

Chest Pain

and your time in the Emergency Department (ED)

Chest Pain

There are many different reasons why you may have chest pain. Most causes of chest pain are not a sign of anything serious.

It is our job in the emergency department to rule out any serious causes for your symptoms. To get to the bottom of what is happening we have to do some standard testing.



Common causes of chest pain

Digestive System

Many digestive system conditions such as indigestion cause pain to move away from the original site of pain to cause pain elsewhere.



Psychological

Anxiety, stress and worry are important factors that can cause chest pain. But they can also make other pain that you may already have feel worse.



Muscles, Joints and Bones

A pulled muscle, broken bone or sore joint may cause pain in the chest area. This sort of pain is usually made worse on moving or breathing.



Heart

There can be many heart related causes of chest pain. These include inflammation of the heart, problems with the electrical activity or blood supply to heart.



Lungs

Conditions like asthma or chest infections can feel like a sharp pain or uncomfortable tightness in your chest that is worse when breathing or coughing.



Unknown Cause

Investigations in the emergency department are used to identify and treat serious causes of chest pain. It may not be possible to find a reason for your source of chest pain.



The Journey through the ED



Triage

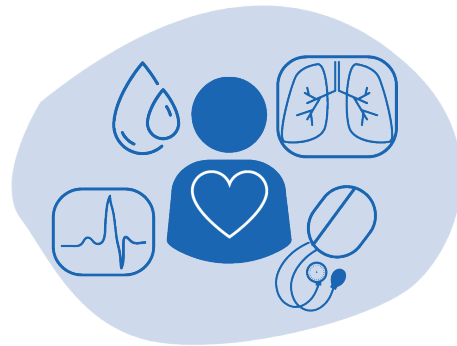
Initial assessment by a specially trained nurse in order to determine the urgency of treatment.

- ▶ Here we listen to what has happened.
- ▶ Undertake clinical observations

Main Department

You will be assigned a care provider e.g. doctor, physicians associate or specialist nurse. They will listen to what has happened and organise testing if required.

- ▶ Clinical Observations
- ▶ Blood tests
- ▶ Electrocardiogram (ECG)
- ▶ Chest X-ray



Review

Lastly, you will have a conversation with your care provider to discuss your test results and the best next steps.

You may not see a consultant but all cases of chest pain are discussed with a consultant.



Waiting to receive feedback on test results can sometimes feel like a long time. This may be due to how busy the department is or the time taken to get your blood tests analysed.

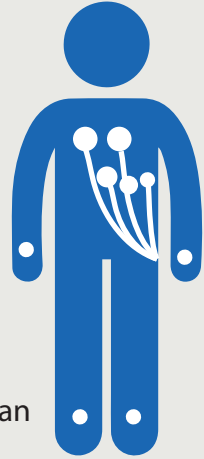
A long wait does not mean that there is anything to be worried about.

Tests and Investigations

What is an ECG?

An electrocardiogram is a quick, simple and pain free test used to look at the electrical activity of your heart.

- ▶ Electrodes (stickers) will be stuck to your chest, arms and legs
- ▶ This information is used to assess your heart rhythm.
- ▶ Sometimes we see patterns on the ECG that can alert us to certain conditions



What is Troponin?

Blood tests give us an indication of your general health. Common blood tests include a full blood count, kidney function tests and infection markers.

- ▶ For chest pain we do an additional test called troponin
- ▶ Troponin is a protein that is released from the heart muscle if it is damaged
- ▶ We use this test to rule out heart attacks

What is a Chest X-ray?

Chest x-rays produce images of your chest. This may be taken to rule out other causes of chest pain,



Why have I had multiple blood tests?

Some patients may require more than one blood test. This may be because:

- ▶ There has been a problem analysing the sample in the lab
- ▶ It has been decided you need an additional blood test that was not required at first
- ▶ We need to see if there has been any change in the blood test between the first sample and a new sample. This is especially important for making sense of troponin test results

Troponin blood test results



1st Troponin blood test

This is used to provide a starting troponin level. If you have had one before clinicians will compare this to any historical results on the system.



2nd Troponin blood test

If your 1st troponin level is above normal range (or very different to any historical result) we will take a second blood test after a set period of time.

We are now looking to see if the blood test is changing up, down or staying the same.

