

Diethylstilbestrol (DES)

(*dye-ethel-stil-bes-tral*)

Category: Hormonal Agent

Other Names for this Medication: DES

Common Dosage Forms: **Veterinary:** None. **Human:** None. Diethylstilbestrol is available from compounding pharmacies.

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

- ▶ Synthetic estrogen usually used in female dogs with estrogen-responsive urinary incontinence (leaking).
- ▶ May be given with or without food. If your animal 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.
- ▶ While DES can cause serious side effects, when used to treat urinary incontinence at the lowest effective dose, it is usually well tolerated in dogs. Watch for signs associated with bone marrow toxicity and pyometra (infected uterus).
- ▶ Pregnant women should avoid handling this drug.
- ▶ Illegal to use this medicine in food animals.

How is this medication useful?

Diethylstilbestrol (DES) is a synthetic estrogen that can be used in some female dogs to treat urinary incontinence (leaking). It is also sometimes used to induce estrus (heat) in female dogs and to treat male dogs with benign prostatic hypertrophy (enlarged prostate). DES is rarely used in cats because it causes serious side effects.

DES was FDA-approved for use in humans but has been withdrawn from the market due to concerns about use in pregnant women. 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 DES, 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 animal 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.
- ▶ Tell your veterinarian and pharmacist about any medication side effects (including allergic reactions, lack of appetite, diarrhea, itching, hair loss) your animal 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:

- ▶ Animals that are allergic to it.
- ▶ Female animals that have a cancer or tumor that is sensitive to estrogen.
- ▶ Animals that have depressed bone marrow function.
- ▶ **It is illegal in the US to use DES in any food animal.**

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

- ▶ Pregnant animals, as birth defects can occur.
- ▶ Cats, as they are sensitive to the bone marrow suppression effects and can develop damaged areas in their pancreas, liver, or heart.

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

What are the side effects of this medication?

While DES can cause serious side effects, when used to treat urinary incontinence at the lowest effective dose, it is usually well tolerated in dogs.

Side effects that usually are not serious include:

- ▶ Vaginal spotting in intact (not spayed) female dogs.

You don't have to be overly concerned if you see this sign unless it is severe, worsens, or continues to be a problem. Contact your veterinarian if this happens.

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

- ▶ Bone marrow suppression. Watch for weakness, fever, bleeding (including bloody diarrhea), bruising, or signs of infection.
- ▶ Pyometra (infection of the uterus). Watch for vaginal discharge, vomiting, lack of appetite, greater thirst and need to urinate, depression and lethargy (tiredness/lack of energy).
- ▶ Mammary or ovarian tumors. If you see abnormal growths or swelling near teats (nipples), contact your veterinarian.
- ▶ Cats: Pancreatic, hepatic (liver), and cardiac (heart) lesions. Your veterinarian will monitor for these.

If you see any of these signs, contact your veterinarian immediately.

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

If you witness or suspect an overdose, 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 it 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.

- ▶ The drug may be given either with food or on an empty stomach. If your animal 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.
- ▶ 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 medicine, contact your veterinarian or pharmacist for tips to help with dosing and reducing the stress of medication time.
- ▶ Patients are usually on this medication for an extended period, often for the rest of their lives. Give this medication according to the label's instructions and obtain refills as needed. Before stopping this medication, talk to your veterinarian, as there may be important reasons to continue its use.

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

If you miss a dose, give it when you remember, but if it is close to the time for the next dose, skip the dose you missed and give it at the next scheduled time. After that, return to the regular dosing schedule. Do not double-up or give extra doses.

How should I store this medication?

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

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

Because this drug has a higher risk for causing birth defects, pregnant women should be very careful not to accidentally take it. Wear disposable gloves when giving doses or handling the drug, and avoid inhaling any dust from split or crushed tablets. Skin or eyes exposed to powder or liquids containing the drug should immediately be washed or rinsed off thoroughly.

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?

- ▶ Your veterinarian will need to do blood tests to watch for serious side effects. Do not miss these important follow-up visits.
- ▶ The FDA has banned the use of this drug in food animals.
- ▶ 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.