

THE *NATURAL* BONE BUILDING HANDBOOK



VIVIAN GOLDSCHMIDT, MA

The Natural Bone Building Handbook

By Vivian Goldschmidt, MA

Notice: This book is not intended to replace recommendations or advice from physicians or other health-care providers. Rather, it is intended to help you make informed decisions about your health and to cooperate with your healthcare provider in a joint quest for optimal wellness. If you suspect you have a medical problem, we urge you to seek medical attention from a competent healthcare provider.

Copyright © 2009-2010 Save Our Bones, Vivian Goldschmidt

All rights reserved under all Copyright Conventions.

No part of this book may be reproduced, or resold, without written permission from the author.

Actonel®, Didronel®, and Prilosec® are registered trademarks of Procter & Gamble Pharmaceuticals, Inc., Aleve® is a registered trademark of Bayer Corporation., Aredia® and Zometa® are registered trademarks of Novartis Pharmaceuticals, Inc., Avandia®, Tums® and Tagamet® are registered trademarks of GlaxoSmithKline., Boniva® is a trademark of Roche Therapeutics, Inc., Camel® is a registered trademark of R.J. Reynolds Tobacco Company., Coumadin® is a registered trademark of Bristol-Myers Squibb Pharma Company., Crest® and Tide® are registered trademarks of Procter & Gamble., Evista® and Forteo® are registered trademarks of Eli Lilly and Company., Fortical® is a registered trademark of Upsher-Smith Laboratories, Inc., Fosamax® and Pepcid® are registered trademarks of Merck & Co., Inc., Miacalcin® is a registered trademark of Novartis Pharmaceuticals., Nexium® and the color purple as applied to the capsule are registered trademarks of the AstraZeneca group of companies., Prevacid® is a registered trademark of Takeda Pharmaceuticals North America, Inc., Protelos® Protos®, Osseor®, Bivalos®, Protaxos®, Ossum® are trademarks of Les Laboratoires Servier., Roloids® is a registered trademark of Warner-Lambert Company, Vioxx® and Zocor® are registered trademarks of Merck & Co., Inc., Vytorin® and Zetia® are registered trademarks of Merck & Co. and Schering-Plough Pharmaceuticals, Zantac® is a registered trademark of Warner-Lambert Company.

Save Our Bones

3389 Sheridan St. #183

Hollywood, FL 33021, USA

saveourbones.com





THE NATURAL BONE BUILDING GUIDE

Introduction



In this report I would like to share with you the truth about osteoporosis and reveal a scientifically proven natural and drug-free way to have strong and healthy bones, increase your bone density, and conquer osteoporosis and osteopenia once and for all. Please feel free to email this e-book to any of your friends, family, or co-workers that you think would benefit from it. They will surely be grateful that you shared all of this information with them. Indeed, this sounds very ambitious, but that is not all... You will also discover that my bone health program is easy to follow without the need to buy any exotic or hard-to-find products, expensive exercise equipment, or follow impossible diets. In fact, just about everything you need to succeed may already be in your pantry!

But first let me tell you about...

The Chilling Day That Changed My Life

I remember the exact day: It was August of 2004. Summer was in full swing here in South Florida. My three sons were enjoying care-free days floating in the pool with friends. Life couldn't be better. Just having turned 50, I scheduled my first-ever bone density test. After all, that's what women my age do.

I remember sitting in the cold room, waiting to hear the results from my doctor. I'm an optimist and kept reassuring myself that everything will be okay. But what the doctor said shocked me to my very core. He was holding the results and they showed that I had osteoporosis. Then, without saying much, handed me a prescription for Fosamax to 'treat' my osteoporosis. At this point I was holding back tears; I would not accept this.

Thanks to my background in nutritional sciences and biochemistry I already knew that I wanted to avoid taking prescription drugs at all cost. So I didn't know what to do. But I did know I had to do something, very fast, before my condition would worsen. I needed an alternative osteoporosis cure. And as I was thinking about it, I asked myself: Before I start taking the osteoporosis drugs with potentially dangerous side-effects, why don't I consider what it is I want... and don't want... in an osteoporosis remedy.

So first, I began thinking about what I DON'T want in an osteoporosis treatment...

- ❌ I don't want to take prescription drugs because of the known (and even worse, unknown) side effects.
- ❌ I don't want to have to do time consuming exercises.
- ❌ I don't want to take costly osteoporosis pills and still fracture a bone.
- ❌ I don't want to live with pain.
- ❌ I don't want to follow an impossible osteoporosis diet.
- ❌ I don't want to lose height and bone density.
- ❌ I don't want to have to buy expensive osteoporosis equipment.
- ❌ I don't want to lose my independence and mobility.
- ❌ I don't want to live with fear and anxiety because of osteoporosis

Then, I began thinking about what I DO want in an osteoporosis treatment ...

- ✅ I want an all natural osteoporosis treatment that works.
- ✅ I want to reverse osteoporosis without taking any drugs.
- ✅ I want to find out the real truth about osteoporosis.
- ✅ I want to increase my bone density scores naturally.
- ✅ I want to cure osteoporosis with no negative side effects.
- ✅ I want to live a worry-free, long and happy life.
- ✅ I want to get to the bottom of WHY I was diagnosed with osteoporosis. Why were my bones getting weaker?
- ✅ I want a proven osteoporosis remedy that's based on reliable scientific research.

And do you know what? I tore up the small prescription paper and never turned back... I, like you, am a fighter. And after hundreds of hours of research...

I'm going to tell you exactly what works by telling you how I found these amazing answers for myself.

I found the perfect natural cure for osteoporosis

It's true, and here's how it happened: You see, this diagnosis turned out to be a blessing in disguise. It led me to embark on what would be a long and fascinating journey — to learn the truth about our bone health. Taking advantage of my science background, I started researching osteoporosis and osteopenia.

I discovered scientific studies that prove bone loss is not inevitable and can easily be prevented and even reversed; that the way we look at this condition is all wrong.

But here's the most important thing I learned from all my research: Bone loss doesn't just happen, and no miracle drug will stop it without harmful side-effects. I learned that we can take control of our bone health and by following a simple plan we can successfully reverse our bone loss.

I took all the scientific data I uncovered, hundreds of journal studies and medical research papers, and devised my own personal bone health action plan. I immediately began to follow through with my plan and was thrilled when I got back my second bone density results less than a year later.

My bone density improved by 20% without ever taking any drugs

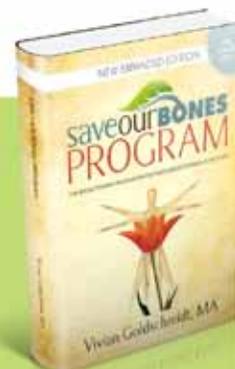
I took control of my bone health and it felt so good that I soon began sharing my story with others. And since then, I have helped thousands of other people take control of their bone health and finally reverse osteoporosis without taking drugs. I've helped people from all walks of life and from around the world that were seeking an effective osteoporosis alternative because of:

- ✔ Negative side effects from osteoporosis drugs.
- ✔ Bone density results did not improve, and in some cases got worse, even after taking osteoporosis drugs such as Fosamax, Boniva, Actonel, Forteo, Reclast, and others.
- ✔ Pain as a result of the osteoporosis drugs.
- ✔ Digestive problems such as Acid Reflux, due to the osteoporosis drugs

So how come they were prescribed the drugs in the first place? This report will reveal the answer to this and much more. So let's get started.

Take your bone health to the next level with the **Save Our Bones Program**. It's the complete system that will increase your bone health naturally.

Visit <http://saveourbones.com/program> for more information.





THE NATURAL BONE BUILDING GUIDE

Osteoporosis: Uncovering The Real Definition



Let's get started by analyzing the official definition of osteoporosis. According to the Merck Manual, (the world's best-selling medical textbook and published, ironically, by the makers of Fosamax), osteoporosis is "a systemic skeletal disease characterized by low bone mass and micro-architectural deterioration of bone, with a consequent increase in bone fragility and susceptibility to fracture."

There are several flaws in this definition, and I will list them out to you below.

Flaw #1: It catalogues the condition as a disease without revealing its cause.

The mainstream definition fails to explain the root cause of osteoporosis and instead, it only focuses on its description. Interestingly, this osteoporosis definition is fairly recent; until the year 1994 a person had to actually fracture a bone due to minimal trauma in order to be diagnosed with it. But all that changed on the same year, when the World Health Organization – an international health agency of the United Nations – established new guidelines, still in effect today, to diagnose and treat osteoporosis.

And what do these changes mean in real terms? Simply put, as published in the Post-graduate Medicine Journal, the new definition "moves this disorder from a disease of fractures to a disease of fracture risks." (Goddard, Kleerekoper, 1998).

One year after the WHO published the new osteoporosis guidelines, the bisphosphonate drug Fosamax became available to treat osteoporosis and osteopenia. Fosamax swiftly gained market share, while the popular Hormone Replacement Therapy (HRT) was quickly losing ground because it was deemed too dangerous for treating bone loss in view of its side effects including stroke, heart attack and breast cancer.

Flaw #2: It sets arbitrary parameters to identify low bone mass

According to the WHO, low bone mass is determined by comparing the patient's bone density to the average standardized bone density of a randomly selected group of women in their 20s. The results are then translated into T-scores, which are numbers that denote the Standard Deviation compared to the established guidelines. Doctors use the T-score results to determine if prescription drug treatment is necessary. There's more detailed discussion of T-scores later in this report.

As you probably know, osteoporosis testing is typically recommended for middle-aged or older people, so this arbitrary comparison is really quite unfair. That's because with age, a slight decrease in bone density is natural and should be expected. The new definition of osteoporosis does not take this into account, making it practically impossible for a middle-aged person to have what the set standards deem as "normal" bone density.

