# Bone Density Revelation

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Maintaining and increasing bone density with certain types of Water Fitness exercises has been a subject of interest questioned in our field. There seems to be a lack of good quality research which measures the many factors involved concerning bone density and Water Fitness exercise. This deficiency opens the way to incorrect ideas by searching non-weight-bearing environments such as swimming, scuba, and even astronaut research.

I've been teaching different types of Water Fitness since mid-1980. Often my experienced students who exclusively do Water Fitness exercises have shared their physician's comments. These comments all bare a positive common factor: their doctors were pleased with the improvement when the results of their two most recent bone density tests were compared. I had a similar experience and would like to share my personal testimony.

In July 2006 my doctor called for a bone density test since I had never had one. The results of the first test were in the normal range, and my doctor did not call for a second test until almost five years later when it was actually necessary.

Why was this second bone density test a necessity? Strangely the account begins with a mammogram ordered to check a specific area. Every six months a single mammogram was required since a bead had been placed in a benign area in the right breast in 2009. Prior to the 2010 mammogram exam, the technician and I were having interesting discussions on Ancient Greek translations. Ancient Greek translations are difficult to interpret; even professionals have varying opinions.

Our discussion was about the Ancient Greek word "pisteuo" and its root word "pistis." The technician and I became totally absorbed in deep thought with this topic. It really sparked our interest, since we had been taught Sunday school in different churches. Both of us chatted about seven points:

1. The Bible was translated into Shakespearian English from the Latin Vulgate rather than the Greek and Hebrew (Larry Osborne), and the Greek word pisteuo was ultimately translated as "believe" (Robert Van Kampen).
2. The Apostle Paul did not see a big difference between the meanings of the three words believe, trust, and faith (Larry Osborne) since all were from the same root word, pistis, meaning reliance on Christ (NASB).
3. In Paul's day, pisteuo, in the active and present tense, meant to "…rely on to be persuaded of..." instead of "…believe…" (Robert Van Kampen). This is used as a noun in Hebrews 11:1 and then as a verb in John 3:16 and John 14:15 (Larry Osborne).
4. "Rely on to be persuaded of" (Robert Van Kampen) was giving both the technician and myself a deeper insight to John 3:16 (NASB). This insight was that the meaning: "rely on to be persuaded of" denotes obedience to God's Word.
5. "The sum of Thy Word is Truth…"(NASB Psalms 119:160) which speaks at full volume telling us to take all Scripture into account concerning a particular subject instead of drawing conclusions from a few verses (Robert Van Kampen).
6. Reliance, love/obedience, faith/works, forgiveness, and go and sin no more are key Scriptures to put into action (NASB John 14:15; James 2: 19-26; John 8:11).
7. "Rely on to be persuaded of" (Robert Van Kampen) is certainly more meaningful than the simple English word "believe" in the Bible, especially in the verse John 3:16 (NASB).

By this time we were so immersed in the conversation that I did not notice the technician was taking a mammogram on my left side instead of my right side. Nor did she notice the error until the test was completed. With apologies she then took a right side mammogram. Ten minutes later I was told I needed to have an ultra sound since they needed to check an area of concern discovered in the left side. The left side was not intended to be examined that day "WOW!" The ultra sound results determined further investigation was needed. Within four hours on a Friday (during the December holiday season!) I had two mammograms, visited two doctors, had two ultra sounds, one needle biopsy, and the tissue was sent to the lab. This all occurred before noon on the day I had my mammogram. This type of four-hour medical process does not happen often. On Monday I received a telephone call from my doctor saying, it's cancer; you need to come into my office this week.

Was this an accidental discovery? Did the mammogram technician really make a mistake? In today's healthcare system is it normal for the following to occur within a four-hour period?

1. Discovery.
2. Confirmation.
3. Extraction of tissue.
4. Sample sent to the lab.

Absolutely "no!" to all three questions! Plus within 17 days of detecting cancer, I had extensive cancer surgery consisting of a double mastectomy and removal of six lymph nodes. After the surgery I needed to have a bone density test before I could begin an estrogen blocking medication (since my cancer was estrogen related).

This second bone density test was scheduled in January 2011; the test results become more interesting when the following are examined:

1. It had been almost five years since my first bone density test.
2. I was within weeks of my 65th birthday.
3. I do not perform sessions of land exercise, machines, or weight lifting. For many years, the only exercise programs I have been using are vertical in the pool. I do not swim even though I remember being an excellent swimmer in the 1950's. My past and current exercise programs consist of:
    a. Deep Water Running: correct body alignment with water line to the chin.
    b. Water Walking: water line above the waist.
    c. Water Aerobics: exercise levels 1, 2, and 3 with water line to the mid-chest area.
    d. Hydro-riding: water line above the waist.

