

Aquatic Exercise and Bone Density: Can They Work Together?

By: Jodi Frank, Ph.D., CTRS

The question that is asked continually in our profession is “Does exercising in the water help my bone density?” There are two sides to every debate, however, the answer in this situation is very clear – Yes!

There are several factors that have been researched to support this finding. First, the resistance of the water just from physical movement places a demand on the skeletal system, thus placing a load on the bones. Once the bones are subjected to this stress they are forced to respond and increase muscle tension. This entire process results in stronger and denser bones. This happens from just minimal movement – think what could happen if you added specific bone loading exercises?

Another finding has been that the impact on the bottom of the pool adds to the bone loading capacity. The impact is reduced compared to land based exercises, however it still provides the stress to the bones and therefore increases their strength. This is not to say that deep water exercise does not have this value, but rather those participants have a greater water resistance factor and load their bones in that manner.

Balance, water exercise, and bone density have a wonderful relationship. The water provides a safe place to work on balance and therefore it helps to build bone density too! The act of working core muscles for balance in the water adds to the complexity of the bone loading activity. The constantly moving water forces the body to engage the skeletal system to maintain an upright position, in doing so, the bones are once again loaded.

The final finding that research supports is focused around specific exercises designed to strengthen the muscles of the back. The back is an area that is often considered the most attacked by osteoporosis, therefore it is critical to strengthen. If the muscles are actively engaged, the bones will also respond. Most people have significant bone loss in this area and special care needs to be taken into consideration when selecting exercises for this area of the body. The water provides a safer environment for this type of exercise and there are numerous movements that can be chosen.

The researchers all conclude that exercising in the water is beneficial and can increase bone density. Most research compares land based and water based exercises and in all cases the water demonstrated significant findings! The critics of aquatic exercise should get off the treadmill and get into the water if they want to get a bone loading workout!

The next time you get asked if what you are doing is good for bone health, you are armed and ready to respond. Remember, always use the research to back you up and keep your spine firm on this topic!