Flaw #3: It places too much emphasis on bone density

Thanks to modern technology, bone density can be measured and compared to the standardized parameters, and – at least for now – density is the only measurable aspect of bone. Is that why perhaps the official definition of osteoporosis places so much emphasis on bone density? You'll be glad to know that when it comes to assessing bone strength, there are other important characteristics of bone, such as ductility and rate of renewal.

Below is a quote from an article published in osteoporosis International titled "The Role of Collagen in Bone Strength" by S. Viguet-Carrin and team:

"Bone strength depends not only on the quantity of bone tissue but also on the quality, which is characterized by the geometry and the shape of bones, the microarchitecture of the trabecular bones, the turnover, the mineral, and the collagen."

Statistical studies on women seem to confirm this important point, showing that over 85% of women turning 50 years old today will never suffer a fracture, regardless of bone density.

Flaw # 4: It depicts the skeleton as "dead tissue"

The mainstream definition of osteoporosis portrays bones as static structures, indicating that when bone deterioration occurs, leading to increased fragility, there is absolutely nothing you can do to reverse or even stop that...unless you take medicines to correct the problem. But pay attention to what Dr. Karl L. Insogna, Director of the Bone Center at Yale School of Medicine, points out: "We tend to think of the skeleton as an inert erector set that holds us up and doesn't do much else. That's not true. Every bit as dynamic as other tissues, bone responds to the pull of muscles and gravity, repairs itself, and constantly renews itself." Perhaps

the misconception can be traced back thousands of years, as the word “skeleton” comes from “skeletos”, meaning “dried up” in Greek.

A comprehensive osteoporosis definition

The correct osteoporosis definition must depict a clear and comprehensive picture of the condition, including its etiology – in other words, its cause. Based on the above statements and on much more information you will discover in this report, the real definition of osteoporosis is:

“Osteoporosis is a condition of the skeletal system, common in middle aged and older individuals, mainly caused by the body’s attempt to correct an unhealthy biochemical imbalance by utilizing the calcium that should normally remain in the bones, causing bone density loss. However, unless certain abnormal endocrine and/or gastrointestinal conditions are present, the biochemical imbalance may be corrected by diet and lifestyle changes.”



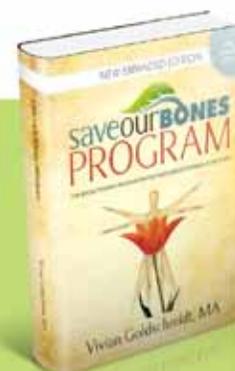
DID YOU KNOW?

Myth: Osteoporosis, either diagnosed or undiagnosed, is the main cause of hip fractures.

Truth: An article in the Journal of Clinical Endocrinology & Metabolism titled “Hip Fracture in Women without osteoporosis” by Stacy A. Wainwright, followed the fracture incidence of 8,065 participants with a median age of 72. The author concludes that “with the exception of the oldest women, after five years of follow-up, the majority of hip fracture cases were without hip osteoporosis, regardless of age.”

Get the Save Our Bones Program that reveals the “Bone Health Action Plan” that you can start using right away to stop and reverse bone loss.

Visit <http://saveourbones.com/program> to get started.





THE NATURAL BONE BUILDING GUIDE

Osteoporosis Diagnostic Tools: Cookie-Cutter Medicine At Its Worst



Diagnostic guidelines

Osteoporosis is typically diagnosed by a DEXA (dual-energy X-ray absorptiometry) test that measures the bone mineral content of the spine, hip, and other parts of the skeleton. In simple terms, an X-ray is beamed to a specific area of the body and results in a computerized calculation based on the amount of light filtering through the tissue. Known as the Bone Mineral Density (BMD), the test results are numbers representing the Standard Deviation (SD) from the “norm” set by a random reference group of young women, typically in their mid to late 20’s. They are referred to as “young adults”. The T-scores are then used for diagnosis as follows:

Normal: T-score above -1 (or no greater than 1 SD below the young adult mean).

Osteopenia: T-score between -1 and -2.5 (or BMD between 1 and 2.5 SD below young adult mean). Note: Osteopenia is defined as low bone mass that can potentially develop into osteoporosis.

Osteoporosis: T-score at or below -2.5 (or BMD 2.5 SD or more below the young adult mean).

Now you can understand why according to the National osteoporosis Foundation, “osteoporosis is a major public health threat for an estimated 44 million Americans or 55 percent of the people 50 years of age and older.” Since the standard reference norm is the peak bone mass of women in their 20’s, it is not surprising that most middle-aged people will not get a normal test result.

DEXA equipment variations

The most commonly used DEXA machines are Lunar, Norland and Hologic. Studies have shown that the differences in results between the three are clinically relevant when diagnosing osteoporosis or osteopenia. This has an important effect on DEXA scan comparisons of previous results to determine if the condition has worsened, improved, or stayed the same. And while there are international standards for diagnosing osteoporosis, the same cannot be said about DEXA scan manufacturer’s standards.

For example, the hip bone density of a Lunar scan is about 6% higher than of a Hologic scan. There are complex equations that aim to equalize the results, but they are unfortunately seldom - if ever - applied. Your best bet is to make sure that your DEXA scans are always obtained from the same equipment brand.

One redeeming factor of DEXA scans

You are most probably aware that excessive radiation exposure can cause undesirable health problems. We are constantly exposed to natural environmental radiation, mainly from the sun and from the ground. Fortunately, the amount of radiation exposure from DEXA scans is quite low, just slightly higher than a regular X-ray. Radiation is measured in millirems (mrems), so to give you an idea, the daily normal environmental radiation ranges from 0.5 to 1.5 mrems, X-rays range from 1 to 2 mrems, while a DEXA scan ranges from 1 to 3 mrems. For comparison purposes, I'd like to mention here that CT scans emit very high levels of radiation, as high as 10,000 mrems.

Bone density tests are unreliable

Below is a list of very important parameters that are not factored into the BMD results:

- ➔ Individual variations in body types and frames
- ➔ Each individual's peak bone mass
- ➔ Nutrition
- ➔ Exercise
- ➔ Stress levels
- ➔ General health

While bone density results may be useful to determine the progress or deterioration of only one aspect of bone health – density – it is a poor method to predict future fracture risk. As discussed earlier, there are many other important factors that have an effect on bone health.



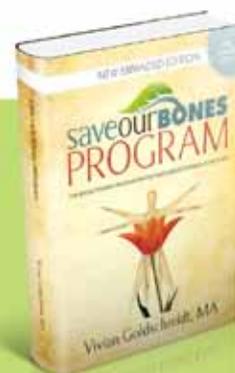
DID YOU KNOW?

Myth: If your mother or a direct family member has osteoporosis, you are at greater risk of an osteoporosis diagnosis.

Truth: There is no known inheritance pattern for osteoporosis. While studies have confirmed the major role of genes in determining bone mass and the inheritance of bone structure, no evidence has been found of a genetic component to bone mineral density loss. Interestingly, underlying genes may be linked to the risk factors for falls but not to bone strength. (Source: "Genetics of osteoporosis". Endocrine Reviews. 2002).

Get the Save Our Bones Program and join the over 15,000 people that are successfully building strong and healthy bones naturally.

Visit <http://saveourbones.com/program> for more information.





THE NATURAL BONE BUILDING GUIDE

Everything You Wanted To Know About Bones



Bones are complex and dynamic living tissue consisting of an outer smooth coating known as cortical bone and an interior collagen matrix, or trabecular bone. Continuous rebuilding allows for approximately 10 percent of all bone tissue to be replaced in the course of one year. This happens by a process known as resorption or bone loss, which is followed by deposition or bone formation.

The combination of resorption and deposition is known as bone remodeling. Resorption is carried out by bone cells called osteoclasts that move through bone tissue with the purpose of capturing old bone for its removal. Once this happens, small serrated spaces are left behind, triggering osteoblasts to deposit new bone, and thus, completing the remodeling cycle. Bear in mind – and this is critical – that osteoblasts cannot function without osteoclast activity.

Bisphosphonate drugs, such as Fosamax, Actonel, and Boniva that are commonly prescribed to treat osteoporosis, stop osteoclast activity and therefore, interfere with normal bone remodeling. Bones may become denser, but eventually they lose ductility and become more prone to fracture than “younger” and less brittle bone.

Three words you’ll never hear from your doctor

The mysterious – and critical words – are “peak bone mass”. Here’s why peak bone mass is important: your BMD results (whether you are a man or a woman) are compared to those of a randomly chosen group of women in their 20’s, as I previously mentioned. But you don’t know what your peak bone mass was when YOU were twenty-something. If you think that this is an unfair and unreliable comparison to diagnose a condition, you are right!

That’s because the concept of peak bone mass has been greatly oversimplified for the purpose of creating diagnostic guidelines, and it ignores differences in important bone health variables. To name a few, ethnicity, exercising habits, diet, and lifestyle are completely disregarded.

And here’s another reason why you won’t hear much about peak bone mass. Paradoxically, while it has been established as the “gold standard” of comparative diagnostic standards, it seems to have almost no effect on future fracture risk. For example, Asian women

have a lower peak bone mass than Western women, but experience a lower fracture rate. A logical conclusion would lead us to believe that using peak bone mass as a bone health determinant can lead to flawed conclusions.

A few good men...have osteoporosis

Until recently, there was practically no mention of osteoporosis afflicting men. The National osteoporosis Foundation expresses concerns that osteoporosis in men is expected to become an important and fast growing public health issue, all the while it is currently under diagnosed and underreported.