Even though my students use resistance and buoyancy equipment, I personally do not use either one for my workouts. I have always performed each move in good alignment with upbeat music, exerted to the point of needed recovery, and then repeated the cycle.

Due to my age and activity choices, everyone was pleased with the results of my second test. My bone density revealed significant improvement. My OB/GYN stated, "Your numbers are the ones hoped for by all." (Dr. Cecil D. Odom). It is not difficult to understand how certain types of Water Fitness exercises can be this beneficial. Water running works! I do not slice through the water; I do not move slowly in the water; nor do I dive below the surface. My bones receive benefits from the mechanical act of running with less impact while my head is above water Normal range bone density is especially important during episodes of chronic disease.

These personal experiences are an example of how cancer patients are confronted with daunting and complex choices and possibly may help others in making decisions. After a large

amount of research and consideration about a multitude of issues, I made two arduous decisions.

1. I investigated reconstruction surgery thoroughly. I declined since back and/or abdominal muscles are used in the recreation of breasts.
2. After surgery, results of my oncotype dx breast test showed a high number in the gray area; yet, my tested lymph nodes were not cancerous. Chemotherapy by IV attacks the immune system and kills more than cancer cells. Therefore, I declined this treatment.

These two decisions, in addition to having a good level of physical fitness, enabled me to return to teaching only 28 days after surgery. Performing Water Fitness exercises prior to surgery and continuing proper nutrition throughout helped me to cope better with the difficult post surgical phase. Once my tissues were healed, I could return to Water Fitness in an effort to regain (as much as possible) my pre-surgery exceptional quality of life. Post surgical Water Fitness is an advantageous method of recovery that would work for nearly everyone.

Another personal experience that may help others is understanding the damage that can occur when placing estrogen blocking (chemotherapy medication) into the body. Months after taking two different types of estrogen blocking medication, my side effects continued to increase drastically. As the side effect increased, my tissue damage became a threat to my daily activities such as the whites of my eyes became more severely scarred and burned constantly. I lost the strength in my fingers and grip in my right hand. Fearful of more seeded damage than had already occurred and knowing the quality of life I wished to maintain during the length of time cancer was at bay, I gathered courage to stop the prescribed cancer medication. There are many side effects I did not mention; unfortunately, all these horrible side effects that occurred will remain for the rest of my life. Then, I discovered things I did not know about estrogen. The body stores estrogen in the fat cells; and it continues to make a small amount of estrogen daily even after a complete hysterectomy. Unfortunately, that small amount of estrogen is not enough to correct my permanent tissue damage as a result of chemotherapy medications. However, this small amount of estrogen may be enough to feed cancer. Estrogen has a very good purpose, but it can also be deadly. During these difficult times, I am thankful for many things such as the availability of Water Fitness exercises and proper nutrition.

The well known cliché, exercise and proper nutrition go hand in hand, holds true. Class #315 at the AEA 2011 Conference referenced the importance of nutritional vitamin D and bone strength. "Vitamin D deficiency is highly associated to bone strength and falls; data suggest that most older women in the US are low in vitamin D…." (Dr. Len Kravitz). Proper nutrition is vital especially when a person realizes they are dealing with chronic disease. Robert G. Wright's book, "Killing Cancer Not People" is an excellent read. He discusses nutrition and the pH scale. Acidic bodies are prone to be unhealthy. However, mildly alkaline bodies (7.3 to 7.4 pH) are prone to be healthier. Water Fitness professionals will easily understand this book as they relate to balancing pool water. Alkaline buffers! Eating fruits and vegetables, taking juice plus vitamins as advised by oncologists, and drinking ionized alkaline water are good choices to make. For more information on vitamins and water, please e-mail milling@mc.edu. Today even in spite of everything available to try to keep cancer dormant, a cure for cancer that prevents major human suffering needs to be released to the world.

In conclusion, estrogen blocking medications are also associated with affecting bone density. My personal 2011 Aquatic Exercise Association conference notes indicate an estrogen deficiency can lead to unhealthy joints and irreversible damage. Regrettably, I did not know this important information on irreversible damage in time to decline the estrogen blocking medication. However, today I can reveal the results of my personal bone density tests prior to taking estrogen blocking medications. I do not know the permanent effect these cancer

medications have had on my bone density. I will discover that particular information when another bone density test is ordered. I can simply say my exercises in Water Fitness are working for me in a positive way. They can for you also. Water running is important!

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