CONDITION

Costochondritis

Costochondritis is inflammation where the ribs join the breastbone, causing chest wall pain and tenderness.

WHAT IT IS
Inflammation of rib cartilage near the breastbone

BODY SYSTEM
Muscles, bones, and joints

MAIN SYMPTOMS
Localised chest pain, tenderness, pain with movement, painful deep breaths

WHAT CAUSES IT
Usually unknown; sometimes strain, coughing, or minor injury

HOW IT IS DIAGNOSED
Reproduced tenderness; tests exclude other causes

MAIN TREATMENT
Pain relief, activity changes, heat, and gentle stretching

CAN IT BE CURED?
Yes - usually resolves over time

IS IT AN EMERGENCY?
Sometimes - new chest pain may signal another emergency

LONG-TERM OUTLOOK
Usually resolves, but pain can recur

Overview

Costochondritis is inflammation of the cartilage connecting one or more ribs to the breastbone. Cartilage is firm, flexible tissue that cushions a joint. The affected joints are usually in the upper or middle chest.

The condition causes pain in the chest wall. Pressing the sore area, moving your upper body, coughing, or taking a deep breath often makes the pain worse. Costochondritis does not damage the heart or lungs and is not usually dangerous.

However, chest pain has many possible causes. Some involve the heart, lungs, blood vessels, or digestive system and need different treatment. New or unexplained chest pain should not be assumed to be costochondritis without an appropriate medical assessment.

Costochondritis is different from Tietze syndrome. Both can cause pain where the ribs meet the breastbone, but Tietze syndrome also causes visible or noticeable swelling, often around a single upper rib joint.

Symptoms

The main symptom is pain near the breastbone, where the ribs attach. It is often felt on the left side, but it may occur on either side or across more than one area.

The pain may feel sharp, aching, or like pressure. It can be mild or strong enough to limit normal activities. It may develop gradually or begin after exercise, repeated coughing, lifting, or another strain.

Features commonly associated with costochondritis include:

Reproducing the pain by pressing the chest wall supports the diagnosis, but it does not completely rule out other causes. Heart-related pain and costochondritis can occasionally occur at the same time.

Costochondritis usually does not cause visible swelling, a skin rash, fever, fainting, or significant shortness of breath. These symptoms may point to another condition and should be assessed.

- Tenderness when you press the affected rib joints
- Pain that worsens with deep breathing, coughing, or sneezing
- Pain with twisting, reaching, lifting, or certain arm movements
- Pain that changes with position or upper-body movement

Causes and risk factors

The exact cause is often unknown. In some people, the rib joints may become irritated after repeated movement or strain.

Possible triggers include:

Less commonly, pain and inflammation around a rib joint may be linked to infection, inflammatory arthritis, or another medical condition. These are not typical cases of costochondritis and may cause other signs, such as fever, swelling, warmth, or pain in several joints.

Costochondritis can affect people of different ages. Having a possible trigger does not prove

that it caused the pain, and many people cannot identify a specific event.

- Heavy lifting or strenuous upper-body exercise
- Repeated coughing or vomiting
- A minor blow or strain to the chest
- Activities involving repeated pushing, pulling, or reaching
- Recent illness with frequent coughing

Diagnosis

There is no blood test or scan that confirms ordinary costochondritis. Diagnosis is based on your symptoms and a physical examination while checking for other causes of chest pain.

During the examination, a healthcare professional may press along the breastbone and nearby ribs. They may also ask you to move your arms or upper body to see whether this reproduces the pain. Your heart and lungs may be examined as well.

Tests are chosen according to your symptoms, age, medical history, and risk factors. They are not always needed. Possible tests include an electrocardiogram, or ECG, which records the heart's electrical activity, and a chest X-ray. Blood tests or other scans may be used if there is concern about infection, inflammation, injury, or a heart or lung problem.

These tests do not prove that costochondritis is present. Their purpose is to look for other explanations that may need treatment.

Treatment and management

Costochondritis often improves on its own. Treatment focuses on easing pain and avoiding activities that keep irritating the area.

Temporarily reduce movements that clearly worsen the pain, such as heavy lifting, forceful pushing, or repeated upper-body exercise. Complete bed rest is not usually needed. Gentle daily movement can help prevent stiffness, provided it does not significantly increase your symptoms.

A warm compress or heating pad may soothe the painful area. Protect your skin from burns and avoid sleeping on an active heating pad. Some people prefer a wrapped cold pack, especially after an activity that has aggravated the pain.

Pain-relieving medicines may help. Options can include paracetamol, also called

acetaminophen, or non-steroidal anti-inflammatory drugs like ibuprofen or naproxen , known as NSAIDs. NSAIDs include medicines such as ibuprofen and are available as tablets or topical gels in some places. They are not suitable for everyone and can affect the stomach, kidneys, heart, or other medicines. Follow the product instructions and ask a pharmacist or clinician if you are unsure what is safe for you.

