HEALTH BASICS

Nitroglycerin for chest pain

Nitroglycerin is a prescription medicine that can quickly relieve chest pain caused by angina.

WHAT IT IS
A fast-acting medicine that widens blood vessels

WHERE IT COMES UP
Prescribed treatment for angina-related chest pain

WHY IT MATTERS
Can relieve angina but cannot rule out a heart attack

WHAT IT IS NOT
Not a diagnosis or a test for heart disease

WHO TO ASK
Prescriber or pharmacist; emergency services for ongoing chest pain

HOW IT IS CHECKED
Blood pressure and response after use

Overview

Nitroglycerin is a prescription medicine used to relieve angina . Angina is chest discomfort caused when part of the heart muscle is not receiving enough oxygen-rich blood. It often occurs during physical activity or emotional stress.

Fast-acting nitroglycerin usually comes as a tablet placed under the tongue or a spray used on or under the tongue. It begins working within minutes. Long-acting forms, such as patches and ointments, have different instructions and are not substitutes for fast-acting treatment during chest pain.

Nitroglycerin does not treat every cause of chest pain. Relief after taking it does not prove that pain came from the heart. Pain that does not improve also does not rule out a heart problem.

If nitroglycerin has been prescribed for you, ask for a written plan explaining when to use it and when to call emergency services. Do not use another person's prescription.

How it works

Nitroglycerin is changed inside the body into nitric oxide, a chemical that relaxes the smooth muscle in blood vessel walls. This widens the blood vessels.

Wider veins reduce how much blood returns to the heart at one time. That lowers the heart's workload and its need for oxygen. Nitroglycerin can also widen arteries that supply the heart.

A tablet must dissolve under the tongue rather than be swallowed. Medicine absorbed through the lining of the mouth reaches the bloodstream more quickly. A spray is also absorbed through the mouth. Follow the product instructions because tablets and sprays are used differently.

You may develop a headache, flushing, light-headedness, or dizziness after a dose. These effects are related to blood vessel widening and a drop in blood pressure. Sit down before using fast-acting nitroglycerin to reduce the risk of falling.

Why it matters for your health

Fast-acting nitroglycerin may relieve predictable angina within a few minutes. Some people are instructed to use it before an activity that regularly causes angina, such as climbing stairs. Do this only if it is part of your prescribed plan.

Quick relief may help you stop an angina episode, but nitroglycerin does not address the underlying cause of reduced blood flow. Regular or changing chest discomfort still needs medical review.

A change in your usual pattern matters. Examples include discomfort occurring with less activity, happening at rest, lasting longer, returning more often, or responding less well to your medicine. Contact your clinician promptly about these changes, even if the discomfort eventually goes away.

New, severe, or unexplained chest pressure may be a medical emergency. Call emergency services if chest discomfort:

Stop activity, sit or lie down, and use your medicine as directed while help is arranged. Do not drive yourself. Some prescribed plans allow more doses at five-minute intervals while waiting, but follow your own instructions and do not delay the emergency call.

- Is not improving within five minutes after the first prescribed nitroglycerin dose
- Becomes worse or feels different from your usual angina
- Occurs with shortness of breath, sweating, nausea, faintness, or pain spreading to the arm, jaw, back, or shoulder

What can go wrong

Stable angina usually follows a familiar pattern, such as chest pressure during exertion that improves with rest or prescribed nitroglycerin. A clinician should assess the cause and review any changes.

Acute coronary syndrome includes unstable angina and heart attack. These happen when blood flow through a heart artery suddenly becomes severely reduced or blocked. Nitroglycerin may reduce the discomfort, but it does not reopen every blocked artery or show that the emergency has passed.

Chest pain can also come from conditions unrelated to narrowed heart arteries. Examples include acid reflux, chest-wall strain, inflammation around the heart, a blood clot in the lung, or a lung problem. Whether nitroglycerin changes the pain cannot safely identify the cause.

Nitroglycerin can lower blood pressure enough to cause marked dizziness or fainting, especially if you stand suddenly. If you faint, are difficult to wake, or have severe weakness after using it, someone should call emergency services.

Certain medicines can cause a dangerous blood-pressure drop when combined with nitroglycerin. These include:

Some of these medicines are prescribed for erectile dysfunction, while others are used for pulmonary hypertension. Tell your prescriber and pharmacist about all prescription medicines, non-prescription products, and supplements you use. If chest pain occurs after taking one of these medicines, call emergency services and tell them what you took. Do not take nitroglycerin unless an emergency clinician says it is safe.

Alcohol and other medicines that lower blood pressure may increase dizziness. Do not stop a prescribed medicine on your own; ask a pharmacist or prescriber to check for interactions.

- Phosphodiesterase-5 inhibitors, such as sildenafil, tadalafil, vardenafil, or avanafil
- Riociguat, a medicine used for certain types of high blood pressure in the lungs

What you can do

Keep a clear record of your nitroglycerin instructions. Know which form you have, when to take the first dose, whether to repeat it, and when to call emergency services.

Practical steps include:

Ask your pharmacist to demonstrate how to use your exact product. Also ask how to tell whether it has been stored correctly and when an opened container should be replaced.

Storage and replacement instructions can differ by product.

Arrange routine follow-up if you are using nitroglycerin more often, avoiding normal activities because of chest discomfort, or having side effects that make the medicine difficult to use. Routine follow-up is also a good time to review your blood pressure, other medicines, and emergency plan.

Do not wait for routine follow-up when chest pain is new, severe, worsening, occurring at rest, or not improving within five minutes after the first prescribed dose. Those situations need emergency assessment.

- Carrying the medicine where you can reach it quickly
- Checking the expiry date and replacing expired supplies
- Keeping tablets in their original, tightly closed container
- Protecting the medicine from heat, moisture, and improper storage
- Sitting down before using a tablet or spray
- Recording when chest discomfort occurs and how long it lasts
- Noting whether the medicine helped and whether your pattern has changed

Common questions

Does a headache mean I am allergic to nitroglycerin?

Usually not. Headache is a known effect of widened blood vessels. Tell your prescriber if headaches are severe or make it hard to use the medicine. Swelling, widespread hives, or trouble breathing requires urgent medical help.

Can I swallow a nitroglycerin tablet?

A fast-acting sublingual tablet is meant to dissolve under the tongue. Swallowing it may delay or reduce its effect. Follow the label for your specific product.

Should I wait through three doses before calling for help?

No. If chest discomfort is not improving within five minutes after the first prescribed dose, call emergency services. If your plan permits additional doses, you may be told to take them while help is on the way.

Can nitroglycerin tell whether chest pain is from my heart?

No. Both heart-related and non-heart-related pain may improve, and serious heart problems may not respond. Diagnosis may require an examination, an electrocardiogram, blood tests, or

other testing.

Can I take nitroglycerin that was prescribed to someone else?

No. It may interact dangerously with your medicines or lower your blood pressure. Chest pain also needs an appropriate medical assessment.

Sources

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