



Osteoporosis Treatment With Teriparatide

The United States Food and Drug Administration has approved Teriparatide for the treatment of osteoporosis in post-menopausal women at high risk of having a fracture.

TERIPARATIDE IS THE FIRST APPROVED AGENT FOR THE TREATMENT OF OSTEOPOROSIS THAT STIMULATES NEW BONE FORMATION.

I have capitalized the previous sentence because it is the entire essence of this article. All the other measures that we have to treat osteoporosis and hopefully increase bone mineral density are treatments that slow the loss of bone. Treatment with Teriparatide actually increases, that is stimulates the formation of new bone.

This medication is administered by injection once a day in the thigh or the abdomen.

Teriparatide is a portion of human parathyroid hormone (PTH) which regulates calcium and phosphate metabolism in bones. Clinical trials have demonstrated a definite reduction in the risk of vertebral and other fractures in post-menopausal women.

No reports of tumor production were made in the human studies although animal studies showed an increased risk.

While this treatment is not, at this time, available in the office of every physician treating osteoporosis, it does give hope for the future that this agent and others will actually be able to stimulate new bone formation.

ADDENDUM

Teriparatide or Forteo as it is called by its trade name is a recombinant segment of human parathyroid hormone. As we have mentioned it is the first approved treatment for osteoporosis that actually stimulates bone formation.

It is important to understand that the others drugs approved for osteoporosis inhibits bone respiration. These others include the well known Fosamax as well as Actonel, Evista and Calcitonin.

Human parathyroid hormone regulates calcium homeostasis and bone formation. Parathyroid hormone if given continuously has a catabolic effect, but when given once daily bone formation predominates.

When Forteo is given subcutaneously it reaches a maximum concentration in the body in about 30 minutes and becomes undetectable in 3 - 4 hours degraded mostly in the liver and kidneys.

The drug has been studied for many years in clinical trials and has been proven to be more effective in raising bone mineral density and preventing fractures than the other medications that we have.

Adverse effects of Forteo have been nausea, dizziness, leg cramps and headache. Mild increases in calcium in the blood and urine have also occurred.

The drug should not be given to patients with any increase risk of Osteosarcoma, which would include those with Paget's disease, unexplained elevation in serum alkaline phosphatase or prior skeletal radiation or to children or young adults with open growth plates.



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The dose recommended is 20 micrograms given subcutaneously on a daily basis in the thigh or abdomen for a maximum of 2 years.

At this time it is not known whether it will be given beyond the 2 year period, but with additional clinical experience this could very possibly be extended beyond the 2 year period.

Its drawbacks are that it must be given by daily subcutaneous injection and it is more expensive than the other medications.



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Please consult Dr. Haverbush or a physician for specific treatment recommendations.

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