

Diethylstilbestrol (DES)

NOT COMMERCIALY AVAILABLE
BUT USUALLY COMPOUNDED
INTO 1 mg CAPSULES

BACKGROUND

Estrogens are potent female hormones produced naturally by the ovary and needed for the normal development of the female reproductive tract as well as for normal female fertility. Synthetic estrogens have, in the past, found assorted medical and industrial uses. In the 1960's sphincter-related incontinence in post-menopausal women was found to be alleviated with the administration of estrogens. Soon, the sphincter incontinence that is common in spayed female dogs was also being treated with diethylstilbestrol (DES) with good success.

DES was used commercially as a growth promoting agent in livestock, as a human medication to help maintain pregnancy, and in the treatment of prostate cancer in humans decades ago but was removed from this use due to human carcinogenicity issues. As the uses of DES dwindled to a few veterinary uses, its manufacturer found it unprofitable to continue production and DES went off the market in the late 1990's. Fortunately, for the numerous incontinent female dogs hoping to lead indoor lives, the human carcinogenicity issues have not crossed over into the canine health arena. The low doses and infrequent dosing schedule have positioned DES as a medication of unparalleled safety and convenience in the treatment of canine incontinence. Compounding pharmacies now make this medication readily available for patients who need it on a prescription basis.

HOW THIS MEDICATION IS USED

As mentioned, DES has only one primary use: the treatment of sphincter tone incontinence in female dogs. DES is used at extremely low doses thus avoiding any toxicity issues that have been a problem for estrogen derivative medications. For control of incontinence, DES capsules are given daily for one week. If the incontinence is not controlled after that time, then it will not help to raise the dose; DES will not be effective for this patient.

If the incontinence is successfully controlled after this time period, the medication is discontinued and the patient is observed for the return of incontinence. This interval will determine the medication administration interval (for example, if the patient is leaking in 4 days then the medication is given every 3 days. If the patient is leaking after 5 days then the medication is given every 4 days.) In this way, the least amount of medication necessary can be given.

DES can be used to induce abortion (a "morning after pill") in the dog but it is not as reliable as other abortion methods.

DES is also sometimes used to treat some forms of prostate disease as well as in some cases of the hormonal skin disease known as "Alopecia X."

SIDE EFFECTS

No side effects are expected at the doses of DES used to treat urinary incontinence. At higher doses, estrogens such as DES can be suppressive to the bone marrow leading to dangerous drops in red cell count, white cell count, and/or platelet count.

INTERACTIONS WITH OTHER DRUGS

Some more refractory cases of urinary incontinence may require the use of DES in combination with phenylpropanolamine, another medication used in the treatment of incontinence. These two medications together may succeed whereas either may have failed alone.

DES may not work as well in the presence of phenobarbital, phenylbutazone (an NSAID), or rifampin (an antibiotic). These medications all act by “inducing” the liver’s enzyme systems used in ridding the body of drugs. Anticoagulants may not work as well in the presence of DES.

Concurrent use of DES with antifungal medications (such as ketoconazole, itraconazole and fluconazole) can increase estrogen levels as can concurrent use of DES with the antacid cimetidine.

CONCERNS AND CAUTIONS

Because of its ability to induce abortion, DES should not be used in pregnant pets.

DES should not be used in females with mammary tumors or other estrogen-responsive tumors.

DES is not safe for use in cats.

If a dose is accidentally skipped, incontinence may resume. Give the skipped pill when you remember to give it. If incontinence remains a problem, contact your veterinarian.

Store medication at room temperature protected from light.

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Additional drug and general pet care information can be found on our world wide web site:
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