Some of the osteoporosis risk factors for men older than age 70 years are:

- ➔ Being underweight
- ➔ Physical inactivity
- ➔ Previous fractures with minimal trauma
- ➔ Long-term use of certain drugs (corticosteroids and drugs used to treat prostate cancer)
- ➔ Spinal cord injury
- ➔ A low in calcium diet
- ➔ Cigarette smoking

There are two main types of osteoporosis in men: primary and secondary, and because these two sometimes overlap, distinguishing between them may be arbitrary. Primary osteoporosis is also known as idiopathic osteoporosis, and is thought to be caused by no specific identifiable cause or simply by age-related bone loss (sometimes called senile osteoporosis). Secondary osteoporosis in men can be due to several causes, most predominantly low testosterone levels, taking corticosteroids, and alcoholism.

While not all osteoporosis drugs have been approved in the U.S. for use in men, all of my recommendations, including supplements, equally apply to both men and women.

Conditions that can accelerate bone loss

Just like any other biological process, it is normal to experience a slight decline in new bone formation due to aging. However, a combination of a variety of factors can cause accelerated bone loss resulting in unusually porous bones.

Some of the possible factors are:

- ➔ Low hormonal levels
- ➔ Eating disorders
- ➔ Nutrient malabsorption
- ➔ Under or over-exercising
- ➔ Use of certain drugs (such as corticosteroids or acid reflux medicines)



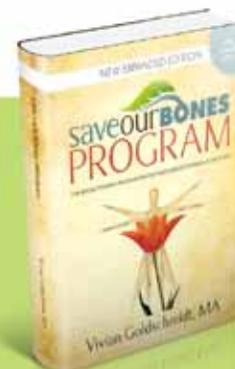
DID YOU KNOW?

Myth: The most effective way to increase bone density is to take prescription drugs.

Truth: Osteoporosis drugs alter normal bone metabolism, potentially increasing fracture risk, especially when taken for many years. Drugs can also have detrimental – and sometimes life-changing side-effects. Osteoporosis drugs work against the Laws of Nature. The best way to increase bone density is to stay within the confines of the Laws of Nature to get maximum bone health benefits.

Get the bone health system that guarantees to increase your bone density without drugs.

Visit <http://saveourbones.com/program> for more information.





THE NATURAL BONE BUILDING GUIDE

Osteoporosis Drugs And Their Dangerous Side Effects



The concept of a “quick fix” is quite appealing, and osteoporosis drugs are no exception. One little pill...one intravenous application, one nasal spray...they all seem to miraculously solve the bone density problem. In fact, scientific studies have shown that osteoporosis drugs can increase bone density, especially the first year or two of therapy. But these drugs may actually cause more harm than good. And here’s why:

- ➔ The most popular osteoporosis drugs stop the natural bone remodeling process and bones become dried-up and brittle, making them more prone to fracture (Source: Mashiba, Mori , Burr et al.. “The effects of suppressed bone remodeling by bisphosphonates on microdamage accumulation and degree of mineralization in the cortical bone of dog rib.” Journal of Bone and Mineral Metabolism. 2005.)
- ➔ All osteoporosis drugs have many undesirable side-effects. Your bones might become denser, but you might be plagued with unpleasant symptoms caused by those very same drugs.
- ➔ Many dentists and oral surgeons are currently declining to work on patients taking Fosamax, Actonel, Boniva, or Reclast because of Osteonecro-



DID YOU KNOW?

Myth: If you don’t take osteoporosis drugs for many years, you have a greater chance of suffering a crippling fracture and you will also lose height.

Truth: A study by Black and team shows that women who discontinued bisphosphonates after five years of therapy had the same number of fractures as women who continued taking the drug. (Source: “Effects of continuing or stopping alendronate after 5 years of treatment: the Fracture Intervention Trial Long-term Extension (FLEX): a randomized trial”. Journal of the American Medical Association. 2006). And another study by Susan Ott concludes that “among the women with fractures, there was more height loss in the alendronate group (3.5cm) vs. the placebo group (2.1cm, $p=.02$)”. (Source: “Use of alendronate after 5 years of treatment”. Journal of the American Medical Association. 2007). Alendronate is the generic name of Fosamax.

sis of the jaw (ONJ), an incurable and disfiguring condition caused by the drugs, typically triggered by major dental work.

- ➔ Osteoporosis drugs are expensive; for example, a daily injectable medicine costs several hundred dollars per month.
- ➔ Taking osteoporosis medicines is a short-sighted view of true and long-lasting bone health. Some drugs, as in the case of bisphosphonates, offer the biggest benefits during the first couple of years. Other drugs, like Forteo, can only be used for a maximum of two years because of (still unconfirmed in humans) potentially life-threatening side-effects.

Why you shouldn't eat laundry detergent and other cleaning products (i.e. bisphosphonates)

Let's take a closer look at the osteoporosis drugs currently used by millions of people worldwide. The most commonly prescribed medicines are classified as bisphosphonates which are synthetic analogs of pyrophosphates. It is a fancy name for an ingredient used for many years in laundry soaps, fertilizers, and industrial lubricants to prevent corrosion. They are still widely used mainly in the textile industry (laundry products) and oil industries (additives in engine hydraulic fluids, as another example). In fact, when you do an internet search of the word pyrophosphates, you will get among the results the websites for osteoporosis medicines and several U.S. patents for detergents, hydraulic fluids and toothpaste.

Below is a quote from the Introduction of Dr. Herbert Fleisch's article titled "Bisphosphonates: Mechanisms of Action", published in *Endocrine Reviews* in 1998. Dr. Fleisch, who passed away in May 2007, was a Swiss researcher on metabolic bone diseases whose pioneering work led to the discovery of bisphosphonates as therapeutic agents:

"The bisphosphonates have been known to chemists since the middle of the 19th century, when the first synthesis occurred in 1865 in Germany. Etidronate, the first bisphosphonate to be used to treat a human disease, was synthesized exactly 100 years ago. Bisphosphonates were used in industry, mainly as corrosion inhibitors or as complexing agents in the textile, fertilizer, and oil industries. Their ability to inhibit calcium carbonate precipitation, similar to polyphosphates, was put to good use in the prevention of scaling. Only in the past three de-

acades have bisphosphonates been developed as drugs for use in various diseases of bone, tooth, and calcium metabolism.”

ACTONEL®, BONIVA®, FOSAMAX®: Bisphosphonates revealed

There are three bisphosphonate medicines available that can be taken orally.

Fosamax was the first osteoporosis and osteopenia bisphosphonate approved by the FDA in 1995. Manufactured by Merck, sales have exceeded 3 billion dollars, but it is expected that this will change since the patent has expired in February 2008. Alendronate Sodium is the generic version of Fosamax.

Actonel (risedronate sodium) became the fastest product in Procter & Gamble’s history to reach \$1 billion in sales. Coincidentally, Procter & Gamble is the manufacturer of Tide® laundry detergent and Crest® toothpaste, among many other products. Procter and Gamble also makes Didronel® (etidronate), but it has not been approved for treating osteoporosis or osteopenia. In my research I discovered that both Tide and Crest contain bisphosphonates. In Crest, the bisphosphonates act as an anti-tartar agent.

Boniva (ibandronate) was developed by Hoffman-LaRoche, and is co-marketed with GlaxoSmithKline, with sales reaching \$417 million for 2006.

Novartis markets Aredia® and Zometa®, the two intravenous versions used in chemotherapy. Millions of cancer patients have been treated with these intravenous drugs.

Bisphosphonates: bone builders or bone hardeners?

As explained in Chapter 3, the bisphosphonates attach themselves to the bone matrix, altering its normal function by affecting the normal replacement of old bone with new bone. Indeed, bone loss will be drastically reduced; but at what price? A very high price, because what the makers of these prescription drugs don’t mention is that, as explained in Chapter 3, inhibiting bone loss also inhibits new bone formation. Bones remain thick, but old bone is more prone to fractures than less dense yet more flexible newer bone.

Not surprisingly, researchers have found that these medicines can make the bones more brittle, actually increasing the risk of fractures. “Many people believe that these drugs are ‘bone builders,’ but the evidence shows they are actually bone hardeners,” wrote Dr. Susan M. Ott in the *Annals of Internal Medicine* in 2004, pointing out that they depress “the bone resorption rate as well as the bone formation rate” and “bones could become brittle with long-term accumulation.”

By now you are probably wondering if bisphosphonates are safe or not, and if they aren't safe, how come there are millions of prescriptions written every year. Continue reading to find out what's really going on “behind the scenes” and to draw your own conclusions.

What can happen when you stop the bisphosphonate drugs?

By now you are probably wondering if bisphosphonates are safe or not, and if they aren't safe, how come there are millions of prescriptions written every year. And if you've already taken these medicines in the past, you are most assuredly concerned about what will happen when you stop taking them, should you decide to do that.

There are two main ways by which your body gets rid of the bisphosphonates once you stop taking the drug. The first — and quickest way — is by elimination via the kidneys because they are practically not metabolized by the body. The general consensus supported by studies conducted by maxillofacial surgeons is that most of the free-flowing drug in the bloodstream is eliminated in that way in approximately three to four months. This also includes the release of bisphosphonates from bone surfaces that end up in the bloodstream because they can't attach themselves to the bone cells, and are simply unused.

According to a study published by The International Bone and Mineral Society titled “Long-Term Bisphosphonates for osteoporosis: An Introduction”, by Dr. Gordon J. Stewler of Harvard Medical School, “the terminal half-life of alendronate (my note: alendronate is the generic name for Fosamax) is approximately 10 years.” In plain English this means that half of the drug remains attached to the bone for that period of time.

