

## Tildren

The first biophosphonate for treating lameness caused by bone and joint disorders

Tildren, or Tiludronic acid, is a biophosphonate that inhibits bone resorption in horses. It is used as part of the treatment protocol for chronic lameness associated with bone pain. Navicular syndrome, sesmoiditis, subchondral bone pain, and bone spavin are a few of the more common conditions treatable with this drug. A full lameness workup and radiographs are recommended before any treatment is recommended.

**Bone Regulation:** In normal horses bones are always being remodelled. This process allows the skeleton to adapt to and perform under the mechanical stresses that we expose it to. The two types of cells that are involved in bone regulation and renewal are osteoclasts and osteoblasts.

- Osteoclasts – these cells cause bone lysis, which is the removal of microscopic areas of bone. These cells start working when new spaces need to be created within the bone to alter density to respond to mechanical stress.
- Osteoblasts – these cells build collagen, the most basic material needed in bone formation. They cause collagen mineralization and create denser bone.

Osteoclasts destroy bone faster than osteoblasts can rebuild it, which can cause major issues in horses that are constantly putting excessive stress on their bones. In competition horses, remodelling of bone is highly active. This can cause two conditions, areas of lytic bone where there is less density, and areas of sclerosis where there is too much density. Both of these issues can cause the bone to damage more easily and cause an increase in pain.

Tildren works by regulating bone remodelling in cases where there is too much bone resorption. It generates osteoblast activity, while suppressing osteoclast function. It also has anti-inflammatory effects, which act by inhibiting the secretion of any cartilage resorbing enzymes.

**Tildren Administration:**

- Your horse will be sedated before the procedure.
- A sterile intravenous catheter will be placed in a jugular vein.
- The Tildren preparation will be mixed as per your horse's weight and added to a litre of sterile saline solution.
- This solution will be slowly dripped into the horse over a period of time between 45 and 60 minutes, during which time your horse is continually monitored.
- An anti-spasmodic drug will be administered to help reduce the possibility of transient colic during administration.

- Your horse will stay in-clinic for a few hours to wake up slowly and be monitored for possible side effects.

Possible Side Effects from Tildren:

- Sweating, slight muscle tremors, and transient colic in the first few hours after administration
- A localized swelling and reaction over the area where the catheter was placed.
- Excitation, excess salivation and tiredness may be noted.

Tildren cannot be administered to horses less than three years of age or to mares that are lactating and/or pregnant.

If you have any questions or concerns about this article or treating your horse with Tildren, please contact Edmonton Equine Veterinary Services.