



Tylosin (Tylan®)

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Revised: March 13, 2024

Published: December 02, 2002

(For veterinary information only)

WARNING

The size of the tablet/medication is NOT an indication of a proper dose. Never administer any drug without your veterinarian's input. Serious side effects or death can occur if you use drugs on your pet without your veterinarian's advice.

It is our policy not to give dosing information over the internet.

Brand name: Tylan®

Available in injectable, soluble granules, soluble powder (usually compounded into a capsule)

Background

In simple terms, tylosin is a natural antibiotic made by bacteria. It acts by interfering with the protein manufacturing abilities of other bacteria. It interrupts the manufacture of cellular proteins but only within bacterial cells. Cells of mammals, birds, and reptiles are not affected. Tylosin is an antibiotic of the macrolide class (same class as [erythromycin](#)).

How this Medication is Used

Tylosin is licensed for use in livestock as a broad-spectrum antibiotic to treat infections, but it has other uses that have little to do with its antibiotic activity. In small animals, tylosin is not used for its antibiotic properties nearly as much as it is for its anti-inflammatory properties in the intestine. Its chief use in pets is to treat colitis. In this situation, it is not used as an antibiotic but instead as an anti-inflammatory to soothe the large intestine. While few formal studies have been performed to examine this non-antibacterial property of tylosin, it certainly seems to work in this regard and there are many patients whose diarrhea will not resolve unless tylosin is given continually. Tylosin is safe for long-term use and provides a good alternative to [metronidazole](#), another bowel anti-inflammatory/antibiotic that is not as amenable to long-term use. Tylosin has been used against

intestinal infection caused by *Cryptosporidium*, a single-celled parasite, as well as those caused by the toxin-producing bacterium *Clostridium perfringens*.

Another common use is to reduce tear staining, particularly in white-colored dogs. Small breed dogs commonly have shallow tear wells that lead to tear overflow down their face, a condition called [epiphora](#). The subsequent red-brown staining of the fur from tear pigments is felt to be unsightly and through an unknown mechanism, tylosin seems to alleviate this condition.

Tylosin can also be used in ferrets, rabbits, birds, reptiles, and pocket pets.

Tylosin can be given with or without food. If a dose is accidentally skipped, do not double up on the next dose; simply pick up as usual.

Side Effects

While there is definite side effect potential in large animal species, dogs, in particular, can tolerate high doses of tylosin with no adverse effects. The biggest problem with small animal use seems to be the especially foul taste; it necessitates formulation into capsules, which is usually done by a [compounding pharmacy](#).

Tylosin may falsely elevate certain liver blood tests (ALT and AST).

Concerns and Cautions

There are several tylosin products marketed without prescription for control of tear staining. Some list the amount of tylosin contained, and some do not. There is controversy in using an antibiotic in an unprescribed manner for what is basically a cosmetic problem. The first controversy is whether or not it is appropriate to use an unknown amount of animal medication for any reason (in the case of products that do not even list the amount of tylosin they contain). The second issue regards the implications of antibiotic overuse.

Casual use of antibiotics is responsible for antibiotic resistance of bacteria in the environment, and, in general, bacteria that become resistant to tylosin also become resistant to erythromycin and possibly even other antibiotics. Since tear-staining, also called [epiphora](#), is simply a cosmetic issue, perhaps non-antibiotic treatment could be used instead. Losing the reliable efficacy of antibiotics has life-threatening implications for both human beings as well as animals, and we must be judicious in their use.

Interactions with other Drugs

Tylosin can increase digoxin blood levels and should be used cautiously in patients taking digoxin for heart failure.



Epiphora can be seen on this small white dog. Image courtesy Dr. Wick Culp.

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