

# Azathioprine

(ay-za-thye-oh-preen)

**Category:** Immunosuppressant

**Other Names for this Medication:** Imuran®, Azasan®

**Common Dosage Forms: Veterinary:** None. **Human:** 50 mg, 75 mg, & 100 mg tablets; Compounded dosage forms may be available.

This information sheet does not contain all available information for this medication. It is to help answer commonly asked questions and help you give the medication safely and effectively to your animal. If you have other questions or need more information about this medication, contact your veterinarian or pharmacist.

## Key Information

- ▶ May be given with or without food. If your pet vomits or acts sick after receiving this drug on an empty stomach, try giving the next dose with food or a small treat. If vomiting continues, contact your veterinarian.
- ▶ May take up to 6 weeks to see a response to treatment.
- ▶ Wear disposable gloves when handling this drug; pregnant women should avoid handling.
- ▶ Do not stop this medication unless instructed to do so by your veterinarian.
- ▶ Contact your veterinarian if you notice fever, reduced activity, bruising, bleeding, vomiting, lack of appetite, or yellowing of the whites of eyes, gums, or skin (jaundice).

## How is this medication useful?

Azathioprine is used to treat a variety of disorders caused by an overactive immune system. Azathioprine works by suppressing the immune system.

The FDA (U.S. Food & Drug Administration) has approved this drug for use in humans, but it is not officially approved for use in animals. The FDA allows veterinarians to prescribe products containing this drug in different species or for other conditions in certain situations. You and your veterinarian can discuss why this drug is the most appropriate choice.

## What should I tell my veterinarian to see if this medication can be safely given?

Many things might affect how well this drug will work in your animal. Be sure to discuss the following with your veterinarian so together you can make the best treatment decisions.

- ▶ Other drugs can interact with azathioprine, so be sure to tell your veterinarian and pharmacist what medications (including vitamins, supplements, or herbal therapies) you give your animal, including the amount and time you give each.
- ▶ Tell your veterinarian about any conditions or diseases your pet may have now or has had in the past.
- ▶ If your animal has been treated for the same disease or condition in the past, tell your veterinarian about the treatment and how well it did or didn't work.
- ▶ If your animal is pregnant or nursing, talk to your veterinarian about the risks of using this drug. Azathioprine has caused birth defects when given to pregnant animals. Because azathioprine can get into mother's milk and affect the nursing offspring's immune system, milk replacer is usually recommended if the mother is receiving this drug.

- ▶ Tell your veterinarian and pharmacist about any medication side effects (including skin rashes, allergic reactions, lack of appetite, vomiting, diarrhea, itching, and/or hair loss) your pet has developed in the past.

## When should this medication not be used or be used very carefully?

No drug is 100% safe in all patients, but your veterinarian will discuss with you any specific concerns about using this drug in your animal.

This drug **SHOULD NOT** be used in patients:

- ▶ That are allergic to it.

This drug should be used **WITH CAUTION** in:

- ▶ Cats. Azathioprine can severely affect the production of blood cells and is generally not prescribed in this species. If your veterinarian does decide to use this drug, you should give it exactly as the veterinarian has recommended. Watch your cat closely for signs of infection (eg, fever, low energy level, poor appetite) or bleeding that might occur as a result of treatment with azathioprine.
- ▶ Animals with liver disorders.
- ▶ Animals with infections. Because azathioprine suppresses the immune system, this drug can affect the body's ability to fight infections.

If your pet has any of these conditions or signs, talk to your veterinarian about the potential risks versus benefits.

## What are the side effects of this medication?

### **Side effects that may be serious or indicate a serious problem:**

- ▶ Azathioprine suppresses the bone marrow from producing blood cells and can cause anemia or lowered white blood cells. Cats are particularly at risk for this side effect. Your veterinarian will monitor for these conditions by periodically performing blood tests (complete blood count).
- ▶ Azathioprine can also cause damage to the liver and pancreas, especially in dogs. Your veterinarian will also monitor for these by performing periodic blood tests (chemistry panel).
- ▶ Because azathioprine suppresses the immune system, your animal may be more susceptible to developing infections or cancer (later in life).
- ▶ Azathioprine therapy **SHOULD NOT** be stopped suddenly, as the immune system may overreact and cause the disorder to start again.

**If my pet gets too much of this medication (an overdose), what should I do?**

Azathioprine overdoses can be very serious. If you witness or suspect an overdose, immediately contact your veterinarian or an animal poison control center for further advice. Animal poison control centers that are open 24 hours a day include: **ASPCA Animal Poison Control Center** (888-426-4435) and **Pet Poison HELPLINE** (855-764-7661); a consultation fee is charged for these services.

**How should this medication be given?**

For this medication to work, give this medication exactly as your veterinarian has prescribed. It's a good idea to always check the prescription label to be sure you are giving the drug correctly.

- ▶ Azathioprine may be given with or without food. If your pet vomits or acts sick after receiving the drug on an empty stomach, try giving the next dose with food or a small treat. If vomiting continues, contact your veterinarian.
- ▶ Compounded liquid forms of this medication must be measured carefully. Your veterinarian or pharmacist can help by providing special measuring spoons or syringes.
- ▶ If you have difficulty getting your animal to take the medication, contact your veterinarian or pharmacist for tips to help dosing and reducing the stress of medication time.
- ▶ This medication can be given for various lengths of time. Be sure you understand how long your veterinarian wants you to continue giving this medication. Prescription refills may be necessary before the therapy will be complete. Before stopping this medication, talk to your veterinarian, as there may be important reasons to continue its use; stopping the drug abruptly may cause the condition to rapidly worsen.

**What should I do if I miss giving a dose of this medication?**

Because azathioprine is used to treat serious conditions, it is important to give the drug as your veterinarian has prescribed. If you miss a dose, give it when you remember. However, if it is close to the time for the next dose, skip the missed dose and give the medication at the next scheduled time. After that, return to the regular dosing schedule. Do not give 2 doses at once, as it can be very toxic.

**How should I store this medication?**

- ▶ Store this medication in the original prescription bottle or an approved child-resistant dosage reminder container (ie, pill minder) protected from light and moisture. Keep away from children and other animals.
- ▶ If your veterinarian or pharmacist has made (compounded) a special formulation for your animal, follow the storage recommendations and expiration date listed for the product.

**Can handling this medication be hazardous to me, my family, or other pets?**

People giving this medication should wear disposable gloves when handling and thoroughly wash their hands afterward. Dispose of used gloves in the trash. Pregnant women must avoid handling this drug because of the risk for birth defects.

**How should I dispose of this medication if I don't use it all?**

- ▶ Do not flush this medication down the toilet or wash it down the sink. If a community drug "take-back" program is available, use this option. If there is no take-back program, mix the drug with coffee grounds or cat litter (to make it undesirable to children and animals and unrecognizable to people who might go through your trash), place the mixture in a sealable plastic bag to keep it from leaking out, and throw the bag out with the regular trash.
- ▶ Do not save left-over medication for future use or give it to others to use.

**What other information is important for this medication?**

- ▶ The effects of azathioprine on your animal's condition may take as long as 6 weeks to be seen. Do not stop this medication without checking with your veterinarian. Suddenly stopping azathioprine may make your animal worse.
- ▶ For the safety of your animal, your veterinarian will recommend doing regular blood tests to monitor for adverse effects. Do not miss these important follow-up visits.
- ▶ Use of this drug may not be allowed in certain animal competitions. Check rules and regulations before entering your animal in a competition while this medication is being administered.

**If you have any other questions or concerns about this medication, contact your veterinarian or pharmacist.**