CONDITION

Stable angina

Stable angina is predictable chest discomfort caused by reduced blood flow to the heart muscle.

WHAT IT IS
Predictable discomfort from reduced heart muscle blood flow

BODY SYSTEM
Heart and circulation

MAIN SYMPTOMS
Chest pressure, breathlessness, fatigue, pain spreading elsewhere

WHAT CAUSES IT
Usually fatty narrowing of coronary arteries

HOW IT IS DIAGNOSED
Symptoms, ECG, coronary imaging, and sometimes stress testing

MAIN TREATMENT
Heart-risk reduction, anti-angina medicines, and sometimes revascularisation

CAN IT BE CURED?
No - underlying coronary artery disease usually remains

IS IT AN EMERGENCY?
Sometimes - new, worsening, resting, or persistent chest pain

LONG-TERM OUTLOOK
Often manageable with ongoing heart-risk monitoring

Overview

Stable angina is a pattern of chest discomfort caused by the heart muscle not receiving enough oxygen-rich blood. It usually happens when the heart is working harder, such as during exercise, stress, or cold weather.

The discomfort follows a reasonably predictable pattern. It often improves within a few minutes after you stop and rest or use prescribed fast-acting angina medicine.

The usual underlying problem is coronary artery disease. In this disease, fatty material called plaque builds up inside the coronary arteries, which supply the heart muscle. The narrowed arteries may provide enough blood at rest but not when the heart needs more oxygen.

Stable angina is not the same as a heart attack. During a heart attack, blood flow is suddenly

blocked for long enough to injure heart muscle. However, angina shows that the heart's blood supply is limited and that future heart problems need to be taken seriously.

The term chronic coronary syndrome is also used for stable coronary artery disease and its symptoms.

Symptoms

Stable angina often feels like pressure, tightness, squeezing, heaviness, or aching in the chest. Some people describe indigestion-like discomfort rather than pain.

The discomfort may spread to the:

You may also feel short of breath, unusually tired, sweaty, light-headed, or sick. Some people mainly experience breathlessness or fatigue rather than obvious chest discomfort. These are sometimes called anginal equivalents because they may represent the same problem with blood flow.

A stable pattern usually has recognisable triggers. Common examples include walking uphill, climbing stairs, carrying something heavy, emotional stress, cold weather, or activity soon after a large meal. Symptoms generally settle with rest or prescribed fast-acting nitrate medicine.

Symptoms can differ between people. They may be less typical in older adults, women, and people with diabetes. Chest pain also has many causes unrelated to the heart, so symptoms alone cannot confirm stable angina.

A change from your usual pattern matters. Pain that begins at rest, occurs more often, lasts longer, feels more severe, or responds less well to your usual medicine may represent unstable angina or a heart attack.

- Arm or shoulder, often on the left but sometimes on either side
- Neck, jaw, back, or upper abdomen
- Chest and both arms at the same time

Causes and risk factors

Stable angina is most often caused by atherosclerosis. This is the gradual buildup of cholesterol-rich plaque within artery walls. The plaque narrows the space available for blood to flow through the coronary arteries.

Less commonly, angina may result from a coronary artery spasm, disease affecting the heart's

smallest blood vessels, or another condition that increases the heart's oxygen needs. Severe anaemia, an overactive thyroid, heart valve disease, or a very fast heartbeat can contribute to angina-like symptoms.

Factors associated with coronary artery disease include:

These factors do not mean that you will develop angina. Some cannot be changed, while others can be managed. Coronary disease can also occur in people without obvious risk factors.

- Smoking
- High blood pressure
- High cholesterol
- Diabetes
- Older age
- Kidney disease
- Limited physical activity
- A close family history of early coronary artery disease

Diagnosis

A healthcare professional will ask what the discomfort feels like, where it occurs, what triggers it, how long it lasts, and what makes it stop. They will also review your health history, medicines, family history, and cardiovascular risk factors.

An electrocardiogram, or ECG, records the heart's electrical activity. It can show a previous heart attack or another heart problem, but an ECG taken while you are resting may be normal in stable angina.

Blood tests may check cholesterol, blood sugar, kidney function, anaemia, and other possible contributors. If symptoms could represent a heart attack, a blood test for troponin may be needed. Troponin is a protein released when heart muscle is injured.

Tests used to assess the coronary arteries or blood flow can include:

The choice of test is based on your symptoms, previous results, other health conditions, and local services. An exercise ECG without imaging is not suitable for every person and is not the only way to investigate angina.

- CT coronary angiography: A scan using contrast dye to look for narrowed coronary arteries

- Stress imaging: An ultrasound, MRI, or nuclear scan that assesses the heart during exercise or medication-induced stress
- Invasive coronary angiography: A test in which dye is passed through a thin tube into the coronary arteries

Treatment and management

Treatment aims to reduce symptoms, help you stay active, and lower the chance of heart attack, stroke, and other cardiovascular problems.

If you smoke, support to stop is an important part of care. Management may also include physical activity suited to your health, a heart-healthy eating pattern, weight management where appropriate, and treatment of high blood pressure, cholesterol, or diabetes.

Medicines may have different purposes.

A fast-acting nitrate, such as glyceryl trinitrate or nitroglycerin, can relieve an angina episode. It may be supplied as a tablet or spray used under the tongue. You should follow the instructions provided with your medicine and your personal action plan. Nitrates can cause headache, flushing, or dizziness.