However, while alendronate released from the matrix during bone remodeling has been shown to inhibit osteoclasts, the above-quoted study found that the drug is active only when

on exposed bone surfaces. As bone remodeling resumes and thus, new bone starts to form, it actually covers the alendronate, and “the drug is buried in bone and becomes inactive.” That’s a quote from an article by Dr. Watts in the *Endocrinology & Metabolism Clinics of North America*, titled “Treatment of osteoporosis with Bisphosphonates.”

Some also question if bone loss accelerates once bisphosphonates are stopped, as is the case with HRT. But a study led by Dr. Mathew Dobbs published in the *Iowa Orthopaedic Journal* confirms that “cessation of alendronate does not lead to the rapid bone loss that occurs after cessation of estrogen.”

All this information should come as great news to you, whether you’ve stopped or wish to stop taking the drugs. And here’s the icing on the cake: the same Harvard Medical School study mentioned before reports that bone loss (resorption) gradually resumes after stopping the drugs, and achieves normal (pre-menopausal) levels in approximately five years.

The long saga of side-effects

The longest study to test Fosamax for safety and efficacy took place for ten years during which time half of the test population dropped out because of intolerable side-effects. According to *Business Week*, researchers have found that 70% of patients taking top-selling osteoporosis drugs drop out in the first year of treatment because of heartburn, ulcers, and other side effects.

The most common complaints users have are gastrointestinal abnormalities which can include:

- ➔ Nausea
 - ➔ Abdominal cramping
 - ➔ Flatulence
 - ➔ Diarrhea
 - ➔ Obstipation (severe constipation)
 - ➔ Inflammation and ulceration of the esophagus
 - ➔ Chest Pain, heartburn or difficulty swallowing
-

These side effects are not surprising at all if you realize that patients are unknowingly attempting to digest a chemical found in laundry detergents, cleaning liquids for toilet bowls and for all kinds of floors among other things.

There are other general side effects that can result from the use of bisphosphonate drugs:

- ➔ Skin rash
- ➔ Eye problems, vision loss, blurred vision
- ➔ Generalized pain of the muscles, joints and/or bones
- ➔ Decreased mobility of the joints
- ➔ Blood clotting disorders
- ➔ Anemia
- ➔ Dental problems
- ➔ Numbness, tight muscles in the face as well as seizures
- ➔ Irritability and unusual thoughts or behaviors.
- ➔ Altered taste
- ➔ Risk of developing atrial fibrillation (rapid and irregular heart beat)

The worst irreversible side-effect

By far, one of the most serious side effects of these drugs is osteonecrosis of the jaw (ONJ), also known as dead jaw. Osteonecrosis is characterized by the inability of the jaw to heal following dental trauma or surgery, which can cause the jawbone tissue to become infected, rot and eventually die. It seems that the risk of developing ONJ depends in part to the dose strength of the bisphosphonate used.

The first case of osteonecrosis was reported in 2003. Why osteonecrosis occurs is unclear — although it generally appears after dental surgery or tooth extraction, and in some cases it develops spontaneously.

Osteonecrosis of the jaw can be an incredibly painful problem. It often causes ulcers of the mouth and skin sores, infections, exposed bone, and disfigurement.

These are some of the symptoms of osteonecrosis:

- ➔ Pain, swelling, or infection of the gums
- ➔ Loosening of teeth
- ➔ Poor healing of the gums
- ➔ Numbness or the feeling of heaviness in the jaw
- ➔ Partial or complete loss of the jaw bone

Given the severity of these symptoms and the difficulty and sometimes impossibility of treating this serious condition, the American Association of Oral and Maxillofacial Surgeons is investigating the link between bisphosphonates and osteonecrosis. Some dental experts predict that up to 10% of people who received bisphosphonates may be affected by osteonecrosis of the jaw at one point in their lives, especially patients who have taken the medicine for many years.

RECLAST®: When everything else fails...try an IV

Unlike oral bisphosphonate therapies that have to be taken daily, weekly or monthly, Reclast (zoledronic acid, known outside of the U.S. as Aclasta) is given as a once-yearly 15-minute intravenous (IV) infusion.

It was originally developed by the Swiss company Novartis and approved by the FDA in the year 2007 for the treatment of Paget's disease. This condition is a metabolic and often painful bone disorder that causes abnormal bone growth due to a malfunction in the body's regular bone-building process. It is also used to treat bone cancer under the name Zometa, but in a different dose. Reclast is now also prescribed to simply "treat" osteoporosis.

Novartis also manufactures Aredia (pamidronate disodium) is also a bisphosphonate approved in 1991 in tablet form and more recently as an IV. Aredia is mainly used to treat hypercalcemia, Paget's disease, and some forms of cancer.

The most common side effects associated with Reclast are fever, pain in the muscles, bones or joints, flu-like symptoms, and headache. This drug also has warnings of possible osteonecrosis of the jaw, kidney problems, and increased risk of a serious cardiac condition called atrial fibrillation.

Interestingly, the earliest cases of Osteonecrosis of the jaw were reported by patients taking intravenous doses of bisphosphonates. It is relevant to mention here a study conducted in Japan on dogs injected with bisphosphonates. Based on the study results, T. Mashiba and colleagues seem to suggest (and therefore confirm Susan Ott's observations quoted earlier in this book) that micro fractures increase and may accumulate as a result of the hardening of the bone caused by bisphosphonates.

FORTEO®: Playing with hormones can be no fun at all

Besides the bisphosphonates, a relatively new way to treat Osteoporosis is with a daily injection of Forteo (teriparatide). This drug, approved by the FDA at the end of 2002, is a synthetically manufactured form of the Parathyroid Hormone (PTH).

Forteo is an incomplete man-made copy of human PTH because natural parathyroid hormone has 84 amino acid residues and the synthetic version has only 34. According to Eli Lilly, its manufacturer, research demonstrates that only 33 to 35 are necessary for biological activity. So they settled for 34.

Here's a summary of the very important role the parathyroid glands play in relation to bone health:

The four parathyroid glands monitor the calcium in the blood 24 hours a day. The parathyroid glands make more or less parathyroid hormone (PTH) in response to the level of calcium in the blood. When calcium levels in our blood are too low, the parathyroid glands make more PTH. Increased PTH causes the bones to release their calcium into the blood. When calcium levels in our blood are too high, the parathyroid glands stop producing PTH. The most common side effects of Forteo are body aches and headaches.

Other reported side effects are:

- ➔ Chest pain
- ➔ Constipation
- ➔ Difficulty swallowing
- ➔ Feeling lethargic

- ➔ Heartburn or pain upon swallowing
- ➔ Irritation or pain of the esophagus
- ➔ Muscle pain and weakness
- ➔ Increased sweating
- ➔ Skin rash
- ➔ Nausea and vomiting

This is a warning posted in the official Forteo website:

“Blood and urine calcium levels: Your doctor may test your blood and urine for calcium levels to make sure that they are within the normal range. If you experience nausea, vomiting, constipation, lethargy, and muscle weakness, contact your doctor as soon as possible.”

And below I’m quoting an unbelievable BLACK BOX warning about Forteo that in my opinion makes it unacceptable:

“In male and female rats, teriparatide caused an increase in the incidence of osteosarcoma (a malignant bone tumor) that was dependent on dose and treatment duration. The effect was observed at systemic exposures to teriparatide ranging from 3 to 60 times the exposure in humans given a 20–mcg dose. Because of the uncertain relevance of the rat osteosarcoma finding to humans, teriparatide should be prescribed only to patients for whom the potential benefits are considered to outweigh the potential risk.”(www.drugs.com)

Eli Lilly has explained that teriparatide has been used in clinical trials involving more than 2,000 participants, and not one case of osteosarcoma has been reported. A spokesperson for Eli Lilly of Indianapolis said that the FDA approved Forteo under several conditions, and the company is conducting a post approval osteosarcoma surveillance study. Because of this still unresolved issue, Forteo is used only for a two year treatment period.

We should be afraid of tampering with the very delicate and complex balance of our natural parathyroid hormone activity. Forteo’s potentially deadly side-effects and short history make it a very unattractive therapy option for the treatment of osteoporosis.

EVISTA®: Double duty and double trouble

Evista (raloxifene hydrochloride) was approved by the FDA in 1997 for the treatment of osteoporosis in postmenopausal women, and like Forteo, it is manufactured by Eli Lilly. Additionally, Evista got its FDA approval ten years later to reduce the risk of invasive postmenopausal breast cancer.

This double-duty medicine is the first in a class of new drugs called selective estrogen receptor modulators (SERMs) approved to treat osteoporosis. It is supposed to have the selective ability to act like estrogen in some tissues but not in others.

Raloxifene is reportedly easier on patients' digestive systems than bisphosphonates but it may cause an increased risk of both venous thromboembolism (VTE; deep vein thrombosis, pulmonary embolism, and retinal vein thrombosis) commonly described as blood clots and stroke, especially in women who are at high risk of having a heart attack. Besides the very serious combo of side-effects, hot flashes are commonly reported when taking Evista.

Long-term side effects of this drug are still unknown and common sense would lead us to think that interfering with our normal hormonal balance with the purpose of treating future fracture risk is not a good idea, especially in view of the serious potential side effects already in record.

PROTELOS®: Treating osteoporosis a la French

There is a new medicine used to treat osteoporosis in Europe called Protelos. It is a synthetic form of strontium ranelate manufactured by France's largest independent drug company Servier. Because strontium is a natural product it isn't patentable. Therefore, by creating the novel combination of strontium and ranelic acid (because the latter is a purely synthetic molecule), Servier was able to obtain a patent and convert this mineral into a prescription drug.

