

pain and upper limb function,²⁶ although few high-quality trials exist. A systematic review of 31 controlled trials of exercise after ankle fracture reported that commencing exercise after surgery in a removable brace or splint significantly improved activity limitation, but also led to a higher rate of adverse events (RR 2.61; 95% CI: 1.72–3.97), whereas most other approaches were ineffective.²⁷

Practical tips and precautions

- The most important components of the exercise prescription for the prevention of osteoporosis are moderate- to high-intensity progressive resistance training in combination with weight-bearing impact exercise and challenging balance training.
- Exercise programs should be individualised to a person's needs, abilities and interests. People with osteoporosis should be encouraged to 'do more' and not 'less' in terms of exercise. It is important that healthcare professionals adopt a positive and encouraging approach to exercise that does not create a sense of fear.
- Particularly when the individual has not undertaken recent physical activity, exercise programs should commence at a low level and be continuously progressive to reach target volumes and intensities as muscle strength and function improve. A physiotherapist or exercise physiologist can assist in developing the most appropriate program, providing education on safe and effective training techniques, increasing motivation and ongoing monitoring of benefits.
- Limiting rapid, repetitive, weighted and end-range forward flexion or twisting of the spine during daily activities and the inclusion of back extension strengthening exercises may minimise the risk of vertebral fractures, as well as exacerbation of pain from spinal osteoarthritis. In the presence of existing spinal osteoporosis or vertebral fracture, it is important to provide clear instructions and advice on safe and correct lifting techniques for day-to-day moving and when lifting, moving and transitioning in and out of exercises.
- Avoid flexion and internal rotation movements in those with a total hip replacement.
- Individuals with arthritis may need to modify exercises in terms of modality, intensity, range of motion or extent of weight-bearing exercise to prevent exacerbation of joint symptoms. Seated resistance training exercise is preferable to weight-bearing aerobic exercise or higher-impact activities for bone health in those with significant degenerative joint disease or instability, at least until joint and muscle health is improved or stabilised.
- To reduce falls risk, prescribe challenging balance or multimodal programs that include resistance training prior to promotion of ambulation if gait and balance are impaired.
- Optimise lighting, visual and hearing aids, safety of the exercise environment, climate conditions and footwear in all exercise settings and exercise at times of day when sedation from medications or fatigue are at a minimum and cognition and mood are optimal.