

Dimethyl Sulfoxide (DMSO), Topical

(dye-meth-el sul-fox-ide)

Category: Free Radical Scavenger

Other Names for this Medication: Domoso®, DMSO

Common Dosage Forms: Veterinary: 70% & 90% gel, 90% liquid, 70% cream. All are for topical use only. **Human:** None.

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

- ▶ Wear rubber gloves when applying the drug to the animal's skin. Use in well-ventilated area; avoid inhalation and contact with eyes.
- ▶ Apply with clean or sterile cotton to reduce chances for contaminating DMSO with other substances. Apply only to clean, dry skin.
- ▶ Do not mix DMSO with other drugs or chemicals without your veterinarian's approval.
- ▶ Can cause a "garlic- or oyster-like" breath odor or local skin reactions.
- ▶ If used on dogs for large areas for calcinosis cutis (calcium deposits in the skin), can make dog feel bad for a while.

How is this medication useful?

Topical treatment using dimethyl sulfoxide (DMSO) may be used to treat some skin conditions in dogs, including calcinosis cutis (calcium deposits in the skin), acral lick dermatitis (lick granuloma; along with a corticosteroid), and skin damage caused by chemotherapy drugs. In horses, DMSO has been used topically for local inflammation but is usually given intravenously for treating surgical colic, acute rhabdomyolysis (sudden muscle tissue breakdown), and laminitis ("founder"). In dogs, DMSO has also been used as an ear drop or instilled in the bladder for hemorrhagic cystitis (inflamed, painful bladder with bloody urine).

The FDA (U.S. Food & Drug Administration) has approved this drug for topical use on dogs and horses for treating acute swelling due to trauma. The FDA allows veterinarians to prescribe and use products containing this drug in different species or for other conditions in certain situations.

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 DMSO, 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 patients:

- ▶ That are allergic to it.

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

- ▶ That have mast cell tumors (mastocytomas).
- ▶ That are dehydrated or have low blood pressure.
- ▶ With severe kidney or liver disease.

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?

When used topically on a small area for a short time, DMSO is usually tolerated well.

Side effects that usually are not serious include:

- ▶ Odor. DMSO can cause an oily garlic- or oyster-like breath odor.
- ▶ Skin effects. Slight burning sensation, skin redness and dryness.
- ▶ Malaise (feeling bad or tired). Some dogs with calcinosis cutis (calcium deposits in the skin) can act like they do not feel well for awhile when DMSO is used.

You do not have to be overly concerned if you see any of these signs unless they are severe, worsen, or continue to be a problem. Contact your veterinarian if this happens.

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

- ▶ Hypercalcemia (blood calcium that is too high—but this is rare) in dogs with calcinosis cutis (calcium deposits in the skin). Your veterinarian will do blood tests to watch for this.
- ▶ Cataracts. High doses used for a long time can cause eye cataracts. Your veterinarian will monitor for these.
- ▶ Liver or kidney toxicity (rare). Your veterinarian will monitor for these.

If my animal 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, apply it exactly as your veterinarian has prescribed. It is a good idea to always check the prescription label to be sure you are giving the drug correctly.

- ▶ Wear rubber gloves when applying topically. DMSO should be applied with clean or sterile cotton to minimize the chances for contaminating it with possibly harmful substances. Apply only to clean, dry skin.
- ▶ This medication can be used for various lengths of time, so be sure you understand how long your veterinarian wants you to continue using this medication on your animal. You may need to get refills before the therapy will be complete. If you want to stop applying this medication, talk to your veterinarian, as there may be important reasons to continue giving it.

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

If you miss an application, apply it when you remember, but if it is close to the time for the next dose, skip the dose you missed and apply 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 container at room temperature and protected from light. Keep lid on tightly.
- ▶ 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?

- ▶ Wear disposable, nonpermeable (does not allow liquid to pass through) rubber gloves when applying or handling the drug.
- ▶ Use in well-ventilated area; avoid inhalation of fumes.
- ▶ Exposed skin or eyes should immediately be washed or rinsed off thoroughly.
- ▶ Do not pet the animal on the area treated.
- ▶ Because this drug has a higher risk for causing birth defects, pregnant women should be very careful to avoid exposure to this drug.
- ▶ DMSO can allow other drugs or chemicals to be absorbed through the skin into the body, so never mix it with other drugs or chemicals unless your veterinarian has told you to do so.

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?

- ▶ Do not use nonmedical grades of DMSO, as they may contain harmful impurities.
- ▶ May damage some fabrics.
- ▶ Not to be used in horses intended for food purposes.
- ▶ 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.