

## PATIENT INFORMATION

# PE :What is a pulmonary embolus?

### What is a pulmonary embolus (PE)?

A PE is a blood clot in one of the blood vessels in your lungs. It usually comes from a clot in the leg, called a Deep Vein Thrombosis (DVT). Part of this clot breaks off and travels through the body. In the lungs, this clot gets stuck in the smaller blood vessels. This can prevent blood travelling to that part of the lungs.

### What causes a PE?

PEs can occur for a number of reasons:

- Being immobile for a long period of time, for example while travelling, or because of being ill or injured
- Following an operation
- In pregnancy
- Having a severe pre-existing medical condition, such as cancer
- Having had a PE or DVT in the past
- Taking a hormone treatment, such as the oral contraceptive pill
- Lifestyle related, e.g. being obese or smoking

### What are the symptoms of a PE?

There are many symptoms that could be the result of having a PE, including:

- **Shortness of breath**, either at rest or on exertion. This is because of the reduced blood flow to the lungs, and may mean that you need to have oxygen
- **A high heart rate**. This is because the heart has to work harder to transport oxygen around the body
- **Chest pain**, which can be either constant or only when breathing deeply. This is because of inflammation of the lining of the lung
- **Coughing up blood**. This is rare, and will settle.
- **Feeling lightheaded or dizzy**. This is because there is not enough oxygen getting to your brain.

These symptoms can also occur in a range of other medical conditions that your doctor will consider.

## What tests do I need to have?

After being examined by a doctor, and a nurse taking your vital signs (heart rate, blood pressure, oxygen saturations), you may need some other tests:

- **ECG.** This shows the electrical activity of the heart. A PE is not a problem with the heart, but it can sometimes be suggested by an ECG
- **Blood tests.** These check that there is no reason that you cannot have the CT scan, and can also be used to rule out infection or other conditions. Some blood tests can also point towards a PE being less likely.
- **Chest x-ray.** A PE cannot be seen on x-ray, but it helps to rule out other problems, such as a chest infection, which can cause similar symptoms.
- **Computed tomography pulmonary angiography (CTPA) scan.** This looks at the blood flow to the lungs and can show us the blood clot.
- **Ventilation-perfusion scan.** This is sometimes used as an alternative when a CT scan is not recommended. It also looks at blood flow to the lungs and at the ventilation of the lungs.

## What is a CT scan?

A Computed Tomography (CT) scanner is an X-ray machine which produces an image of a cross-section, or a slice, of the body. For the CT scan required to look for blood clots in the lungs, dye is injected into a drip in your arm. This dye will travel through your blood system to the blood vessels in your lungs. The dye makes it much easier to see whether a clot is present.

## What is the treatment for a PE?

Your body will naturally break down the blood clot, but in order to do so safely, you will need to take anticoagulant medication. Anticoagulant medication will thin the blood to prevent the clot from getting bigger or moving and prevent new clots forming. For safety anticoagulant treatment will be started as soon as a PE is considered, even before it is confirmed on scan. On-going anticoagulant treatment would be discussed with you in more detail if a PE is confirmed.

## Do I need to stay in hospital?

Not necessarily. This depends on the size and position of the blood clot, and how it affects your health. If you have a fast heart rate, fast breathing, need oxygen or are in severe pain, you may be admitted. If you are relatively well, you may be treated as an outpatient by the MAAT (Medical Admission Avoidance and Treatment) team.

## How long will I be on the anticoagulants?

If a blood clot in your lungs is confirmed you will need anticoagulant medication for a minimum of three months, but sometimes it will need to be longer.

## Will I need any other tests?

If you are still breathless after 3 months, your GP may refer you for an echocardiogram. This is a scan that can help look at whether there has been any damage to the heart following a PE.

If we do not know what has caused your PE, we may need to do further tests to see if there is an underlying cause that requires treatment. This will be discussed with you on an individual basis.

## **When should I call for help?**

**If you feel unwell and start to suffer any of the following symptoms, please dial 999 and state that you are under investigation for a PE.**

- Worsening breathlessness
- Dizziness
- Chest pain

If you experience any bleeding which you cannot stop, attend the nearest hospital. If you cough up blood, contact your specialist or your GP for advice.

For general queries about being managed as an outpatient, please call the MAAT team on 01803 655776

---

For further assistance or to receive this information in a different format, please contact the department which created this leaflet.