A diagnosis of osteoporosis or osteopenia is in too many cases, a source of unnecessary anxiety. Much of the information on bone health is confusing and misleading.

Hopefully the following information will simplify things and help you make informed decisions about your bone health.
Our bones are constantly in a state of simultaneous destruction and reconstruction. This process goes on 24/7, eliminating old bone and replacing it with younger bone. Specialized cells within the bones called osteoclasts tear away old bone cells, while other specialized cells called osteoblasts simultaneously rebuild new bone.

As the osteoblasts rebuild, they either rebuild the bone heavier and stronger, or lighter and weaker. The simple principle of “use it or lose it” determines whether our osteoblasts rebuild stronger or weaker.

Our body keeps track of the day to day loads we place on our muscles and bones. If we become more sedentary and the loads go down, the body determines that we “no longer need” our present level of bone strength. It then signals the osteoblasts to rebuild the bones lighter and weaker than before.

The solution to the bone thinning problem is really quite simple: increase the stress on the bones with strengthening exercise. This signals the osteoblasts to build the muscles stronger and rebuild the bones stronger and heavier.

How do you know the bones are getting stronger? When the muscles get stronger, the bones also get stronger. This is a built in safety system to make sure the muscles can never overpower the bones and cause a break.

Dr William Evans, a nationally renowned researcher, summed it beautifully in an interview with ABC’s 20/20 news show when he said: “They call them skeletal muscle for a very important reason; the muscles attach to the skeleton, and that means when you lift a weight, you not only put stress on the muscles, but you also are putting stress on the bones and it’s the stress on the bones that causes them to get stronger.” The interviewer asked: “The stress builds bones just the way it builds muscles?” Dr Evans answered, “Absolutely!”

Some bone thinning is a perfectly normal part of the aging process, even for very active people. This fact has been distorted to frighten many women into taking harmful bone thinning drugs.

**WHAT SHOULD WE DO TO BUILD BONES AND REDUCE FRACTURE RISK?**

We should start strengthening exercise immediately, which is the only unquestionably proven method of building bone strength. Walking and most types of aerobics, although very good for our health, do little or nothing for building bones.

Strengthening exercises that exhaust the muscles in 60 to 90 seconds is what builds muscle and bone. When done correctly, it takes remarkably small amounts of strengthening exercise to build muscle and
bone. With the addition of the X-Force machines one workout a week is all that is needed at any age.

Ideally we should start with bone strengthening exercise in our teens and twenties during the period of our lives when our body is building it’s peak bone density. This gives us a safety buffer for our later years when we tend to lose bone more easily. Regardless of our activity level when we were young we can add bone density at any point in our life.

We also need to fulfill our calcium requirements. The best and only proven method of absorbing the calcium we need is to consume a healthy diet of grains, fruits and vegetables which give us an, absorbable source of calcium. (See “Is Calcium the Answer” later in this brochure)

Assuming we are not on a drug that depletes the bones, if your muscles are getting stronger you can be sure your bones are also getting stronger.

**THE DISTRESSING NEWS**

If you have been told you have osteopenia or osteoporosis, the article published by NPR, *How a Bone Disease Grew To Fit The Prescription* is essential reading. You can find the article by clicking on Health Info at the top of our website home page, then scroll down and click on Osteopenia, Is It A Disease?

The article details how the term osteopenia was arbitrarily chosen by some of the worlds leading researchers as a research term for normal bone loss from aging, never imagining it would be misused as a supposed disease.

The change began when Merck pharmaceutical company hired a talented marketer to figure out how to increase the sales of their new drug, Fosamax. He decided that to sell more of the drug, they needed a small, less expensive DEXA “bone density” machine in more doctors offices. Despite a lack of machine accuracy and lack of research correlating the scans with bone fractures, he successfully pushed for the smaller machines. He also created a not-for-profit organization funded by pharmaceutical companies, to lobby for insurance paid testing and was again very successful. As a result Fosamax became a huge money maker for Merck.

DEXA testing for determining bone density is highly inaccurate for a number of reasons. According to Marcelle Pick, OB/GYN NP in an article from *Women’s Health Testing*, “bone density varies so dramatically according to race and region.” In addition “errors in DEXA measurement can be 8 to 10% depending on the machine.”

