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## Patient Drug Education for Nitroglycerin Ointment

Nitroglycerin ointment (NTG) is used to help heal anal fissures. The ointment relaxes the smooth muscle around the rectum and promotes blood flow to help the growth of new skin over the tear in the lining of the rectum. The NTG reduces anal canal pressure, which diminishes pain and spasm. We use a diluted concentration of NTG (.125%) compared to the 2% that is typically used for heart patients.

The NTG ointment should be applied 2-3 times per day as directed. It may take 4-6 weeks for the fissure to heal, and you will continue to take the medication after resolution of your problems. A pea size drop should be placed on the tip of your index finger and then the ointment is gently placed inside of the rectum. The finger should be inserted at least half its length and may be covered with a plastic glove or finger cot. You may use Vaseline to help coat the finger or dilute the ointment. If you are advised to mix the NTG with steroid ointment limit it to one to two weeks in order to decrease the risk of infection. The first few applications should be taken lying down, as some mild light-headedness may occur.

It is important to continue the treatment for the entire time period. It takes up to two years for the healing tissue to regain the normal skin strength. You will be advised to add fiber to your diet, increase water to 7-8 glasses per day, use relaxing baths or sitz baths, and to avoid prolonged sitting and straining on the commode. Local anesthetic ointment, may be added.

In the beginning of treatment the anal fissure is very inflamed, which allows more of the NTG to get into the blood. This allows for a higher incidence of the most common side effect, a headache. It is usually mild but may require Tylenol or Advil. You may dilute the NTG further with Vaseline to decrease the headaches. As the treatment progresses and the fissure begins to heal the headaches will dissipate. Other side effects include lightheadedness, flushing, dizziness, nervousness, nausea, and vomiting. If any of these side effects persist or worsen, notify us promptly. Stop using the NTG and notify us if you should develop the rare side effects of severe dizziness, fainting, fast/pounding heartbeat, paleness, sweating, blurred vision, dry mouth, dark urine, bluish lips/skin/nails, unusual tiredness, severe weakness, irregular heartbeat, seizures, or chest pain. Serious allergic reactions are unusual, but seek immediate medical attention if you develop a rash, swelling, dizziness, or trouble breathing.

Tell us if you are allergic to nitrates, have severe anemia, low blood pressure, dehydration, chronic heart failure, cardiomyopathy, recent heart attack, increased pressure in the brain, or exposure to nitrates while on the job. Do not use NTG while driving or working around machinery if you are drowsy, dizzy, have lightheadedness, or blurred vision. Limit alcoholic beverages. To minimize dizziness and lightheadedness, get up slowly when rising from a sitting or lying position. The elderly may be more prone to dizziness and falling. While there are not adequate studies to confirm the safety of NTG in pregnant or breast feeding women it has been used without incident so far. We recommend waiting at least one hour after applying the NTG ointment before breast feeding.

**Do not use NTG ointment if you are taking drugs for sexual problems (e.g., sildenafil, tadalafil, vardenafil).** Use caution before taking cough-and-cold products, diet aids, or NSAIDs preparations because they may contain ingredients that could increase your blood pressure, cause a fast heartbeat, or increase chest pain (e.g., pseudoephedrine, phenylephrine, chlorpheniramine, diphenhydramine, clemastine, ibuprofen, and naproxen). Tell us if you take alcohol, alteplase, migraine drugs (ergotamine), water pills/diuretics such as furosemide or hydrochlorothiazide, or other drugs for high blood pressure (beta blockers, calcium channel blockers, ACE inhibitors).

Store the NTG at room temperature and keep away from light and moisture. Close the container tightly after each use. Do not store in the bathroom. Keep away from children and pets. If you have any questions or problems please call us.