If pain continues, a physiotherapist may suggest posture work and gentle exercises for the chest, shoulders, and upper back. Stretching should be gradual rather than forced.

For severe pain that does not respond to simpler measures, a specialist may consider an injection of local anaesthetic, sometimes with a corticosteroid like prednisone or hydrocortisone , near the painful joint. This is not commonly needed, and evidence for injections is limited.

Antibiotics like amoxicillin or doxycycline do not treat ordinary costochondritis. They are used only when a bacterial infection has been identified or is strongly suspected.

Complications

Costochondritis itself does not usually cause lasting damage to the ribs, heart, or lungs. The main difficulty is ongoing or recurring pain.

Persistent pain can interfere with exercise, work, sleep, and everyday upper-body movements. Avoiding movement for a long time may also lead to stiffness or reduced fitness.

Regular use of pain medicines can cause side effects, particularly if the recommended amount is exceeded or several products containing the same ingredient are combined. If you need pain relief often or for a prolonged period, seek advice about safer long-term management.

The most important risk is mistaking another cause of chest pain for costochondritis. A previous diagnosis does not mean every future episode of chest pain has the same cause.

Prevention

Costochondritis cannot always be prevented because its cause is often unclear.

If a specific activity repeatedly triggers symptoms, changing the technique, workload, or pace may reduce irritation. Build up lifting and upper-body exercise gradually, and allow time for recovery after a flare.

Treating a persistent cough may reduce repeated strain on the chest wall. A cough can have many causes, so arrange an assessment if it continues, becomes worse, or is accompanied by

other symptoms.

Posture changes and strengthening exercises may help some people with recurring mechanical chest wall pain, but they cannot guarantee that costochondritis will not return.

Living with it and what to expect

Many episodes improve over several weeks, although some settle sooner and others last for months. Symptoms can fluctuate. You may feel better for a time and then notice pain again after coughing, lifting, exercise, or prolonged time in one position.

Improvement is often gradual rather than immediate. The area may remain tender even after stronger pain has eased. Returning to demanding activity in stages may be more comfortable than resuming everything at once.

Costochondritis does not usually limit life in the long term. Most people can continue or return to their usual work, exercise, and daily activities. Some experience recurring episodes and need to identify movements that aggravate the chest wall.

If symptoms are not following the expected course, the diagnosis may need to be reviewed. Ongoing pain does not necessarily mean something serious, but another chest wall condition, joint disorder, digestive problem, or heart or lung cause may need consideration.

When to get medical help

Arrange a routine medical appointment if chest pain is new, keeps returning, lasts longer than expected, or is affecting sleep and daily activity. You should also seek review if pain treatment is not helping or you need it frequently.

Prompt medical assessment is appropriate if you develop fever, redness, warmth, visible swelling, a new lump, or pain after a significant chest injury. These features are not typical of uncomplicated costochondritis.

Seek emergency help for chest pain that is severe, unexplained, or accompanied by:

Heart attack symptoms are not always dramatic and can differ from person to person. Do not rely on tenderness or a previous costochondritis diagnosis to rule out an emergency.

- Pressure, squeezing, or heaviness in the chest
- Shortness of breath, fainting, marked weakness, or confusion
- Sweating, nausea, or vomiting

- Pain spreading to the arm, shoulder, jaw, neck, or back
- Coughing up blood
- A very fast or irregular heartbeat
- Sudden chest pain with breathing difficulty

Common questions

How long does costochondritis last?

Many cases improve within several weeks, but the timing is not predictable. Pain may continue for months or return after it has improved. A review is appropriate if symptoms persist, worsen, or change.

Can costochondritis feel like a heart attack?

Yes. Both can cause chest pain, and symptoms alone may be difficult to interpret. Costochondritis is more likely to be tender when pressed and to change with movement, but these features cannot safely exclude a heart problem.

Does costochondritis show up on an X-ray?

Usually not. Standard X-rays do not show the inflammation that causes ordinary costochondritis. A chest X-ray may still be used to look for another cause, such as a lung problem, rib injury, or other chest condition.

Can I exercise with costochondritis?

Light activity that does not significantly worsen pain is often reasonable. Temporarily avoid movements that clearly trigger symptoms, especially heavy lifting or demanding upper-body exercise. Return gradually as the pain settles.

Is costochondritis caused by anxiety?

Anxiety does not directly define or confirm costochondritis. Stress can tighten muscles, change breathing patterns, and make pain feel more noticeable. Chest pain should still be assessed on its medical features rather than being assumed to come from anxiety.

Can costochondritis come back?

Yes. Some people have repeated episodes, especially after coughing, lifting, or activities that strain the chest wall. Recurrent pain should not automatically be treated as costochondritis if it feels different or comes with new symptoms.

Sources

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