



Osteoporosis Exercises and Risk for Falling

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Mature healthy adult bone is extremely tough and durable, usually able to withstand all sorts of physical stress whether walking, running, jumping, playing games or lifting heavy objects.

Unless there is considerable loading (contact sports such as a soccer tackle or heavy fall) bones tend not to break. If however the quality of the bone structure is reduced as in osteoporosis the risk of fracturing the bone increases.

Osteoporosis is a bone disease characterized by low bone mass and deterioration in the bone micro-architecture. Typically this reduction in bone quality occurs without any symptoms and may only be identified after a fracture has been sustained.

With estimates of the incidence of this disease ranging from one in four in females over the age of 50, and one in eight for males, much attention has been focused on identifying and treating those individuals at risk. Current thinking suggests that adult bone health is significantly determined by what we eat and how we stress our bones in early childhood and teenage years. Adequate calcium intake and plenty of weight bearing exercise at that time in our lives lays down our good boney template for the future.

In addition to nutrition and physical activity there are several other risk factors associated with osteoporosis:

- Female particularly menopausal and post menopausal
- Caucasian ethnicity
- Genetics - family history early onset osteoporosis
- Hyperthyroidism
- Elderly
- Older age, Post menopause
- Parathyroid conditions
- Hormone imbalances
- Smoking
- Sedentary lifestyle - lack of physical exercise
- Dietary deficiency
- Alcoholism
- Corticosteroid usage

Bone strength is influenced by how it is loaded or stressed. Stress applied to bone will increase osteoblast activity, (bone producing cells), and make bone stronger. This means that for most people weight bearing activity such as walking, climbing up and down stairs, carrying groceries and gardening are simple everyday activities that can help to keep bones strong.

Physically active people generally have higher bone mass than people that are sedentary.

Inactivity tends to weaken tissue whether it is bone or muscle. Inactivity can also increase your risk of falling.

Agility, balance and resistance training may also have an added benefit of lowering the likelihood of sustaining a fracture. These factors are why exercise plays such an important part of the management of osteoporosis, however, to be effective it must be carefully applied and progressed.

For instance, certain directions of movement such as standing toe touches or sit -ups have been shown to increase fracture risk in the spinal vertebrae. Professional advice from your physiotherapist or bone specialist can help you to design a program of physical activity which can be incorporated into your daily activities, as well as formal exercises to improve posture and ensure careful loading of muscles and bones. This should form an integral part of your strategy to prevent osteoporosis and treating it once it has been diagnosed.