

## ***9. What are The Medical Remedies (Drugs) To Treat severe Osteoporosis & When Are These Prescribed?***

Osteoporosis is considered to be severe if :

- a). DEXA Scan T score is lower than -2.5
- b). There is a history of fracture with a minor injury
- c). There is severe backache due to spinal fractures.

Calcium and Vitamin D supplements alone will not suffice in severe Osteoporosis. These patients require drugs that slow down bone loss or build bone mass. The guidelines for managing severe Osteoporosis are:

- Modify Food and Lifestyle to enhance the natural intake of calcium and Vitamin D
- Calcium and vitamin D supplements in safe doses as outlined above.
- First-line drugs—The first-line drugs are the drugs that slow down bone resorption. These drugs, called Bisphosphonates, include the following medicines:

**Alendronate (Fosamax)- once a week tablet**

**Risedronate (Actonel)-once a week or once a month tablet**

**Ibandronate (Boniva)- Once a month tablet**

*Side effects of the Bisphosphonate drugs*—Damage to the jaw bone and Thigh Bone. Stomach upset. These drugs need to be stopped if patients develop burning in the chest (esophagitis).

***How long to take Bisphosphonates*** – These medicines are given for 3-5 years. Then patients can continue on food and lifestyle solutions and calcium and Vitamin D supplements in safe daily doses.

- **Second-line drugs**—These drugs also slow down the process of bone resorption like bisphosphonates. For the patients who have kidney dysfunction and cannot tolerate bisphosphonates, these second-line drugs are:

**Denosumab (Prolia)**- Given as a shot in the skin every six months. Once the patient gets started on Denosumab, he/she will have to take it for the rest of his/her life.

**Raloxifene (Evista)**- It is a hormone therapy that works like estrogen. It provides the beneficial effects of estrogen on the bones without the side effects of estrogen, such as the risk of breast and uterine cancer.

- **Third line drugs**- These drugs are bone-building medication that is like the natural bone-building hormone parathormone. These are given in severe Osteoporosis when the above medicines fail to help. These drugs are given as an injection for 1-2 years, and then the patient is switched back to the other medications. Medicines in this group are:

**Teriparatide (Forteo)**-Given as daily injection under the skin

**Abaloparatide (Tymlos)**- Given as daily injection under the skin

**Romsozumab (Evenity)**-Given as injection once a month

These drugs have multiple side effects and can not be given for more than 1-2 years. Side effects include nausea, dizziness, headache, vertigo.