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## **Anabolic Medication for Bone - Teriparatide (Forteo)**

**Anabolic medications** are medications which can stimulate additional body tissue formation. Teriparatide (**Forteo**) is the only member of this class currently available which can stimulate the formation of bone. This is often the best treatment for severe osteoporosis with fragility fractures, extremely low DXA scores, or failure to maintain bone density on other medications.

Teriparatide (**Forteo**) is given as a daily injection with a tiny (insulin) needle. I cannot see the needle clearly without my glasses. The new syringe is very easy to use. It gives the proper measured dose automatically. It lasts for 28 days if kept refrigerated. You take it every day for 2 years, and then you switch to a bisphosphonate.

Teriparatide (**Forteo**) will build new bone matrix (the protein part of bone). It is the only medication which will do this to any major degree. The increase in bone matrix will repair and replace the portions of bone which are eaten away by osteoporosis. The increase in bone matrix volume in 2 years is typically up to 35 %. Fully putting Calcium into the bone matrix takes longer than building the bone matrix. Therefore the bone density as measured by DXA will often rise very little in the first year although the prevention of fractures starts early.

Two years of Teriparatide (**Forteo**) must be followed by 3 to 5 years of a bisphosphonate to fully put all the Calcium into the bone. Therefore the bone density as measured by DXA will continue to increase after Teriparatide (**Forteo**) is finished. **Remember that you must take enough Calcium and Vitamin D to have ANY Osteoporosis Medication work.**

Teriparatide (**Forteo**) is a synthetic portion of human Parathyroid Hormone. Human Parathyroid Hormone (hPTH) is a chain of 84 amino acids. Teriparatide (**Forteo**) is the first 34 amino acids of that chain. It is made from rDNA – the messenger used by the body to specify the manufacture of proteins. Human Parathyroid Hormone (hPTH 1-84) is made in the parathyroid glands (4) in the neck near the thyroid gland. hPTH is normally made and released into the bloodstream continuously. Too much hPTH on a continuous basis will stimulate bone resorption. (**Forteo**) (hPTH 1-34) given once daily only lasts in the bloodstream for about 15 minutes. (**Forteo**) stimulates bone formation 4 times as much as it stimulates bone resorption.

Teriparatide (**Forteo**) will increase the rate of osteosarcoma in certain rats. Osteosarcoma in humans occurs in about one person in 250,000 per year. After over 550,000 human years taking (**Forteo**) only one case has been found – less than the normal rate. However, because of this possible concern, patients who have had radiation therapy, previously known cancers in bone, or Paget's disease cannot take (**Forteo**).

**Determining the best medication for each individual requires a detailed evaluation** of your medical history, lab work, DXA score and trend, and living situation. That is why **we allocate a full half hour visit for each patient.**

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