

Bisphosphonate Handout

Pediatric Bone Health Program

Background: Normal bone is maintained by a balance between **osteoblasts** and **osteoclasts**.

- **Osteoblasts** build bone (think “B” for building)
- **Osteoclasts** break down bone (think “C” for chewing)

Bisphosphonates are a type of medication used to treat osteoporosis and other bone diseases in children. They work by killing osteoclasts. This allows the osteoblasts to build more bone. More bone means higher bone density and a lower risk of fracture.

Names of bisphosphonates we use:

- **Zoledronic acid** (Zometa, Reclast)
- **Pamidronate** (Aredia)
- **Alendronate** Fosamax

What are bisphosphonates used for?

- To prevent or treat osteoporosis
- To treat bone pain
- To treat inflammatory bone disease
- To treat avascular necrosis
- To treat high calcium levels

How are bisphosphonates given?

- **Zoledronic acid and pamidronate** are given through an IV several times per year. In most cases this will happen in the treatment center on AC-6. Some patients will need to stay in the hospital to monitor for side effects.
- **Alendronate** is given by mouth, usually once per week. It is taken on an empty stomach with a full glass of water while sitting upright.
- Your child will likely be prescribed **calcium, vitamin D, and Tylenol** before and after being treated

What are the side effects?

- Fever
- Muscle and bone pain
- Upset stomach and vomiting
- Low calcium or phosphorus levels
- Kidney damage (rare)
- Osteonecrosis of jaw (rare)
- Fracture (rare)
- Allergic reaction (rare)

Questions? Call Us! Dr. David Weber & Katherine Ippolito, RD, CDE
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