Protelos (also marketed as Bivalos®, Osseor®, Ossum®, Protos®, Protaxos®) has not been approved by the FDA and is not available in America as of yet. It may show up eventually as a prescription drug in the United States and Canada. However, strontium citrate and other forms of strontium can be found in America as over-the-counter supplements.

Protelos has its own list of side effects. During clinical trials, the most common side effects were nausea, diarrhea, headaches and skin irritation. Other quite dangerous but fortunately less commonly reported side-effects were blood clots, fainting, memory troubles and, in rare cases, seizures.

We must remember that long-term safety and efficacy of any form of strontium (except for Servier's studies) have never been evaluated on humans using large-scale medical trials. And furthermore, some scientists point out that it would be difficult to assess actual bone improvement because traditional bone mineral tests like DEXA will give artificially high results as strontium is much denser than calcium.

Recent short-term studies on Strontium show that it contributes to bone thickening. Several forms of strontium salt have been used in clinical studies and each strontium salt has had thickening results for bone, so it is hypothesized that strontium is the active component, and not the carbonate, ranelate, lactate, or citrate part the strontium is attached to. Obviously, this is a very touchy subject with Servier laboratories.

George Boivin and colleagues at Universite Claude Bernard in Lyon, France, suggest that strontium does not affect the quality of the bone mineral, but that it does affect the quantity. In other words, the outer cortical bone becomes thicker. This was confirmed by Jiang and colleagues at the University of California and the University of Michigan osteoporosis and Arthritis Lab.

These findings seem to indicate that strontium affects the normal bone remodeling process by thickening the bones. Let's not forget that thick bones may be more prone to fracture than thinner, more flexible bones.

Our bodies naturally contain between 320 to 400 mg of strontium, a trace element chemically very similar to calcium. So similar, in fact, that strontium competes with the calcium protein carrier in our blood (that is why it's supposed to be taken at least 4 hours after or before taking calcium). Calcium is the naturally occurring bone mineral that handles our bone strength, not strontium.

Regardless of the results, altering the very delicate mineral balance in our bones could one day prove to have harmful effects that we don't know as of yet.

MIACALCIN®, FORTICAL®: There's something fishy about these drugs

Miacalcin and Fortical are brand names of the synthetic version of salmon calcitonin used to treat osteoporosis in women who have been in menopause for at least 5 years. Calcitonin is a hormone present in mammals, birds, and fish. In conjunction with the parathyroid hormone, calcitonin plays a role in controlling the blood calcium levels of animals.

Novartis makes Miacalcin both in a nasal spray and daily injection form, while Fortical is manufactured by Upsher-Smith Laboratories and available only as a nasal spray. Even though the active ingredient in both is calcitonin salmon, Miacalcin is made using chemical reactions and Fortical is made using DNA technology.

Quoting Novartis:

"The actions of calcitonin on bone and its role in human bone physiology are still not completely elucidated, although calcitonin receptors have been discovered in osteoclasts and osteoblasts." (<http://www.pharma.us.novartis.com>)

Both Miacalcin and Fortical have some side effects; many are related to increased adverse nasal events, especially in elderly patients using the spray. For that reason, the makers of the drug recommend frequent internal nose examinations performed by a doctor. Here's a list of the more common side-effects:

- ➔ Runny nose
- ➔ Nosebleed
- ➔ Sinus pain
- ➔ Nose symptoms such as crusts, dryness, redness, or swelling
- ➔ Joint and back pain
- ➔ Stiffness
- ➔ Headache

Some side effects can be serious and are fortunately much less common (occurring in 1 to 3 percent of people):

- ➔ Hives and skin rashes with itching
- ➔ Difficulty breathing
- ➔ Swelling of the tongue
- ➔ Bladder or sinus infection
- ➔ Hair loss
- ➔ Dry mouth
- ➔ Muscle pain
- ➔ Increased sweating
- ➔ Indigestion, heartburn, nausea
- ➔ Dizziness
- ➔ Depression
- ➔ Rapid heartbeat
- ➔ Palpitations
- ➔ Myocardial infarction
- ➔ Bronchitis
- ➔ Pneumonia

Fortical has some additional less common side effects, such as urinary side-effects (bloody or cloudy urine, difficult, burning, or painful urination), ear congestion or pain, hoarseness or other voice changes, swollen glands, and sore throat.

In addition to the side effects listed, Novartis' injectable version is reported to affect kidney function, as studies have shown that it increases the excretion of sodium, calcium, and phosphate. It also may cause "marked transient decreases in the volume and acidity of gastric juice and in the volume and the trypsin and amylase content of pancreatic juice." (<http://www.pharma.us.novartis.com>).

The issue with calcitonin products is that they alter the bone resorption process, thus affecting bone remodeling. And, as you know by now, the bone remodeling process is what helps bones remain ductile and therefore, less prone to fracture.

Prolia™ (Denosumab): A Wolf in Sheep's Clothing

On June 1st 2010, the FDA approved Prolia™ (denosumab), a twice-yearly injectable osteoporosis drug by Amgen. Two days earlier, the European Commission granted Amgen marketing authorization for Prolia to all its member nations.

The first of its kind, this drug can be used to treat and prevent postmenopausal osteoporosis for patients considered to be at high risk of fractures, or for those who have failed or are intolerant to other osteoporosis drugs. It is also approved for bone loss in hormone-treated prostate and breast cancer patients.

On the surface, Prolia appears to be a breakthrough and fairly innocuous drug. But appearances can be deceiving, unfortunately. A fully human monoclonal (laboratory-made) antibody and the first RANK Ligand inhibitor to be approved as a drug, it also sounds very complicated. But it isn't, and I'll break it down for you next, so you'll get a clear understanding of what this drug is all about.

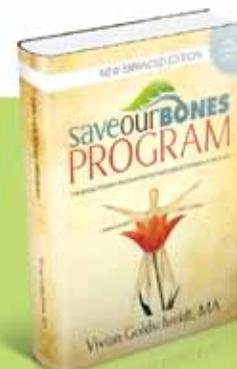
Antibodies are proteins produced to neutralize "invaders", such as bacteria and viruses. RANK Ligand (RANKL for short) is a protein that activates osteoclasts and is involved in immune-response regulation. By now you know that osteoclasts are bone cells that remove old bone to make space so that new bone is deposited by osteoblasts.

Now back to Prolia. The natural inhibitor of RANKL is osteoprotegerin, a tumor necrosis factor (TNF) cytokine that binds to RANKL, preventing interaction with its receptor-activator RANK on the surface of osteoblasts. Cytokines are chemical messengers that help regulate

Order the **Save Our Bones Program**.

The complete natural bone health system, filled with the most up to date information on how to regain your bone health fast.

Visit <http://saveourbones.com/program> for more information.



the nature and intensity of an immune response. Remember this for later, because it all ties in together.

So, in plain English, Prolia mimics osteoprotegerin by blocking the effects of RANKL and de-activating osteoclasts, effectively stalling new bone deposition on its tracks. Bisphosphonates achieve the same end result as Prolia, only through a different biochemical pathway. At the end of the day, both bisphosphonates and Prolia alter normal bone metabolism, in addition to several other important body processes.

Amgen's own Press Release states that "Treatment with Prolia resulted in greater bone density, stronger bones, and reduced risk for vertebral, hip and non-vertebral fractures measured at three years." It backs up this statement with a study by Cummings et al. published by the New England Journal of Medicine in 2009, titled "Denosumab for Prevention of Fractures in Postmenopausal Women with Osteoporosis".

But the biggest cause for concern with Prolia is its potential side-effects. Even though Prolia doesn't accumulate in the body and has no known esophageal side effects as is the case with bisphosphonates, it boasts a rather long list of undesirable – and sometimes dangerous – potential side-effects. In its shadow, bisphosphonates almost seem to be the lesser of both evils, and that's no small feat. You'll soon know why.

The most common side effects of Prolia are back pain, arm and leg aches, elevated cholesterol, general musculoskeletal pain, bladder infection, and pancreatitis.

And as disclosed on the Prolia website (<http://www.prolia.com>), it can cause serious side effects because it "is a medicine that may affect your immune system" (remember the cytokines?).

These are the main side-effects listed by Amgen:

- ➔ Low calcium levels
 - ➔ Serious skin, lower abdomen, bladder, or ear infections
 - ➔ Dermatitis, rash, or eczema
 - ➔ Inflammation of the inner lining of the heart (endocarditis) caused by an infection
-

➔ Severe jaw bone problems such as osteonecrosis of the jaw.

And for dessert, Amgen serves up a cautionary statement: that “it is not known if the use of Prolia over a long period of time may cause slow healing of broken bones or unusual fractures.”

Like bisphosphonates, Prolia opens the door to a wide array of opportunistic health problems, many of which will get covered-up with yet more drugs. And let’s not forget that it interferes with the body’s natural immune system, which is the obvious reason for many of its most dreaded side-effects. In fact, roughly one year before its approval, FDA reviewers expressed concerns about Prolia’s activity against an important immune system modulator. As is the case with many other drugs, the agency looked the other way.



THE NATURAL BONE BUILDING GUIDE

What Really Causes Osteoporosis



As we continue to explore the osteoporosis saga, you'll be amazed at the simplicity of it all. So let's take a closer look at the true cause of osteoporosis.

The human body is designed for health, not for disease

Modern medicine focuses disproportionately on disease and tends to ignore the true meaning of health. Diseases are named, described and treated with drugs, all while health is left undefined. Sickness seems to be inevitable, and little if anything is done to prevent it. Like everything else in life, it is much easier to achieve a goal if it is well delineated. In other words, in order to pursue health, we first need to have a clear picture of what health is all about.

