesses, many people opt to receive treatments on a “maintenance” schedule as part of a healthy ageing program to keep their immune systems as robust as possible.

I also see many patients for these oxidative treatments at the earliest sign of a cold or flu. Often, if the virus has not had time to get ‘established’, they can be eliminated completely after one treatment. An excellent treatment for “Flu” is the UVBI treatment followed by intravenous vitamin C. Many patients will come in for routine maintenance treatments monthly just for prevention.

UVBI and Hyperbaric Ozone are also very effective to help support the immune system during chemotherapy, and as an adjunct to fighting cancer or to help the body tolerate the chemotherapy.

This has been documented on thousands of patients. They have also been shown to work for allergic problems such as asthma, bronchitis and rashes such as poison ivy and shingles.

These treatments are easy, and have an established safety record of over 80 years of history. They have fewer side effects than even aspirin and Ibuprofen.

OXIDATIVE TREATMENTS HAVE BEEN EFFECTIVE FOR OVER 60 DIFFERENT DISEASES:

VIRAL INFECTIONS:

HIV
Hepatitis
Influenza
Herpes Simplex and
Zoster (shingles)
Mononucleosis
Mumps
Measles
Viral Pneumonia
Polio

BACTERIAL INFECTIONS:

Pneumonia
Non-Healing Wound
Infections
Septicemia
(Staphylococcus,
Streptococcus,
Pneumococcus)
Lymphatic Infections
Peritonitis
Recurrent Skin
Infections
E. Coli Infections
Respiratory Infections
Sinus Infections

AUTOIMMUNE DISEASES:

Chronic Fatigue
Fibromyalgia
Lupus
Rheumatoid Arthritis
Psoriasis
Psoriatic Arthritis
Raynaud's Disease
Scleroderma
Multiple Sclerosis

OTHER

Poor Circulation
Heart Disease/Angina
Chronic Yeast Infection

You Are REDDI To Get Healthy And Stay Healthy

Strive towards optimal health and **celebrate**.

Celebrate your renewed sense of commitment;
your commitment to *yourself*.

Notice the focus in your clarity and passion.

If you are willing to put some effort into a healthy diet, exercise routine, replace your missing hormones as you age, protect your immune system and prevent toxicity from poisoning your body, you will be rewarded with a long and highly productive life—with a body unencumbered by the ravages of chronic disease and toxic medications.

The ultimate goal of my REDDI program is Radiant Health and a Robust Life.

Nothing is better than that!

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