Nitroglycerin, Topical
(\textit{nye-tr\textsuperscript{o}-tr\textsuperscript{e}-gli-\textsuperscript{ser}-in})

\textbf{Description:} Nitrate Vasodilator

\textbf{Other Names for this Medication:} NTG, Nitro-bid\textsuperscript{®}

\textbf{Common Dosage Forms:} 
- \textbf{Veterinary}: None.
- \textbf{Human}: 2\% topical ointment; transdermal patches in 0.1 mg/hour, 0.2 mg/hour, 0.3 mg/hour, 0.4 mg/hour, 0.6 mg/hour, & 0.8 mg/hour.

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.

\begin{itemize}
\item If using ointment: \textbf{1)} Always wear non-permeable gloves when applying nitroglycerin ointment. If ointment contacts your skin, wash it off immediately or the drug could be absorbed through your skin and side effects (headache, flushing, low blood pressure) could occur; contact your physician if this happens. \textbf{2)} Use the supplied papers to measure the correct dosage. \textbf{3)} Only apply to the areas on your animal where your veterinarian has instructed. These may include: inside the ear flaps, groin, or armpits (under front leg), or in the mouth. Rotate administration sites; do not apply in same area 2 times in a row. Sometimes, veterinarians will have you rub the medicine onto the gums of your animal. \textbf{4)} Do not touch animal where ointment has been applied or allow other animals to groom the patient being treated.
\item If using patches, patch must be removed after 12 hours.
\item Nitroglycerin ointment, patches, or tablets have no danger of exploding, but store as instructed.
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\item How is this medication useful?
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Nitroglycerin administered through the skin may be used in small animals for the short-term treatment of heart failure.

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 in the USA. 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.

\begin{itemize}
\item What should I tell my veterinarian to see if this medication can be safely given?
\end{itemize}

Many things might affect how well this drug will work in your animal. It is very important to discuss the following things with your veterinarian so together you can make the best decisions for treating your animal.
Other drugs can cause problems when taken with nitroglycerin. Be sure to tell your veterinarian and pharmacist what medications (including vitamins, supplements, or herbal therapies) you are giving your animal, as well as the amount and schedule of 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.

How long until I will know if this medication is working, and how long will the effects of this medication last?

This medication should help your animal feel better within 1 to 2 hours. Your animal’s clinical signs should improve after that time. The effects of this medication are short-lived, meaning they will stop working within 24 hours, although the benefits may be prolonged if your animal has decreased kidney and/or liver function.

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:

- With severe anemia.
- That have had an allergic reaction to it.

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

- With low blood pressure.
- With head trauma.
- That are dehydrated.

If your animal matches any of these conditions, talk to your veterinarian about the possible risks of using the drug versus the benefits.

What are the side effects of this medication?

**Common but not serious side effects include:**

- Rashes where the ointment was applied. If a rash develops, do not apply ointment to that area again until it clears.

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:**

- Collapse (passing out). This does not occur commonly and usually means the dose is too high for your animal.

If your animal collapses or passes out, contact your veterinarian immediately.

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

Too much nitroglycerin can cause low blood pressure. Always apply the amount prescribed by your veterinarian. If you accidentally apply more than is ordered, wash the ointment off. Contact your veterinarian or an animal poison control center for further advice.

Animal poison control centers that are open 24 hours a day include: Pet Poison HELPLINE (855-764-7661) and ASPCA Animal Poison Control Center (888-426-4435); 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.

- 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.

When using the ointment:

- Wear clean, non-permeable gloves (eg, vinyl, nitrile, latex) before applying the ointment.
- Use the supplied papers to measure the correct dosage.
- Only apply to the areas where your veterinarian has instructed. These may include: inside the ear flaps, groin, armpits (under front leg), or in the mouth. Rotate administration sites; do not apply to same spot 2 times in a row.
- Rub the ointment into the skin well.
When using the patch system:

- Before and after applying a patch wash your hands with soap and water. Do not touch your eyes until after you have washed the medication from your hands.
- Do not cut the adhesive patch to adjust the dosage. Check with your veterinarian if you think the medicine is not working as it should.
- Apply the patch and rotate sites to the areas your veterinarian has instructed.
- Always remove a previous patch before applying a new one. Usually patches must be off for 12 hours before applying a new patch.
- Apply a new patch if the first one becomes loose or falls off, but remove it at the time the original patch would be taken off.

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?

- Keep the cap on the ointment firmly attached. Store at room temperature, away from heat, moisture, and direct light. Keep from freezing.
- Keep away from children and other animals.

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

- Always wear non-permeable gloves when applying nitroglycerin ointment. If ointment contacts your skin wash it off immediately or the drug could be absorbed through your skin and side effects (headache, flushing, low blood pressure) could occur; contact your physician.
- Do not touch your animal where ointment has been applied or allow other animals to groom the patient being treated.
- Nitroglycerin ointment, patches, or tablets have no danger of exploding.

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 leftover medication for future use or give it to others to use.

What other information is important for this medication?

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 about this medication, contact your veterinarian or pharmacist.