But unfortunately, that does not seem to be the case. In the U.S. alone, nearly 1,700,000 new cases of diabetes are diagnosed in one year, and the number of total yearly prescriptions is a staggering three billion. Another example is the UK, where 796 million prescriptions were dispensed in 2007, almost 60 per cent more than in 1997. Clearly, current medical protocols are losing the war against disease. Rather than covering-up diseases by taking prescription drugs, we should be striving to attain true health, and if we don't interfere with Nature, chances are we'll be successful. And the same principles apply to our bone health. Now back to our biology...

The human body is a well-organized and highly adaptable organic system. Millions of ongoing processes simultaneously and flawlessly take place round-the-clock, most of them without our awareness. For instance, the six quarts of blood in our body contain more than twenty-four trillion cells that travel through the equivalent of ninety-six thousand miles of blood vessels. The heart beats every minute of the day for years on end without even a battery replacement. Confirming this, a recent U.S. Senate report estimates that roughly 100,000 pacemakers are implanted in the United States annually – accounting for a mere .0003% of the population.

There are countless more organs and systems that are perfectly coordinated with each other, functioning day-in and day-out to keep us alive and healthy. The human body contains approximately seventy-five trillion cells, and each one of them knows exactly what to do and when to do it. All this activity is guided by the most sophisticated supercomputer ever crea-

ted: the brain, which is composed of more than twenty-five billion cells. Amazingly, all of our cells share the same goal: they are constantly striving for balance – and balance is required for good health.

The best army in the world

Similar to a well-trained army, the body fights for a healthy balance, and it is ready to use plenty of “ammunition” for that purpose. Intruders such as bacteria and viruses are attacked and more often than not, eventually eliminated; insect bites are isolated from the rest of the body; poisons are forced to take a shortcut to leave the body fast...In most cases the system works, unless so many “soldiers” are destroyed that the army becomes weak and vulnerable...or diseased.

Common sense would lead us to conclude that such a sophisticated system functions at its best when allowed to follow its programming and if it has access to the correct type of “fuel”. What is the body’s “fuel”? The nutrients we get from what we eat and drink, and this is where most health problems originate.

I’d like to bring up the somewhat cliché example of a car to further elucidate this important topic. Even when in tip-top condition, with all its state-of-the-art circuitry perfectly tuned, if a car has the wrong type of fuel it will not run as well as it’s supposed to. Eventually, it will break down and many parts will need replacement. At one point, the car may cease to operate altogether.

The art of survival

Unlike a car, the body has plenty of built-in “backup systems” to keep us feeling good for as long as possible, and ultimately, to keep us alive. But while the activation of alternative biochemical pathways solves the short-term problems, they unfortunately trigger undesirable reactions that have detrimental long-term consequences. The immediate concern of the body is survival, and this makes sense since it’s a “living” organism, and thus, it fights for its “life”. The damage done to achieve this goal may or may not be reversible, but staying alive is the number one priority. The body always chooses life first, and then gets into “problem-solving” mode, much like an accident victim willing to give up a limb, if that is the only possible way to remain alive.

A good example of a backup system is the way we metabolize alcohol, because alcohol is treated by the body as a poison. The body's goal is to remove it from the blood as quickly as possible to prevent organ and cell damage, and in order to achieve this goal, the body "sacrifices" the maintenance of healthy blood glucose levels. Even though glucose metabolism is crucial, the body interprets the presence of alcohol as an invader, and therefore, it must quickly neutralize its effects at any price. So the "Master Detoxifier" organ, the liver, oxidizes the pure ethanol in several steps, until it is finally converted into the non-harmful end products of CO₂ and water. But, as is generally the case, damage is done along the way, and this explains why alcoholics often end up suffering irreversible liver damage.

The basics of acid-alkaline nutrition

As mentioned earlier, the correct definition of osteoporosis states that it is "...mainly caused by the body's attempt to correct an unhealthy biochemical imbalance..." What is the biochemical imbalance and what is its cause? You'll be surprised to discover that bone loss occurs when there is excessive accumulation of acid waste in the body, forcing calcium – most of which is stored in the bones – to be used to correct the acid imbalance. And what is the main culprit of the acid residue in the body? You guessed it! The food you eat has a direct effect on your body pH, the potential hydrogen, which indicates whether a food is acid or alkaline-forming.

The pH scale ranges from 0 to 14, where numbers below 7 are considered acid and numbers above 7 are alkaline. The body is designed to function between a pH of 7.35 and 7.45, and it will do everything within its power to maintain this range. First, it uses the most readily available supplies, such as the alkaline end products of food, and when there is a shortage of alkaline foods, it uses the calcium stored in the bones. As you probably know, calcium is an excellent acid neutralizer.

After food is digested, its mineral content determines whether the end product will be either acidifying or alkalizing.

- ❗ **Acid-forming foods** contain chloride, phosphorous, sulfates, and other organic acids.
- ❗ **Animal protein** (beef, poultry, fish, and eggs, dairy) and most grains are acidifying foods.
- ❗ **Milk** (except for raw milk) and all unfermented dairy products are acidifying.
- ❗ **Soda**, especially cola, is acidifying, as well as coffee and tea (except for herbal teas).
- ❗ **All synthetic chemicals**, including prescription drugs and artificial sweeteners, are acid-forming.
- ❗ **Alkaline foods** contain sodium, potassium, calcium, and magnesium.
- ❗ **Fruits and vegetables**, with very few exceptions, are alkalizing foods.

Researchers have found two main ways to determine if foods are acidic or alkalizing. One is by analyzing the ash content of foods, and the second way is by calculating the potential renal acid load of foods (PRAL), which is an estimated measure of excess acid vs. alkali excreted by the kidneys. PRAL takes into account a variety of intestinal absorption rates of minerals and of sulfur-containing protein, including the amount of acidifying sulfate produced from metabolized proteins. A negative PRAL score indicates the food is alkaline-forming and a positive PRAL score indicates the food is acidic. PRAL scores should not be confused with pH values.

For a complete and accurate bone-smart acid/alkaline foods list and to take all guess work out of it, claim your copy of the Save Our Bones Program today. Learn more here:

<http://saveourbones.com/program>

A modern problem: chronic acidosis

Amazingly, the current osteoporosis epidemic can be traced to the highly acid-forming “modern” dietary habits that cause a continuous low grade chronic metabolic acidosis. And because it is a subclinical condition, you and your doctor won’t realize that anything is wrong... but your cells and your bones most certainly will. Even worse, because mainstream medicine pays no attention whatsoever to the importance of the pH balance, you will be offered a “band-aid” approach as the only solution instead of addressing the real cause of osteoporosis.

So what's the problem with this low-grade chronic metabolic acidosis? Follow me closely here, because you're about to discover the key to osteoporosis. As mentioned earlier, the body needs to function within a stable and quite narrow pH range. Any excess dietary acid load is treated as an "enemy", and therefore, it has to be neutralized as quickly and as efficiently as possible. This is achieved by using the bicarbonate reserves to raise the blood pH, but because this is a chronic condition, the reserves eventually run out. The body responds by mobilizing calcium out of the bones to correct the acid imbalance. This has been documented in scientific studies that show high levels of urinary calcium excretion when participants consume an acidifying diet. In other words, the calcium that was stored in the bone is lost in the urine with the acid it had to neutralize. Clearly, as this vicious cycle persists, bones become weak and decalcified.

Effects of chronic acidosis on older people

As we get older, kidney function has reduced efficiency. Since the kidneys are in charge of excreting the dietary acid load, urinary excretion of acid is typically insufficient to maintain the desirable pH. This explains why bone loss accelerates with age, and further demonstrates how important it is to follow a nutritional program that regulates the pH. Keep in mind that as we age, we require more alkalizing elements in the body to neutralize the acid than when we were younger. Fortunately, there is an easy way to naturally reverse and prevent bone loss regardless of age, and you'll be amazed at the simplicity of it all.



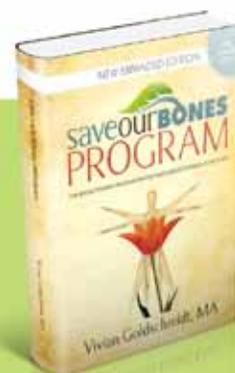
DID YOU KNOW?

Myth: Milk and all dairy products are excellent sources of calcium to help build strong and healthy bones.

Truth: Even though dairy products contain calcium, their consumption actually causes bone loss. The pH of milk (except for raw milk) and unfermented dairy products ranges from 2 to 4. Also, the most acidic of all dairy products is pasteurized homogenized milk. This explains why a Harvard Nurses' Health Study found that women who consumed the most calcium from milk and dairy foods broke more bones than those who rarely drank milk (Source: Feskanich et al.. "Milk, dietary calcium and bone fractures in women: a 12-year prospective study". American Journal of Public Health. 1997).

Take out all the guess work and get your the **Save Our Bones Program**.

Visit <http://saveourbones.com/program> for more information.





THE NATURAL BONE BUILDING GUIDE

The Power Of Bone-Smart Nutrition



The best way to maintain an alkaline pH in your body is to eat a balanced combination of alkalizing and acidifying foods. The ideal therapeutic percentage is to eat 80 percent alkalizing foods and 20 percent acidifying foods. In simple terms, this can be translated as eating eight out of ten (or four out of five) alkaline-forming foods, and two (or one) acid-forming foods. You will notice that the pH balanced program places great emphasis on consuming vegetables and fruits.

But don't despair... you don't have to be a vegetarian to maintain an alkaline pH because no foods are forbidden; the key is to maintain the correct balance between the acid-forming and alkaline-forming foods. In other words, all acidifying foods are permissible – and should be eaten – but in smaller quantities as compared to alkalizing foods.

