Should we prescribe calcium and vitamin D supplementation for osteoporosis treatment or prevention?

Cristina Carbonell, Spain

Osteoporosis is a systemic skeletal disease characterized by a low bone mass, and expressed as fragility fractures. Is a major public health problem with high incidence in developed countries. At any given age, the key determinants of fracture risk, bone mineral mass, and bone structure result from the difference between the amount of bone gained and lost.

Bone growth begins with the development of the skeleton during fetal life and continues until the end of the second decade of life when the maturation process is complete and peak bone mass is achieved. In adult life, bone mineral mass is determined by the amount of bone accumulated at the end of skeletal growth (peak bone mass) and by the amount of bone lost subsequently. Falls also contribute to fracture.

Skeletal bone mass is determined by a combination of endogenous (genetic, hormonal) and exogenous (nutritional, physical activity, tobacco, alcohol and others) factors. Nutrition plays an important role in bone health. The two nutrients essential for bone health are calcium and vitamin D.

Dairy products may represent the best dietary sources of calcium because of the high content and high absorptive rate. Moreover, dairy products provide others nutrients like protein, magnesium, potassium, zinc, and phosphorus for a healthy skeleton. Vitamin D also plays an important role in calcium metabolism.

If the patients don’t take any dairy is very difficult to achieve the amount of calcium we need. So we have to prescribe supplements with calcium with or without vitamin D.