

## **Osteoporosis – A Preventive Approach**

Osteoporosis is a depletion of bone mass and deterioration of bone tissue. Women are particularly susceptible following menopause because of the hormonal changes the body undergoes. Osteoporosis leads to bone fragility and potential risk of fracture in the hip, spine and wrist. In people over 50 years of age, it affects one in four women and one in eight men. Approximately 1.8 million women, in Canada, have osteoporosis.

Most of us can relate to a story about an elderly person who had fallen and broken their hip (my father for example). The neck of the femur (most fragile part of the thigh, near the hip) is usually where the break occurs. The catalyst is when someone tries to stop from falling, resulting in a torsional force on one hip that causes a fracture at the femoral neck. The fracture results in the person falling and ultimately carries a high risk - Osteoporosis Canada identifies potential death rates up to 20% and potential disability in 50% of the survivors for these fractures.

A fragility fracture occurs when a bone is broken as a result of a minor impact (e.g. wrist, foot or hand) – this is a potential indication of osteoporosis and should be assessed by your doctor.

Prescribed medications such as Bisphosphonates are one way to combat this disease. Adequate calcium and vitamin D intake can also be therapeutic. It is important to consult with your MD when considering these approaches.

Another alternative is resistance training with weights. Wolf's law states that bone in a healthy person will adapt to the loads it is placed under: i.e. if weight bearing exercise on a particular bone is gradually increased, the bone will remodel over time to become stronger, accept and accommodate that sort of loading.

Consequently, weight training under the guidance of a personal trainer is very effective for building strength and maintaining bone mass. Trainers also understand how to work opposing and co-operating muscles to create balance in the body. This holistic approach is preventive and should be utilized in the early stages and even better - prior to developing osteoporosis.