Abstract

Osteoporosis constitutes a major public health problem through its association with age related fractures. Fracture rates are generally higher in caucasian women than in other populations. Important determinants include estrogen deficiency in women, low body mass index, cigarette smoking, alcohol consumption, poor dietary calcium intake, physical inactivity, certain drugs and illnesses. Thus, modification of physical activity and dietary calcium/vitamin D nutrition should complement high risk approaches. In addition, the recently developed WHO algorithm for evaluation of 10-year absolute risk of fracture provides a means whereby various therapies can be targeted cost-effectively to those at risk. Risk factors, together with bone mineral density (BMD) and biochemical indices of bone turnover, can be utilised to derive absolute risks of fracture and cost-utility thresholds at which treatment is justified. These data will provide the basis for translation into coherent public health strategies aiming to prevent osteoporosis both in individuals and in the general population.

Keywords

Osteoporosis, fracture risk, prevention, bone density, risk factors, WHO algorithm, absolute risk of fracture, public health.