Bone mineral density is also measured against a younger reference group, but everyone loses bone density as they age. So eventually almost all women’s bone density will deviate from the “norm” and they will appear to be suffering from diagnosable disease. No wonder there is an osteoporosis epidemic!

“What’s the ‘low’ for one woman, may also be just fine for another, depending on the thickness of her
bones, her ancestry, her peak bone mass from when she was in her 20’s and other variables.” according to Marcelle Pick.

There are many other factors that can alter the result of a DEXA scan including, the operator’s experience, the way the patient lays on the table, and even the clothes the patient is wearing.

THE BAD NEWS ABOUT OSTEOPOROSIS DRUGS

The first series of drugs for osteoporosis “prevention” were developed to actually poison the osteoclasts and prevent them from removing old bone. The thinking was that if they prevented the old bone from being removed and left the osteoblasts to keep building new bone, it would create heavier bones. The bones did appear to get heavier but then patients on these bisphosphonate drugs, such as Fosamax, began to have an elevated risk of spontaneous breaks after 5 years. As it turns out, old bone needs to be removed because it is more brittle and thus more susceptible to breaking.

From an article written by Dr Lane Lenard, a medical/science writer and author, “even though bone strength appears to increase due to Fosamax treatment, in fact use of this patented medicine has been associated with a 20% reduction in bone toughness (that is, its ability to endure bending pressure without breaking).” Dr. Susan Ott, compares bisphosphonate-treated bone to an old tree. Under the stress of a strong wind, younger trees are flexible enough to easily bend without breaking. However, older, denser trees, faced with serious windstorms are less able to bend and might just snap in two. “Many people believe that these drugs are ‘bone builders,’ but the evidence shows they are actually bone hardeners,” making them more brittle.

The next osteoporosis drug hailed as the answer, is Forteo. (MIACALCIN spray, FORTICAL and generic equivalents) They were designed to overstimulate the osteoblasts (the bone building cells), with the idea they would build more bone than was being removed by the osteoclasts. Overstimulated cell development is also a description of cancer. Sure enough the rats in the testing lab started developing osteosarcoma, a serious form of bone cancer and developed it at all dosing levels.

The “belief” is that it takes 2 years for the development of this bone cancer. “Coincidentally,” the human studies on these drugs were limited to under 2 years and the recommendation is to discontinue using Forteo after 18 months. Studies also failed to show that these drugs decrease fracture risk.

These osteoporosis drugs are toying with our bone remodeling process, the system that is so critical for preventing bone breaks, and rather than preventing breaks, are in many instances causing them.

IS CALCIUM THE ANSWER?

To further confuse matters, we are the highest calcium consuming country in the world, and yet we have the highest fracture rate in the world.
First of all, to fulfill our calcium requirements, it is best to consume a healthy diet of grains, fruits and vegetables which gives us a healthy, absorbable source of calcium.

When it comes to calcium consumption, no amount of calcium alone will stop bone loss, unless the bones get the required healthy stress from activity that triggers the bone to use the calcium in the building process.

Although sufficient calcium consumption is essential for bone health, more than approximately 600 milligrams a day is unused by the body and passed. This amount can easily be achieved without dairy products or supplements. Multiple studies, including the Harvard Nurses Study that followed 72,000 women for 18 years showed no protective effect of increased milk consumption on fracture risk.

A Swedish study published in the *British Journal of Medicine* followed a hundred thousand men and women for up to 20 years. Three glasses of milk a day was associated with nearly twice the risk of premature death and they had significantly more bone and hip fractures. More milk, more fractures.

Despite what we are told, calcium supplements perform no better. In an article written by Jane Brody, the New York Times personal health columnist, she wrote “the United States Preventive Services Task Force recommended that post-menopausal women refrain from taking supplemental calcium and vitamin D. After reviewing more than 135 studies, the task force said there was little evidence that these supplements prevent fractures in healthy women.”

In addition, the side effects of any medication we are on should be carefully reviewed. Some of the more commonly used pharmaceuticals that weaken bones include many antidepressants.

There are innumerable articles and research studies on the web that corroborate the above points, once you scroll past the multitude of pharmaceutical webpages.