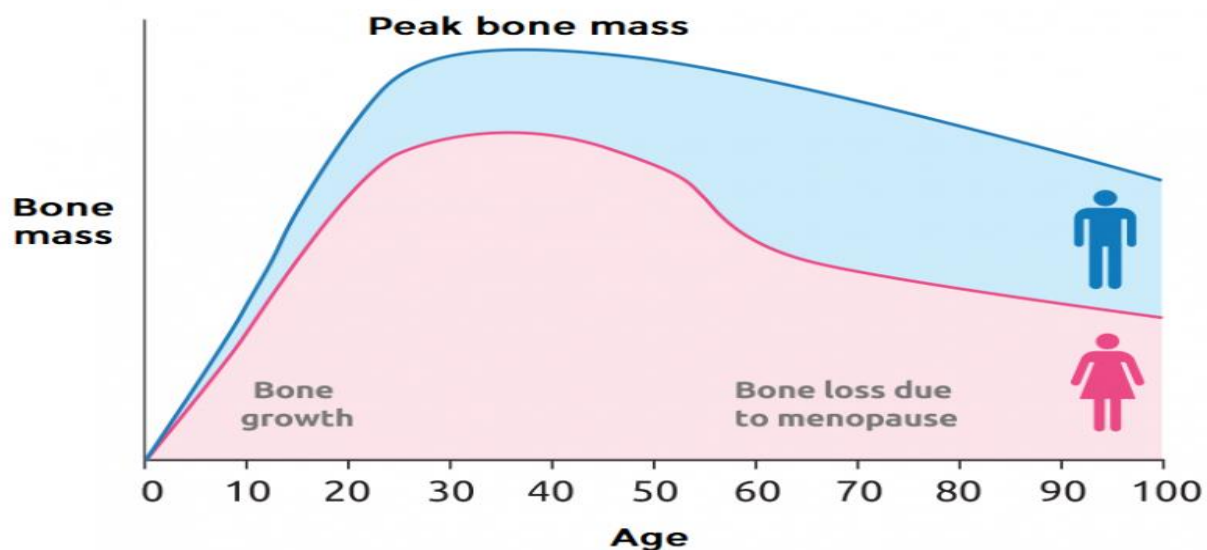


1. Introduction-What is Osteoporosis?

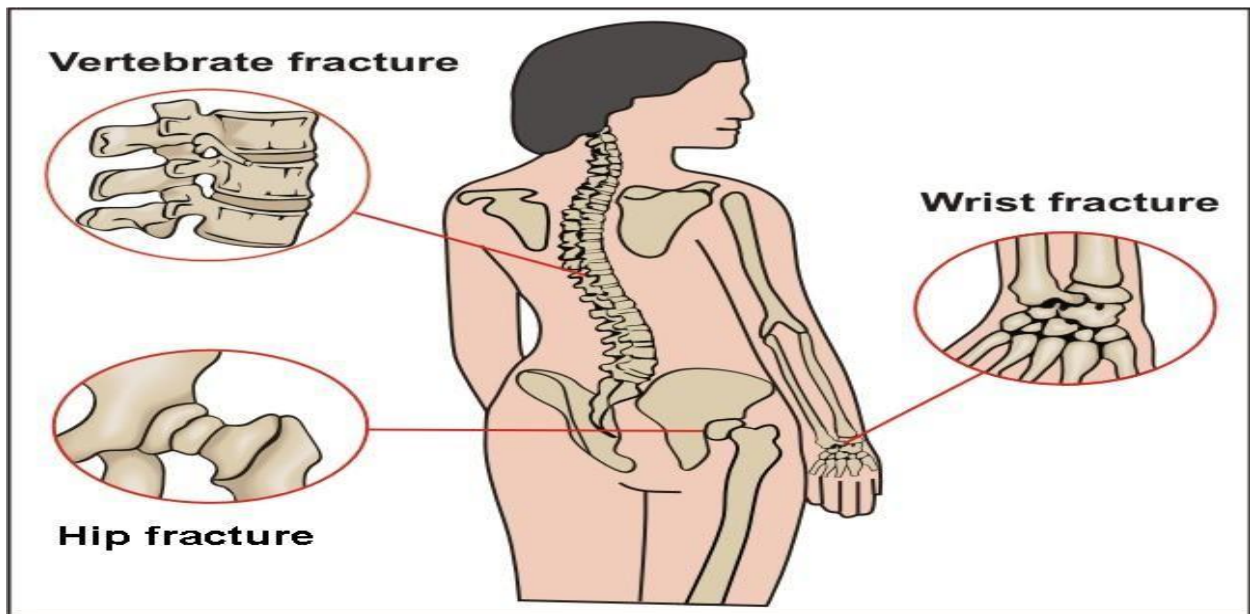
Osteoporosis means weak, porous, and spongy bones that break easily, leading to significant pain, disability, and dependence. It is a silent disease, and most older people do not know they have it until they break a bone with a minor injury. Osteopenia is the milder form, and Osteoporosis is the severe form of the disease that increases the risk of bone fractures. Healthy calcium balance together with Vitamin D is necessary for maintaining bone health as well as muscle health. Weak bones and weak muscles go hand in hand.

Bones grow in strength as the child grows into adulthood, reaching a peak between 20-30 years of age. Strong bones at a young age is a fixed deposit for keeping solid bones in old age.



The bones are renewed throughout life by a constant process of new bone formation and old bone destruction. At a young age, new bone replacement is more than bone loss. As age advances, the process reverses, and at an older age, bone loss is more; the bone becomes spongy and thin and can break easily. That age is greater than 65 years in females and 70 years in males. However, Osteoporosis can occur prematurely at a younger age if the food is deficient in calcium, sun exposure for Vitamin D production is inadequate, or a person is taking certain medications that interfere with calcium absorption or increase bone loss.

The three bones that are at the most significant risk of fracture in Osteoporosis are- Spine. Hip and wrist.



There are 9 million fractures worldwide each year because of Osteoporosis, approximately one in every 3 seconds. Norway is the country with the highest incidence of Osteoporosis. That is surprising because the population consumes meat and milk in large amounts. The studies from Norway suggest that excessive dairy (more than one glass a day) is unnecessary. More milk increases the risk of Type 2 diabetes, doubles the risk of heart disease because milk is rich in sugar and saturated fat. The same is valid for milk-dense foods such as cheese/ paneer and milk-based sweets. So moderation in dairy is the key, and more milk does not translate to stronger bones (that is an old myth).

To keep strong bones, one needs to know:

2. *Why do Osteopenia and Osteoporosis occur?*
3. *How to increase the calcium in the bones naturally?*
4. *How to increase the natural intake of vitamin D?*
5. *How to know if a deficiency of calcium and vitamin D is present?*
6. *How do doctors diagnose Osteoporosis?*

7.How to prevent Osteoporosis?

8.Do we need medical supplements of calcium and Vitamin D ? when are these required, and what is the safe amount?

9.What are the medical remedies to treat severe Osteoporosis, and when are these prescribed?