Some medicines used for erectile dysfunction or pulmonary hypertension can interact dangerously with nitrates. Your prescriber or pharmacist should know about all prescription medicines, non-prescription products, and supplements you use.

Longer-acting medicines can reduce how often angina occurs. Options include beta blockers like metoprolol or propranolol , calcium-channel blockers, long-acting nitrates, and other anti-angina medicines. The most suitable category is influenced by your heart rate, blood pressure, other conditions, side effects, and treatment response.

Other medicines may lower cardiovascular risk rather than directly relieve pain. These can include cholesterol-lowering treatment and antiplatelet medicine, which makes blood cells called platelets less likely to form harmful clots. These treatments are not appropriate for everyone and require an individual assessment.

If symptoms continue despite suitable medicines, or testing finds important narrowing, a procedure may be considered. Angioplasty opens a narrowed artery, usually leaving a small mesh tube called a stent in place. Coronary artery bypass grafting creates new routes for blood to flow around narrowed arteries.

These procedures can improve symptoms in selected people. They do not remove the underlying tendency to develop coronary plaque, so medicines and risk-factor management

often continue afterward.

Cardiac rehabilitation may be offered after certain procedures or heart events. It provides supervised activity, education, and support for living with coronary disease.

Complications

The main concern is progression of coronary artery disease. Plaque may become unstable and trigger a blood clot, causing unstable angina or a heart attack.

Reduced blood flow or previous heart damage can also contribute to:

Good symptom control and management of cardiovascular risks can reduce complications, although no treatment removes all risk.

- Heart rhythm problems
- Heart failure, when the heart cannot pump effectively enough
- Reduced activity because of frequent or feared symptoms
- Anxiety or low mood related to living with a heart condition

Prevention

Stable angina cannot always be prevented. Age, family history, and some health conditions are outside your control. Coronary disease can also develop despite a person's efforts to reduce risk.

You can lower your risk by not smoking, managing blood pressure and cholesterol, and keeping diabetes well controlled if you have it. Regular physical activity and a diet rich in vegetables, fruit, whole grains, beans, fish, and unsaturated fats can support heart health.

If you already have angina, do not begin an intense exercise programme without advice. Activity is usually encouraged, but it may need to increase gradually and account for your symptoms and test results.

Taking agreed medicines consistently and attending routine reviews can help identify rising blood pressure, cholesterol, blood sugar, or changing symptoms.

Living with it and what to expect

Many people live active lives with stable angina. Symptoms may remain similar for months or

years, improve with treatment, or gradually become more limiting. The course cannot be predicted exactly for one person.

Learning your usual triggers and early symptoms can help you plan activity. A clinician may advise you on warming up, pacing yourself, and using prescribed medicine before a known trigger. Avoiding all activity is generally not helpful because loss of fitness can make everyday tasks harder.

Keep fast-acting angina medicine accessible if it has been prescribed. Check its expiry date and make sure close family members know your emergency plan. Sitting down before using it may reduce the risk of falling if it makes you dizzy.

Angina can affect work, travel, driving, and sexual activity. The practical advice that applies to you may depend on symptom control, local driving rules, and the type of work you do. Stable symptoms do not automatically mean these activities must stop.

Routine follow-up usually includes discussion of symptom frequency, treatment side effects, blood pressure, cholesterol, diabetes risk, activity, and emotional wellbeing. Arrange a review if angina becomes easier to trigger, interferes more with daily life, or your medicine causes troublesome effects.

When to get medical help

Call emergency services for chest pressure, pain, or breathlessness that is new, severe, occurs at rest, or does not settle as expected. Also seek emergency help if discomfort is accompanied by fainting, marked sweating, nausea, severe weakness, or pain spreading to the arm, jaw, back, or neck.

If you have an angina action plan, follow it. Use prescribed fast-acting nitrate medicine as instructed while waiting for help. Do not drive yourself to hospital.

A change in an established angina pattern can be urgent even if the discomfort eventually stops. Seek prompt medical assessment if episodes are becoming more frequent, lasting longer, occurring with less activity, waking you from sleep, or responding less well to your usual treatment.

For symptoms that remain predictable but are limiting your activities, arrange a routine appointment. Routine review is also appropriate for medicine side effects, uncertainty about exercise, or help managing cardiovascular risk factors.

Common questions

Is stable angina a heart attack?

No. Stable angina is temporary reduced blood flow without the lasting heart muscle injury that defines a heart attack. However, it is usually linked to coronary artery disease and indicates an increased future cardiovascular risk.

Can stable angina go away?

Symptoms may improve or stop with medicines, lifestyle changes, angioplasty, or bypass surgery. The underlying coronary artery disease usually remains and still needs long-term management.

How long does stable angina last?

A typical episode lasts a few minutes and settles after the trigger stops or prescribed fast-acting medicine is used. Pain that lasts longer than expected or does not follow your usual pattern needs urgent assessment.

Can I exercise if I have stable angina?

Many people can and should remain active, but the type and intensity need to suit their condition. Stop if symptoms occur and follow your action plan. Seek advice before starting vigorous or unfamiliar exercise.

Is all chest pain angina?

No. Chest discomfort can come from muscles, ribs, the lungs, the oesophagus, anxiety, or other causes. Location or sensation alone cannot reliably identify the cause. New or concerning chest pain should be medically assessed.

Does a normal ECG rule out angina?

No. A resting ECG can be normal between episodes. Diagnosis may require assessment of the symptom pattern, coronary imaging, or a test that examines blood flow while the heart is working harder.

Sources

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