

# Denosumab (Prolia)

Denosumab (Prolia) is a prescription medicine prescribed to treat osteoporosis, a condition where bones become weaker and are more likely to break (fracture). Denosumab is called a biologic medication because it contains complex proteins that closely resemble antibodies normally found in the human body. Denosumab works by blocking a molecule called RANK-L that would normally activate key cells involved in bone breakdown (resorption) that leads to or worsens osteoporosis.

## How to Take It

Denosumab is given as a shot under the skin (subcutaneous injection) by your rheumatology provider or nursing staff in a hospital, infusion center, or clinic office. The dose is one 60 mg injection every 6 months. People on denosumab should take calcium (1,000–1,200 mg) and vitamin D (at least 400 IU) every day but these doses should be checked with the prescribing healthcare provider before starting treatment. Denosumab works quickly, its effects can be detected in blood within three days after a dose and last for several months. Blood and bone density tests should be done before starting this medication, a dental exam is also recommended.

## Side Effects

The most common side effects of this medicine are muscle aches, back pain, and pain in arms or legs. Joint or muscle pain from denosumab can last for a few days or in rare cases, for weeks or months.

Denosumab can cause low blood calcium levels (hypocalcemia). When this happens, it is usually within 1–2 weeks after an injection but in rare cases, can happen several months later. This is more likely to happen in people with advanced chronic kidney disease.

Other rare complications can include atypical femur fractures (also known as stress or insufficiency fractures involving the thigh bone), infections (especially if you are already taking medications that lower your immune system's ability to fight infection), loss of blood supply (osteonecrosis) to the jaw bone, and severe allergic reactions including skin rashes or hives, low blood pressure, throat and tongue swelling, and difficulty breathing.

Stopping, skipping, or delaying denosumab doses by more than 30 days will increase the risk of vertebral (bones in the spine) fractures. It is very important to stay on schedule with your injections, rheumatology visits, and any recommended testing.

## Tell Your Rheumatology Provider

If you are pregnant, considering pregnancy, or breastfeeding, let your provider know before starting this medication. Birth control is recommended for people who can become pregnant while taking denosumab and for at least 5 months after the last dose. Breastfeeding is not recommended while on denosumab because the drug can enter breast milk.

If you are taking denosumab, call your provider if you have numbness or tingling of the hands or around the mouth, muscle twitches or spasms, new pain in the jaw or thigh, hip, or groin; burning or discomfort with urination or needing to urinate urgently, and fevers or other signs of infection.

*Updated March 2024 by Elizabeth Graef, MD, and reviewed by the American College of Rheumatology Communications and Marketing Committee.*

*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.*