This is a good time to remind you that eating only alkalizing foods is not a healthy option.

Another great feature of this natural solution to osteoporosis is that there is no need to weigh or measure foods; you can simply visually estimate the quantities. Here is an example of an alkalizing dish: a salad consisting of lettuce, tomatoes, avocado slices, red peppers, and grilled chicken, with vinaigrette dressing. Now let's assume that you're at a restaurant, and you'd like to have a pasta dish. Because pasta is made of grains, it is acidifying, so what you need to do is have an alkalizing appetizer, side-dish, and desert. Examples of an appetizer could be a bowl of mixed vegetables soup; a side-dish could be a salad with a variety of alkalizing vegetables; desert could be a fruit. Of course, you can skip the desert if you are too full.

Supplements that help you build strong bones

Because there are so many processes in the body that relate to bone health, I suggest that you take the daily Recommended Dietary Allowance (RDA) of the minerals and vitamins listed below. There are many good quality multivitamins that contain many of them, and in many cases, the amounts are higher than the RDA. As long as you buy well-known brands, you should not be concerned about that, especially in the case of water-soluble vitamins.

Minerals

- ➔ Calcium: 800-1,200 mg; don't take more than 500 mg at a time.
- ➔ Magnesium: 320 mg.
- ➔ Zinc: 8 mg for women and 11 mg for men.
- ➔ Boron: there is no established RDA, but the typical recommendation is 3 mg daily.
- ➔ Copper: 0.9 mg.
- ➔ Manganese: 1.8 mg for women and 2.3 mg for men.

Vitamins:

- ➔ Vitamin D: The body synthesizes this vitamin by the action of the sun. Dietary sources account for very little of the amount of D circulating in the blood, so I recommend that you try to spend at least 15 minutes a day in the sun. Oral supplementation is still a good idea. Instead of an RDA, Vitamin D has an AI (Adequate Intake) of 400 IU up to age 70, and 600 IU for those older than 70.
- ➔ Vitamin K: 70 micrograms for women and 80 micrograms for men.
- ➔ Vitamin B-complex: the most important B vitamins for bone health are:
 - ➔ B12 (cobalamin): 2.4 mcg.
 - ➔ B6 (pyridoxine): 1.5 mg. for women and 1.7 mg. for men.
 - ➔ B9 (folic acid): 240 mcg, which is equivalent to 400 mcg of folate, expressed as Dietary Folate Equivalent.
- ➔ Vitamin C: 60 mg. However, I recommend increasing it to 500 mg.

Bone-building antioxidants

Antioxidants are molecules that protect cells from oxidative damage by preventing the proliferation of free-radicals. The most important ones for bone health are listed below:

Lycopene: studies have shown that this antioxidant that gives certain foods their red color stimulates osteoblasts and thus, actually helps you build bones. (Source: Rao, Kim et al.. "Lycopene II—Effect on osteoblasts: the carotenoid lycopene stimulates cell proliferation and Alkaline Phosphatase Activity of SaOS-2 Cells". Journal of Medicinal Food. 2003). Coincidentally, foods that are rich in lycopene are also alkalizing, so I've called them Power

Foods, and I strongly recommend that you include them in your diet. Below is a list of foods with naturally high levels of lycopene:

- ✓ Watermelon
- ✓ Apricots
- ✓ Pink Grapefruit
- ✓ Tomatoes
- ✓ Guava
- ✓ Papaya

Polyphenols: these water-soluble plant pigments have been shown to increase production of osteoblasts. Green tea has the highest levels of polyphenols, but unfortunately, green tea has very high levels of naturally occurring fluoride, which can be harmful to the bones and to your health. (Most municipalities add fluoride and other chemicals to tap water, so stay away from it as much as you can). Fortunately, other easily available foods are also rich in polyphenols. Below is a partial list:

Fruits

- ✓ Apples
- ✓ Blackberries
- ✓ Cantaloupe
- ✓ Cherries
- ✓ Grapes
- ✓ Pears

Vegetables

- ✓ Broccoli
 - ✓ Cabbage
 - ✓ Celery
 - ✓ Onion
 - ✓ Parsley
-

I recommend that you include foods with polyphenols in your daily diet, and you can also take a supplement. There are multi-vitamin supplements that have lycopene and green tea extract in their formula.



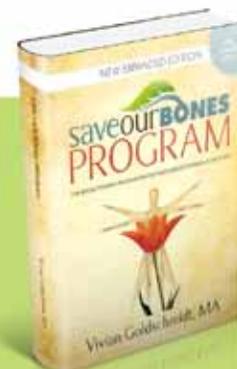
DID YOU KNOW?

Myth: Only calcium-rich foods have bone-building benefits.

Truth: Calcium is a necessary nutrient for bone health and for general health, but many other nutrients also help build strong and healthy bones. For example, a study conducted in France has shown that phloridzin, a potent polyphenol exclusively found in apples and especially concentrated on apple peels, can prevent bone loss. (Source: Puel, Quintin et al. "Prevention of bone loss by phloridzin, an apple polyphenol, in ovariectomized rats under inflammation conditions." *Calcified Tissue International*. 2005)

Get the **Save Our Bones Program**.

Visit <http://saveourbones.com/program> for more information.





THE NATURAL BONE BUILDING GUIDE

Exercise Is Important

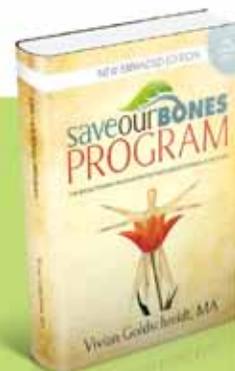


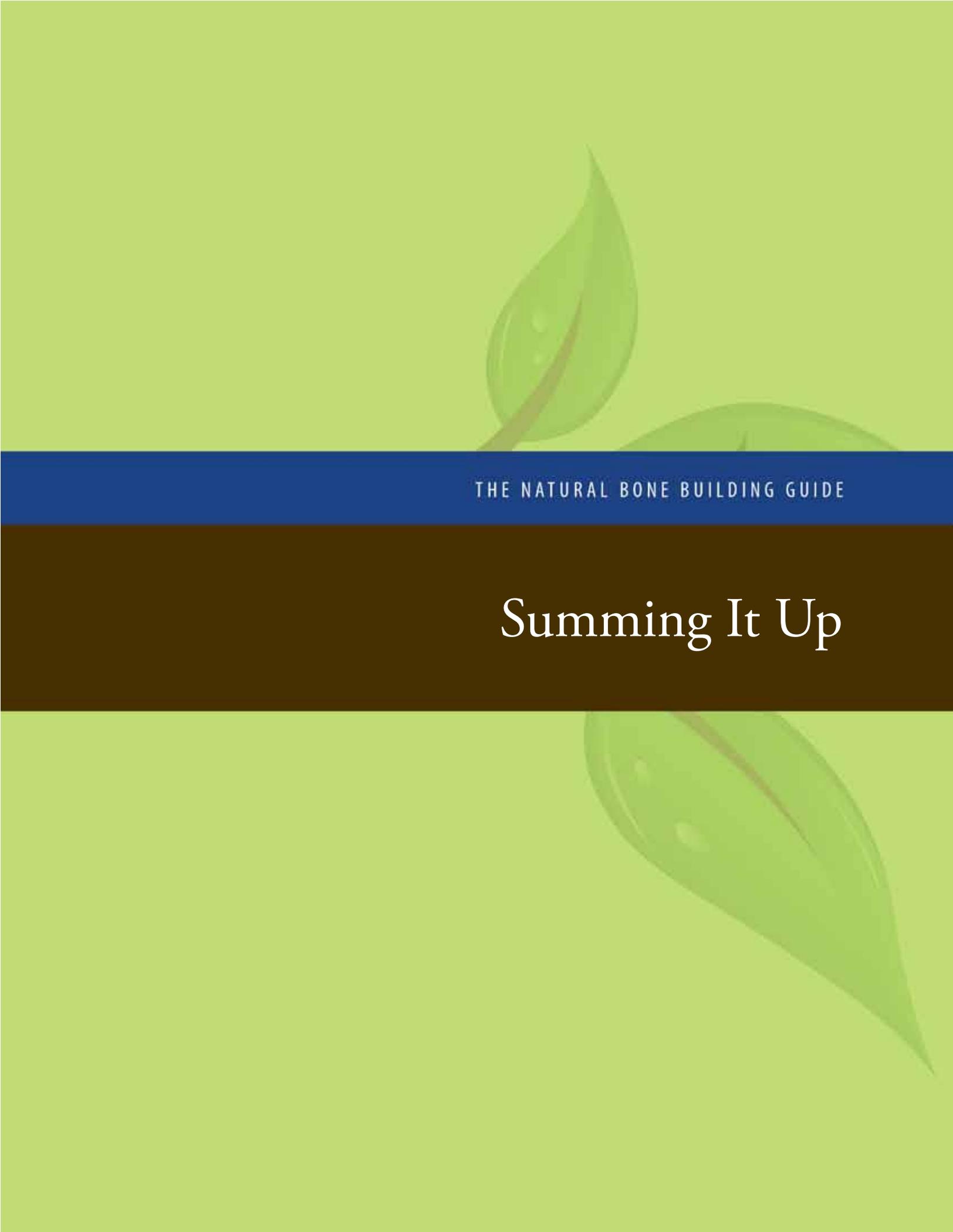
As you've discovered in this report, eating the right food combinations to maintain an alkaline body pH and taking the right supplements is crucial to have strong and healthy bones. Last, but not least, exercising is also a very important part of your bone health program. You should consider a realistic exercise plan that includes weight-bearing activities such as walking or jogging. You can also try fun aerobic sports like tennis, racquetball, or cross-country skiing. And remember to make time for weight-lifting exercises to build strong muscles and bones. Whatever exercise you prefer, try your best to be consistent.

