

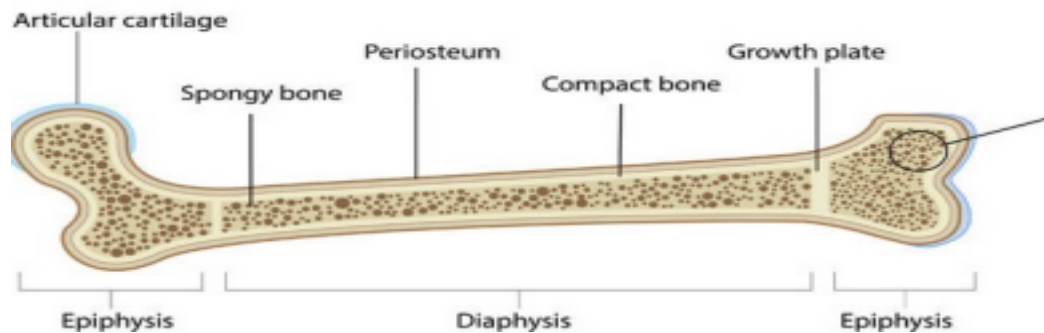
Brittle Bones Do Not Mean a Brittle Life!

Every day I hear another patient tell me they have “osteoporosis”. They tell me because of their diagnosis they are unable to be physically active or lead an active lifestyle. It seems the predominant way of thinking about osteoporosis in the general public is that anything other than sitting or laying is life threatening. I don’t know why people think this way, or who keeps perpetuating this idea, but this is not the case! People can lead very active and meaningful lives despite having osteoporosis! It just takes an extra bit of planning and being careful to participate in activities safely.



Anatomy of Bone

Bones are found all throughout the body. They form the skeleton which provides muscles attachment points, allowing us to move. They ensure we have shape, so we don’t become massive blobs trying to move from one location to another. There are two main parts to bone that are affected with osteoporosis: the cancellous (spongy inner portion) tissue, and the compact (hard putter layer). With osteoporosis, both of these tissues become weaker, making them more likely to break under pressure.



What is Osteoporosis?

Osteoporosis is a disease that affects the strength of the bones. There are two main processes that lead to osteoporosis, them being:

- 1) The body loses too many bone cells, whether due to natural causes or disease
- 2) The body does not make enough bone cells to maintain the integrity of your existing bones

These processes can occur independent of each other, or occur at the same time.

With osteoporosis, the cancellous bone becomes less dense. There is more space within the bone, making the bone almost hollow. The compact bone also becomes thinner, making it easier to break.



Risks of Osteoporosis

The number one risk of developing osteoporosis is fractures. Once a bone is weakened, it is more susceptible to breaking, even under light pressure. This is problematic because breaking a bone can lead to serious disability, especially later in life. For example, breaking a hip at the age of 25 will most likely lead to full recovery and return to normal function. Whereas, breaking a hip at the age of 75 may lead to an inability to walk.

With osteoporosis, individuals can have fractures with even a light jolt or missing the final step in a set of stairs. Compression fractures of the spine can happen, which can affect the spine's alignment and neurological integrity.



Risk Factors to Developing Osteoporosis

Although anyone can develop osteoporosis throughout their lifetime, there are certain factors that make some individuals more likely to develop it. They include:

- Age (being over the age of 50)
- Sex (women are more likely to develop osteoporosis than men)
- Familial history of osteoporosis (genetics)
- Lack of physical activity during youth
- Being overweight or underweight (can be determined using Body Mass Index calculations)
- Low intake of calcium and vitamin D levels
- Alcohol abuse
- Smoking cigarettes

BODY MASS INDEX



Treatment Options for Osteoporosis

Unfortunately, osteoporosis is not a curable disease. Once the process has started, it is not possible to start it. However, there are treatment options to slow the progression of the disease!

1) Altering your diet

One of the easiest ways to improve your bone health is by making simple alterations to your diet. By increasing your calcium intake, through dairy products or green leafy vegetables, you will provide your bones with ammo to bulk up!



2) Go into the sunlight more often

Another easy way of improving bone health is by allowing yourself to go into the sun more frequently. This will increase the vitamin D levels in your body. In countries where there is limited sunshine, people often choose to take vitamin D supplements instead.



3) Exercise

Participating in weight bearing exercises, or exercises that put light load on your bones, sends signals to your bone to get stronger! I feel like I'm starting to sound like a broken record, but exercise does seem to be a cure for almost all ailments...



4) Medications

This option includes oral and injectable medications. One mechanism by which medications for osteoporosis work is by limiting the breakdown of bone



Exercises For Osteoporosis

Below I'm going to list a couple simple exercises everyone can adopt to improve their bone health. These exercises are low impact and quite safe to complete for most people. Remember, if these exercises cause pain or you are worried about your balance, do not do them!

1) Walking

Walk at a steady pace for 30 minutes. Walk fast enough to get your heart rate up, but not so fast that you are panting. If you are able to walk and talk at the same time then you are walking at a good pace! If 30 minutes is too long, you can walk for 10 minutes, take a break, and repeat two more times.



2) Marching on the spot

Standing on one spot, bring one knee up to your chest and then gently stomp on the ground. Alternate between both legs. Try to complete 10 on both sides. You can hold on to a stable surface if you are worried about losing balance.



What Next?!

If you would like more information about osteoporosis, or would like more specific exercises to improve your bone health, you should see a physiotherapist! Email us at informphysio12@gmail.com for more information!