

Physical Activity. Weight-bearing, strength, and balance-training exercises are also an important part of any osteoporosis prevention and treatment program, regardless of age. They can help increase or preserve bone mass and may also help reduce the risk of falling. As discussed in Chapter 6, all types of physical activity can contribute to bone health. Activities that are weight bearing or involve impact are most useful for increasing or maintaining bone mass. Activities that are not weight bearing or are low impact may help improve balance and coordination and maintain muscle mass, which can help prevent falls. To encourage increased levels of physical activity among all age groups, "Physical Activity and Health: A Surgeon General's Report" recommends a "minimum of 30 minutes of physical activity of moderate intensity (such as brisk walking) on most, if not all, days of the week" (USDHHS 1996). Since the skeleton responds preferentially to strength training and short bouts of high-load impact activity (such as skipping or jumping), the same report recommends that adults supplement their cardiorespiratory endurance activity with strength-developing exercise at least two times per week. Chapter 7 addresses specific ways to incorporate strength and loading activities into an overall habit of physical activity.

For those who cannot engage in regular physical activity due to disability, mechanical stimulation of the skeleton might prove beneficial. Recent, small studies found that use of vibrating platforms increased BMD and slowed bone loss (Rubin 2004 et al., Verschueren et al. 2004, Ward et al. 2004). This may provide another way to reduce fracture risk both in the elderly and in younger individuals with disabling conditions that limit their ability to exercise. However, the long-term safety and efficacy of such approaches remain to be determined, and therefore specific rehabilitation and exercise programs aimed at increasing activity and function remain critically important in the frail elderly and in younger individuals with neuromuscular disabilities.