Also, remember to stop well before the point of exhaustion, especially if you don't have the proper conditioning, because exercising excessively releases acid residue stored in the tissues. On the other hand, a good aerobic workout creates an alkaline response in the body because it oxygenates the tissues.

Join the thousands that are part of the natural bone health. Get your printed copy of the **Save Our Bones Program** now.

Visit <http://saveourbones.com/program> for more information.





THE NATURAL BONE BUILDING GUIDE

Summing It Up

Having osteoporosis and osteopenia is not the end of your active and fulfilling life. Quite to the contrary — it's the beginning of your commitment to a natural health path that you can start right away with ease and peace of mind when you know exactly what to do.

That's why I spent countless hours at the local library, calling doctors and researchers, and analyzing scientific journals, to come up with my all natural, drug-free osteoporosis solution.

In fact, what I discovered worked so well that one day I thought to myself: "Vivian, why don't you create a comprehensive resource for people, who are also looking for simple and natural ways to reverse osteoporosis and osteopenia that takes them by the hand and reveals how to do it in a easy to understand step-by-step format?"

And so...that's exactly what I did! And now...

Over 10,000 People are Successfully Reversing Their Bone Loss Forever

Let's face it... There's a murky sea of information on osteoporosis out there. And often times, there is misinformation — miracle supplements, exotic food guides, confusing articles, bizarre exercise equipment costing hundreds of dollars...

It's a bad situation for someone who wants to know the truth about osteoporosis. I know this because I was there too. After my diagnosis, it took me over two years to work through all the clutter and figure out the truth about osteoporosis. I read through all the osteoporosis websites and books I could get my hands on. They all claimed to offer a cure, but it was just more of the same.

That's why I created The Save Our Bones Program so that you can finally understand what Osteoporosis is truly all about and uncover what until now has been kept as a secret. And more importantly, so that you or a loved one can learn the drug-free way to prevent and even reverse Osteoporosis and stop the unnecessary harm caused by dangerous Osteoporosis treatments.

I've read hundreds of medical publications, international research papers, and NASA funded studies, and compiled the bottom line information for you in the Save Our Bones Program — the first system of its kind that reveals a revolutionary approach to having healthy bones.

The Save Our Bones Program offers pure step-by-step knowledge designed to get you what you're really after—to regain control of your bone health without harmful prescription drugs.

I really want you to join the thousands that are naturally building their bone density with the Save Our Bones Program. That's why I've made it as easy and risk-free as possible for you to try this program on for size for one full year and prove to yourself that it will improve your bones and your life.

This is your opportunity to revolutionize your bone health. I understand that you may think I'm trying to "sell" you a product, but I really want you to experience this system and the amazing feeling that comes with knowing that you took action and reversed your bone loss without taking dangerous drugs.

You've already made it all the way to this part of the report, so I know you are committed to your health. And remember, there is absolutely no risk for you to try this out – you have one full year to try the program and return it for a full refund no questions asked for ANY reason.

I can provide this guarantee because I know how effective the Save Our Bones Program will be for you – after all it's backed up by over 140 scientific studies all referenced in the program.

But ultimately it's your choice. How much is your health worth to you?

Will you continue doing what you've done until now... or will you start building strong and healthy bones naturally.

Are you going to continue taking dangerous drugs and fear their side effects... or are you going to let nature help you build strong and healthy bones naturally.

Will you continue to live with the fear of falling and breaking a bone.. . or will you live happily with the peace of mind that comes with knowing that your bones are strong AND flexible.

I look forward to adding your story to the thousands of testimonials I have already received.

Here's to YOUR bone health,

Vivian Goldschmidt

Vivian Goldschmidt, MA



Read What World Renowned Dr. Robert B. Salter Had To Say About This Approach:

"Having read the excellent program entitled, The Save Our Bones Program by Vivian Goldschmidt MA, I am pleased to recommend it as essential reading for all persons involved with preventing and treating osteoporosis."

Dr. Robert B. Salter, MD, CC, OOnt, FRSC, FRCSC, FACS, Canada

Dr. Salter (December 15, 1924 to May 10, 2010) was a world renowned Orthopedic Surgeon, professor, author, scientist and was named one of the 10 most outstanding scientists of the past 80 years by the University of Toronto Faculty of Medicine.

Here are more comments:

I have used the approach explained in the program with my patients and I give it my full endorsement

“As a doctor with many years of experience in the field of Osteoporosis and bone health, I’ve seen how dangerous and ineffective standard Osteoporosis treatments can be.

Having read the Save Our Bones Program, I am impressed with how comprehensive and well researched it is. There is no hype - just factual information that anyone can apply to naturally improve their bone density.

I have used the approach explained in the program with my patients and I give it my full endorsement.

I recommend Vivian Goldschmidt’s fantastic work to anyone seeking a safe and effective alternative to Osteoporosis drugs.”

Dr. Craig Curphey, Barrie Canada



Your program is such an eye opener.

“Talk about a revolution... Your program is such an eye opener. I’m going to tell all my friends about it. I can’t believe all the wrong information that’s out there about this. Keep up the good work.”

Denise Worthington, Los Angeles, CA



Thanks for making us all aware

“Dear Vivian, I am just reading your book with so much attention and will let you know how I am doing when I put everything into practice. Thanks for making us all aware of the different alternatives that are out there.”

Rita Hutson, Australia



I'm so relieved...

“Perfect timing! I was about to fill my Fosamax prescription when my husband came across your website. I'm so relieved I didn't start on the meds after reading the chapter about them. It's really scary stuff—we need to get this information out in the open.”

Crystal Norton, Mansfield, OH



There's a HUGE improvement

“I'm writing this just to tell you that it's been 6 months or so since I started on your program and my bone density results just came in and there's a HUGE improvement. I'm really excited. Oh, and did I mention I don't take any Osteoporosis drugs? You're a blessing to women everywhere.”

Stephanie White, Plant City, FL



Thanks for your enlightening program

"I have now read your program completely and used a large amount of yellow marker pen!

It made very interesting reading and I quickly learned not to feel guilty that I hadn't filled my prescription for Actonel.

Thanks for your enlightening program."

Margaret Williams, Ontario, Canada

I find myself referring back to it constantly

"Thanks for your program! I have really enjoyed reading it and I find myself referring back to it constantly.""

Yvonne Custalow, ycustalow@xxxxxx.net

Thank you for the support

"I bought your program, and refer to it constantly, to check whether foods are acid or alkaline, and to give myself hope.

Thank you for all the supportive emails. The most recent about bisphosphonates, was encouraging. It helps to know there is someone out there whose only aim is to fight osteoporosis.

Once again, thank you for the support Vivian."

Julie, julie_white@xxxxxx.com

I hope your program makes it to every woman in America

"I hope your program makes it to every woman in America.

It is excellent!"

Dr. Dorie, drercksn@xxxxxx.com

I feel very informed

"I got your program and I love it!

I feel very informed and am no longer worried about this "condition".

I'm on the quest with friends I know who use Fosamax.

So, thank you for everything!"

Kitty, kbmac47@xxxxxx.com

So interesting and informative

"I am finding your program so interesting and informative. Also the recipes are great. Thanks Vivian, for all the excellent information."

Wilma Olive, Nova Scotia

Have never felt better

“Thanks again for sharing this information. I have taken the path of your plan. I read your program 4 weeks ago and as of today have never felt better. Thanks again...your are a blessing.”

Terry

I have successfully raised my t-scores

“After a year of following the guidelines in your program, I have successfully raised my t-scores without taking any drugs.

My spine was -1.0 and raised to 0.8 which is normal. My left hip was -2.1 and raised to -1.7 My right hip was -2. and raised to -1.5.

I am very grateful to you for trying to help all of us with bone density problems. Thank you.”

Melany Haas, melahaas@xxxxxx.com

As a medical professional, it makes so much sense

“I just wanted to share with you that I read your program, cover to cover, this evening and absolutely LOVED It. As a medical professional, it makes SO MUCH sense to me and clearly confirms the work of other substantial researchers. Our research and principles are clear, easy to follow and remarkably powerful!”

M.C. RN, APN, C. CG

Have learned so much in just 2 weeks

“I am so very glad I found your site, bought your program, and have learned so much in just 2 weeks about Osteoporosis and the horrors of the medicine I almost took, but thanks to you I didn’t!!

Thanks a million, I just already feel this is going to be worthwhile, will keep you posted.”

Eileen Bishop, UKe-16@xxxxxx.com

Your book is fascinating reading

“Your program is fascinating reading - I’m so pleased to have found you on the internet! I will quite definitely NOT be giving in to bisphosphonates.”

Sara De Siena, seades50@xxxxxx.com

She only said you are not worse, but a little better

“Thank you so much for your program. I have had my first test since I started the program. The doctor had not contacted me since the test on Friday (March 20th). I called her and she remembered I was working with your program. She only said you are not worse, but a little better. Keep doing what you have been doing. By the way, it has also kept my blood pressure down, and I have not taken a pill for that, since last May. Thank you again.”

Phyllis Mitchell, Puyallup, WA

I will add this information to my class

“Thank you for that very helpful info. I lecture on the dangers of these drugs and others harming women. I will add this information to my class. ”

Sincerely,

Dona Garofano, ND, Great Halls of Healing, LLC

Take your bone building to the next level. Visit:
<http://saveourbones.com/program>

Discover why world renowned Dr. Bruce Salter recommended the **Save our Bones Program** as “essential for all persons involved with preventing and treating osteoporosis.”

Visit <http://saveourbones.com/program> for more information.

