

Exercise and it's effects

Age	Bone status	Exercise effect
Childhood/ Adolescence	In girls and boys the major build up of bone occurs in the pre-teen and adolescent years. Peak bone density is reached during mid to late 20s.	Can increase bone density and structure to maximise peak bone strength, which helps keep bones strong for longer in adulthood.
Early to mid adulthood	Bone density is maintained or starts to decrease very gradually when a person reaches their 30-40s although increases are still possible during middle adulthood.	Can maintain or increase (1-3%) bone density and improve cardiovascular health and fitness; resistance training can also improve muscle mass and strength.
Post menopausal women	In women from the age of 45 years, bone loss begins to increase to 1-2% per year. Bone loss accelerates up to 2-4% per year at the onset of menopause.	Can maintain bone strength by helping to slow the rate of bone loss following menopause. It is very difficult to increase bone density during or after menopause by exercise alone. Can effectively improve muscle function (balance) and reduce falls risk.
Men	Bone density tends to remain relatively stable until middle age, decreasing by about 0.5-1.0% per year from the age of 45-55 years. Low testosterone or hypogonadism can cause bone loss in men.	Can maintain or increase (1-2%) bone density, improve muscle mass, strength, balance and co-ordination to help prevent falls and maintain general health.
Older adults without osteoporosis	After 75 years of age, further increases in bone loss occur in both sexes, especially from the hip. The risk of fracture increases as bone loss increases.	Helps to maintain bone strength and increase muscle strength, balance and co-ordination, which in turn help to prevent falls.
Older adults with osteoporosis/ fractures	Bones are increasingly thin and fragile.	Exercises recommended by physiotherapists and exercise physiologists can improve general health, muscle strength, balance and posture to prevent falls and reduce the risk of further fractures.