

Pulmonary Embolism (PE)

Introduction

This leaflet is for patients who have been diagnosed with a Pulmonary Embolism.

What is a Pulmonary Embolism?

A Pulmonary Embolism (PE) is a blood clot that has developed in the blood vessels of the lungs. The blood clot may initially form in the deep veins of the pelvis or legs (a Deep Vein Thrombosis or DVT) and if a piece of clot breaks off, it can travel in the blood stream to the lungs where it lodges and can lead to symptoms.

What symptoms might I have from a Pulmonary Embolism?

Common symptoms can include chest pain, breathlessness or coughing up blood. Large PEs can cause light-headedness or fainting. Some patients may have symptoms suggesting a DVT as well, such as leg swelling or redness. On occasions, patients may have no symptoms at all.

Why have I developed a Pulmonary Embolism?

There are a number of risk factors for developing a PE and these include:

- Undergoing major surgery.
- Long periods of not moving or reduced mobility.
- Certain medications such as hormone replacement therapy (HRT), oral contraception (the Pill), tamoxifen, raloxifene and chemotherapy.
- Pregnancy or giving birth within the last six weeks.
- Having an active cancer or receiving cancer treatment.
- Being overweight or obese.
- A previous history of VTE or if there is a family history of VTE.
- If you have an inherited or acquired blood clotting problem.
- If you have a serious medical illness or more than one medical condition, such as heart disease, diabetes or respiratory illness.
- If you have travelled long-haul (for journeys where you sit for longer than four hours) within four weeks before or after hospital admission.

What tests might I need?

Your doctor will assess you and request tests to decide if they think you are likely to have a Pulmonary Embolism. These tests include:

- Blood tests
- A heart tracing (ECG)
- A chest X-ray
- Either a CT scan (called a CTPA), or in some cases
- A V/Q scan.

You will be given an injection of a blood thinning medicine while you await your scan. The doctor will assess you and decide whether you can go home and come back for your scan or whether you need to be admitted to hospital.

If a blood clot is diagnosed, sometimes further tests may be needed such as a heart scan (echocardiogram) to assess the function of the heart. Occasionally other tests such as a CT scan of your abdomen or a mammogram for women may need to be arranged.

What is the treatment for PE?

You will have an injection of anticoagulant – a blood thinning medication – while you await your scan. If a blood clot is confirmed you will then need to be started on anticoagulation regularly. This can be tinzaparin injections or tablets, such as warfarin, apixaban, edoxaban, rivaroxaban or dabigatran. Your doctor will discuss with you the pros and cons of these options and decide on the medicine most suitable for you according to any other health conditions that you have.

What happens when I go home?

When you are ready to go home you will be given a supply of the medications to take home. Your GP will be informed of the diagnosis and any changes to your medicines on your discharge letter. All patients need a minimum of three months treatment with an anticoagulant and will then be sent an appointment to be seen in the Respiratory Clinic after three months to decide if the treatment should be continued.

What important things do I need to know about being on anticoagulation?

The following points are good to be aware of if you are on blood thinning medications:

- You should **always** tell your pharmacist if you are on anticoagulants as they can interact with other medications or 'over the counter' medicines.
- Ensure your dental practice knows which medication you are on - occasionally they may need to be stopped for a brief period for certain procedures.
- If you are planned to undergo any hospital procedures your medical team will give advice as to if and when the medication needs to be stopped, and when it should restart.
- Some anticoagulant medications are not suitable in pregnancy, so you may need to take a contraceptive, or discuss with your G.P if you are planning a pregnancy.
- It is perfectly safe to fly on anticoagulant medications.
- We generally advise to avoid significant contact sports when on anticoagulation due to the risk of bruising and bleeding.
- Avoid drinking alcohol to excess when you are on anticoagulants, as this can cause inflammation in the stomach and increase your risk of bleeding.

- If you miss a dose of your anticoagulant, don't panic.
 - If you are on a once a day medicine, take it as soon as you remember, and then adjust the timing of your next dose to 24 hours.
 - If you are on a twice daily medication and have missed one dosage, simply take the next scheduled dose as normal.
- If you develop bleeding whilst on an anticoagulant medicine that cannot be controlled you should seek urgent review.

What happens at my three month clinic appointment?

- At your clinic follow-up the Respiratory Team will assess you to see if your symptoms have improved. They will discuss with you how long you need to take the anticoagulants for and this depends on many factors.
- If the blood clot was felt to be triggered by something temporary or transient, for example pregnancy or following a surgical procedure, then it may be safe to stop the medication.
- However, if there was no clear reason for the blood clot, or if the reason hasn't gone away (for example you have cancer or other significant medical issues) then you may need to carry the medicines on. We know from studies that patients with no obvious reason for their blood clot have a higher risk of having more blood clots in the future if the medication is stopped. This risk can be as high as 20-30% over five years. This therefore needs to be weighed up carefully with any problems you have experienced while taking the medication to make a sensible decision about if it should continue.
- If you have ongoing symptoms of breathlessness that aren't explained by any other health conditions, you may need an echocardiogram to look at the heart or sometimes a repeat scan, but for most patients no further scans are needed. The vast majority of patients clear their blood clots and only 1-2% of patients develop complications that need further tests.

Further information about PE

Please speak to your doctor or nurse if you have questions about your diagnosis.

Further information can be found on these sites:

<https://www.nice.org.uk/guidance/cg144>

<https://www.nhs.uk/conditions/blood-clots/>

This document can be made available in other languages and formats upon request.

Dr Lynne Curry, Consultant Physician, Department of Respiratory Medicine

Written: November 2019. Review due: November 2021