

**L**ifting type exercises have proven more productive for increasing bone mass. Nautilus machines have successfully been used in a number of studies on osteoporosis and have proven to be more productive than aerobic type exercise for bone building. Care should be taken, to make sure that the resistance is very light, particularly at the start. People who are unfamiliar with Nautilus type machines sometimes shy away from this most successful tool because they are concerned that it might be too difficult for them. If the proper equipment is used, the resistance can be dropped to a level comparable to 0 Lbs. and moved up in small increments as needed. Anaerobic, weight assisted exercise is the recommended therapy for osteoporosis (except in very advanced stages). Exercise, like walking and swimming, except in the most advanced cases of osteoporosis, does not provide sufficient work for the bones and thus do little or nothing for halting bone loss.



**I**f you have been diagnosed as having Osteoporosis or you have a family history of the disease, check with your doctor first then speak with our Fitness Director or me (Mike Artega) for help in customizing your bone building program.



**Y**ou don't have to wait until you have a problem! Keep your muscles and your bones strong and healthy by including at least some Nautilus or other weight bearing exercises in your regular exercise routine! The American College of Sports Medicine just recently changed their exercise recommendations to incorporate weight bearing exercise, in response to the latest research. They now acknowledge that weight bearing exercise is essential for a fitness and health-care program!

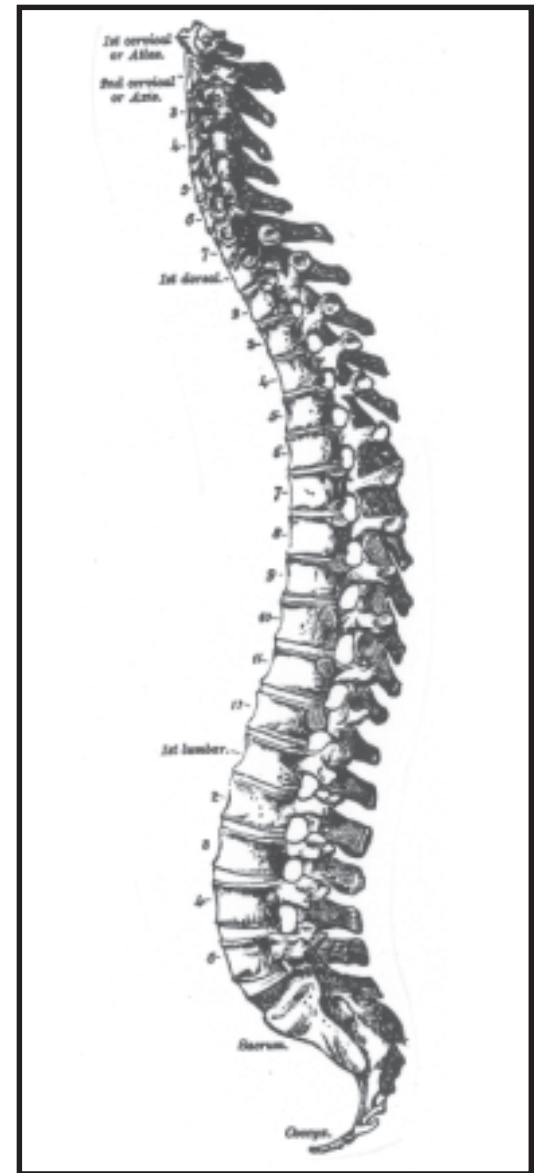
**I**f time is a concern, speak to us. We can establish a balanced weight bearing exercise program that can take as little as 15 minutes twice a week!

- MIKE ARTEAGA



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# GOOD NEWS ABOUT Osteoporosis





steoporosis is defined as the thinning of the bones or the reduction of bone mass, which results in an eventual deterioration of the skeletal structure. As the bones become thinner, the chance of fracture increases. For the average individual, bone thinning is a normal part of the aging process.

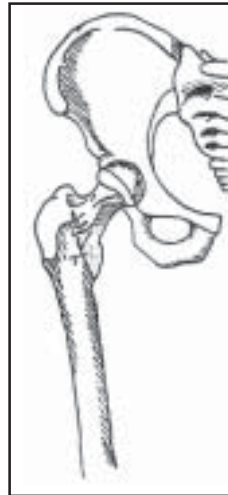
**M**ore than one million osteoporosis related fractures occur annually and it is estimated that over eight million women in the U.S. are affected. Although osteoporosis is more prevalent in women with particular ethnic backgrounds or a family history of the disease, **it is lifestyle related**. New studies are indicating that bone thinning can be halted and in many cases reversed!

**B**ecause most people get little or no regular exercise, some bone thinning is a normal part of aging for the average individual. When the process occurs too rapidly, the result is an increasingly weakened skeletal structure. According to Dr. Everett L. Smith, Director of the Biogerontology Lab, Department of Preventive Medicine at the University of Wisconsin, "Exercise may be the greatest stimulator that bone ever gets, and may maintain and even increase your bone mass". Loss of bone mass, is not a "normal" part of the aging process. It is simply a response to the less active lifestyle most people lead as they get older. We are seeing, as the active senior population continues to grow, that many of the health problems attributed to aging are related to reduced activity levels, not aging!



**B**one is dynamic tissue, which is constantly in the process of tearing down and rebuilding. As we age, the body has the tendency to rebuild slightly less bone tissue than it tears down. Over time, this leads to a marked reduction in bone density. The deterioration is compounded if a person is not consuming enough calcium or is leading a sedentary lifestyle.

**W**ith bone, much like muscle tissue, we know that the body follows the old "use it or lose it rule". A sedentary lifestyle puts less and less stress on the bone and muscle structure. If these systems are not exercised regularly, the body will naturally shed muscle and bone density over time. The body will maintain just enough strength to perform tasks we do each day. Standing, walking and sitting, require minimal effort on the part of the muscles and the bones. If this is a person's only form of exercise, eventually very little bone and muscle strength will remain. At this weakened point, almost any unusual task can result in an injury. It is widely believed that many of the hip fractures that "happened when they fell", actually happened first and then the person fell! The bones may have deteriorated so badly that they literally collapsed from the stress of walking!



**S**ince bone is constantly in the process of tearing down and rebuilding, it is possible to reverse the deterioration. Just as muscle responds to exercise by getting larger and stronger, bone tissue can also respond to exercise in the same way. The process of strengthening the bones is a much slower process than strengthening the muscles. Care must also be taken, particularly when osteoporosis is more advanced, because the very exercises that are best for rebuilding bone, can also cause more damage if they are performed incorrectly. A skilled sports medicine Physical Therapist or an experienced exercise professional should be consulted when starting an exercise program.

**A**ge has much less effect on a person's response to exercise than is commonly believed. In a recent study performed with seniors of both sexes, ranging in age from 85 to 99, and using Nautilus type machines, the group more than doubled their muscular strength in 10 weeks! Bone strengthening is a much slower process. **B u t w h e n** proper exercise and nutrition are initiated, muscle and bone strengthening can be achieved at ANY age.

