Denosumab (Prolia) is a biologic medication used to prevent fragile bones, also known as osteoporosis, and bone fractures. As a biologic drug, it is synthetic and closely resembles naturally-occurring antibodies in the body. In this case, it stops a molecule, called RANKL, which normally causes bone turnover. By blocking RANKL, it helps to strengthen bones. Denosumab is generally not viewed as the first treatment given in osteoporosis but rather when they are unable to take bisphosphonates or have unsuccessful results.

Denosumab is given as an injection just under the skin. It is given by your doctor or nurse. The usual dose is 60 mg every six months, and it should be taken with calcium [1000-1200 mg daily] and vitamin D [at least 400 IU] supplementation. Denosumab works quickly—within three days of an injection, the effects on reducing bone turnover can be detected in the blood; the drug also stays in the blood for several months after stopping the medicine.

The most common side effects that patients experience are back pain, pain in the hands and feet, and increased cholesterol. The pain from denosumab can last a few days up to a few months after administration. The rarer, but worrisome side effects include an increased risk for infections (especially if you’re already taking medications that lower your immune system), low calcium levels (called hypocalcemia), loss of blood supply to the jawbone (called osteonecrosis of the jaw), atypical fracture of the leg, and severe allergic reactions.

Some symptoms may occur normally while taking denosumab, however, you should notify your doctor if you have these symptoms while taking this medication: tingling of the hands or around the mouth, new pain in the jaw, or fevers or other signs of infection. Make sure to notify your other physicians while you are taking this drug. If you are pregnant or considering pregnancy, let your doctor know before starting this medication. Women should discuss birth control with their primary care physicians or gynecologists. Breast-feeding should be avoided while taking denosumab because the drug can enter breast milk.

Updated February 2019 by Vaneet K Sandhu, MBBS, and reviewed by the American College of Rheumatology Committee on Communications and Marketing. This information is provided for general education only. Individuals should consult a qualified health care provider for professional medical advice, diagnosis and treatment of a medical or health condition.

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