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Osteoporosis Treatment

FRACTURES DUE TO OSTEOPOROSIS ARE OFTEN THE LIFE ENDING EVENT FOR WOMEN.

Our entire skeleton replaces itself about every 10 years. During our younger adult years, the process is in balance. The bone resorption (breaking down) is done by osteoclasts and the rebuilding is done by osteoblasts. Aging in women and men, menopause, smoking and many diseases make this process fail to balance. Managing osteoporosis involves looking for causes that can be changed or treated such as low vitamin D levels, thyroid imbalance, kidney disease and lack of activity.

Some things like getting older and other diseases that limit mobility cannot be changed and pharmaceutical (drug) treatment may be advised.

Only one drug on the market actually makes bone grow. It is called an ANABOLIC drug. All the others try to slow down the resorption at different points in the process. All have risks and side effects. The drug that GROWS bone, the anabolic drug is teriparatide, a form of parathyroid hormone/FORTEO. This is a daily injection and usually only used in very high risk people. Animal studies show an increase in certain bone cancers so it is not used for more than 2 years.

The rest of the available drugs slow down the osteoclasts, preventing resorption. Zolendronic acid (Reclast/Zometa) is an annual intravenous infusion that is used mostly for people on chronic steroids for medical conditions and cancers of the bone.

TREATMENT FOR POSTMENOPAUSAL OSTEOPOROSIS: Goal is to prevent more bone loss and fractures, not to improve bone density measurements.

There are 4 groups of drugs to achieve this goal.

- Hormones: Estrogen with or without progesterone and SERMS like Evista (selective estrogens that lower the risk of breast cancer). These drugs reduce the bone breakdown and also have an effect on the structure and strength of the bone beyond what we can measure. There is an increased risk of blood clots

and stroke with all of these medications. Estrogen with progesterone raises the risk of breast cancer, but estrogen alone is not safe for women who have not had a hysterectomy.

- Bisphosphamides: Fosamax/Boniva/Actonel/Atelvia. These are usually taken orally in a once a month or once a week dose. Boniva can also be given intravenously every 6 months. These medications have a different profile of side effects, mostly irritation of the stomach and esophagus and heartburn with the oral form. They also can cause muscle cramps and joint pain. Getting more attention are the rare complications. Osteonecrosis of the jaw (bone death) is a very rare thing that happens almost exclusively with cancer patients but concerns dentists. This concern needs to be balanced with the understanding that osteoporosis ALSO affects the jaw and can lead to tooth loss and difficulty wearing dentures if needed. For most of us, that is a much bigger concern. The other rare side effect is a strange type of fracture in the upper leg (thigh bone). This is related to how long the drugs have been taken. We now recommend a “drug holiday “ of two years off after 5 years on to allow some breakdown of bone so it is not rigid. We know that the benefit of this group of drugs is maintained for several years after stopping them. The word “holiday” is used instead of “retirement” because it is a time off, not the end...
- Denosunab (prolia) is an injection given every 6 months. It is often used in men on medication for prostate cancer, but is also used in women who cannot tolerate bisphosphamides. It works at a different place in the bone resorption cycle. Side effects include a skin rash and risk of immune suppression as well as the jaw concerns.
- Calcitonin/Miacalcin/Fortical: This is a synthetic hormone that is naturally occurring and decreases spine fractures. It does not decrease hip fractures. It is given as a nasal spray or injection. Common issues are irritation of the nose and nose bleeds.

For most women with osteoporosis the bisphosphamides will be the best choice, but each woman has a unique situation that needs to be discussed.