Osteoporosis Medications - Biologics & Biosimilars
Quick Guide

Osteoporosis medications are made in different ways and the terminology can be confusing. Here is a Quick Guide to help you better understand some of the common terms as you consult with your healthcare provider about your options.

How Can Osteoporosis Medicine Help?

Your skeleton is an active vital organ. It keeps you healthy through a constant process of repair, renewal, and mineral release. This process is called *remodeling.* The bone remodeling cycle consists of two distinct stages: (1) bone resorption (breakdown and removal) and (2) bone formation (generation of new bone). As we age, the remodeling process can become unbalanced. More old bone gets removed than new bone gets created.

The goal of osteoporosis therapy is to try to restore the balance of bone resorption and formation to reduce bone loss. It can be done by slowing resorption through use of antiresorptive medication or by promoting bone formation using anabolic medication. By doing so, these therapies lower the risk for fractures, which is the goal of treatment.

What are Biologic Medications?

Many common medications are made from chemicals with active ingredients that are smaller and simpler - like aspirin.

- Generics are copies of brand name chemical medicines approved to work the same way.

Biologic drugs are more complex – they are made from living sources that use cells or tissue (such as yeast, bacteria, or animal cells).

- Biologics cannot be copied exactly, even between batches of the same brand, because they are made from living sources and it is natural to have some slight differences between batches of medications.
- These slight differences do not affect how the medicine works in the body.

Are Biologics Approved for Osteoporosis?

Yes, the U.S. Food and Drug Administration (FDA) looks at effectiveness, safety, and quality to approve biologic medications to treat osteoporosis.

This includes the biologic medicines to slow bone loss (known as antiresorptives) as well as those designed to build bone (known as anabolics).

Biologics are approved to treat many other chronic conditions, too, such as insulin to treat diabetes.

What Does the Term Biosimilar mean?

A biosimilar medication is an equal substitute for the original biologic it is modeled after, known as the reference drug. A biosimilar cannot be an identical copy of the original biologic drug, so it is referred to as a biosimilar. Osteoporosis biosimilar medications may be available as part of your treatment plan.

- Biosimilars are tested and approved by the FDA for safety and quality (since 2015).
- They are designed to be as effective as the original reference drug.
- They work the same way in the body.
- They are made in the same dose and strength.
- They have the same potential side effects.
- Biosimilars drugs are made by a different manufacturer and will have different names than the original reference drug.

Learn more

BHOF hosted a consumer webinar on **Understanding Osteoporosis Medications: Biologics & Biosimilars** with BHOF Chief Medical Officer, Andrea Singer, MD and Cate Lockhart, PharmD, PhD, and Executive Director of the Biologics and Biosimilars Collective Intelligence Consortium. **Click here** to watch the recording. **Click here** to download a helpful handout.

Visit **www.bonehealthandosteopororis.org** for more information.

If you have any questions, please contact **info@bonehealthandosteoporosis.org**.