It is very normal to need repeat troponin blood tests. There is nothing to worry about if you need a second test. But always ask questions if you have any concerns or worries.

Questions you may have

Have you found a cause for my symptoms?




Sometimes it is not possible to find a cause for your chest pain. In the emergency department we test for serious or life threatening emergencies. It is normal to get discharged home following chest pain. Before going home the medical team should tell you the results of any tests that you had and whether they are normal or not.

What were my blood test results?

The medical team should discuss all your results when talking to you about your time in the emergency department. It is not possible to provide a print out of these. However, there is a space on the back of this leaflet to write your results down for future reference. If the numbers don't make sense to you, just ask your care provider what it all means.

Do I have to stay in hospital?

Some patients may require admission to hospital and we will do our best to explain the reasons why this is needed. Common reasons for staying in hospital with chest pain include:

-  Additional investigations are required
-  An extra period of monitoring is required
-  A medical speciality (e.g. cardiology) review is required.



What should I do if this happens again?

We know that chest pain can be very scary. If you are being discharged it means that you do not have a serious or life threatening condition at this time. Learn more about heart attacks below. We have included this advice not because we think it is likely that you will have a heart attack, but because it can help you to know what to do.

The Symptoms of a heart attack

(From the British Heart Foundation)



Pain or discomfort in the chest that doesn't go away.



The pain may spread to the left or right arm ...



... or may spread to the neck and jaw.



You may feel sick or short of breath.

What to do if you suspect a heart attack?

- STEP 1:** Sit down and try and relax
- STEP 2:** If you have been prescribed glyceryl trinitrate (GTN) spray use it as prescribed.
- STEP 3:** Dial 999 if the pain continues or you do not have GTN spray. Ask for an ambulance and tell them it is a suspected heart attack.
- STEP 4:** Wait for help to arrive, do not try and drive yourself to hospital

Will I receive any follow up?

This varies person to person. For some people, no follow up will be required. However, a letter about what has happened, including any tests or investigations will be automatically sent to your GP.

For other people your care provider may refer you for a follow up appointment in an outpatient clinic. Sometimes the team can give you the time and date of your appointment before leaving the department. However, usually this appointment is received in the post.

Will my GP be informed?

If you registered with a GP within NHS Lothian- YES

A copy of your discharge letter will be automatically sent electronically to your GP. This does not mean you will need a follow up with your GP. Often it is just so there is a record on your notes of what has happened. Sometimes you will need to see your GP and this will be made clear on the discharge letter. Make sure to ask before leaving if you need to make an appointment yourself.

Is there anything I can do to improve my own health?

When you come in with chest pain the priority is making sure everything is ok right now. However, we do need to think about long-term lifestyle changes that may help improve your health and prevent any future cardiac event from happening.

There are so many resources that can help you learn about small changes you can make to your everyday life that will all add up to reducing your risk of having a heart attack in the future.

► Where can I find out about lifestyle changes?

The British Heart Foundation



<https://www.bhf.org.uk/information-support/publications>

Chest Heart & Stroke Scotland



<https://www.chss.org.uk/resources-hub/>

NHS Live Well



<https://www.chss.org.uk/resources-hub/>

Personal test results:



Blood Pressure:



Heart Rhythm (ECG):



Troponin Level:

Any Questions for the healthcare team?

We know that often everyone looks busy but we would like to make sure that we have answered any questions you may have before you leave. You can write questions here while you wait, in case you for get when you are speaking to your care provider at discharge.

Who is who in the emergency department

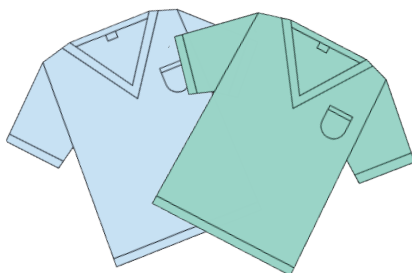
Medical Staff (Scrubs)



Purple: Consultant



Dark Green: Registrar



Unmarked light blue or green:
Junior Doctors or surgical team

Nursing Staff (Tunics)



Navy: Senior Nurse



Blue: Staff Nurse



Pale Blue: Healthcare
Assistant



Grey: Student Nurse

Other Staff



Mint green polo:
Porter



Mint green tunic:
Domestic Staff



Blue polo:
Radiology