

# Pulmonary Embolism (PE)

Pulmonary embolism (PE) occurs when a blood clot dislodges from a vein, travels through the veins of the body, and lodges in the lung.

Most blood clots originally form in the deep veins of the legs, thighs, or pelvis and this condition is known as deep vein thrombosis (DVT).

The clot or clots block the blood flow to parts of the lung.

Pulmonary emboli are uncommon and range in severity but are important because large clots can be fatal if not identified and treated promptly.

## Risk factors of PE:

- Clotting abnormality in the blood (including family history).
- Pregnancy.
- Obesity.
- Underlying cancer.
- Previous DVT.
- Immobility including long haul flights.
- Contraceptive pills.
- Recent surgery.
- Intravenous drug use.

## Symptoms of PE:

- Shortness of breath.
- Sharp chest pain especially when taking a deep breath.
- Coughing up blood.
- Feeling dizzy/blacking out/crushing chest pain – may suggest presence of large clots.



## How is it diagnosed?

In some cases the condition can be excluded by a blood test without the need for special scans. If the test is not appropriate or does not exclude a blood clot, a scan of the chest is usually required.

In pregnancy a sound wave leg scan is often done instead to try to avoid the effects of X-rays on the unborn baby.

## Treatment of PE

The mainstay of treatment of PE is 'anticoagulation' which means thinning of the blood. This reduces the risk of blood clots getting bigger, while the body's own systems dissolve the clot.

The duration of the anticoagulation treatment varies. The usual minimum duration of treatment should be six months.

## Medications used to treat DVT:

- Low Molecular Weight Heparin (LMWH) such as dalteparin
- Vitamin K antagonists (VKAs), such as warfarin.
- New Oral Anticoagulants (NOACs), such as rivaroxaban.

If warfarin is used you will also start treatment with low molecular weight heparin injections for a few days this is because it takes a few days for the optimal effect of warfarin to be established.

The risk and benefits of treatment will be discussed with you by the doctor. Warfarin has special monitoring arrangements and you will need regular blood tests, this may be done by either your GP or the hospital.

The doctor or pharmacist will give more information, including an information pack before you are discharged.

When you are discharged it is important that you know when your next blood test is due and who will monitor your warfarin in the future.

You will be given a form that will tell you this information and you should take it to your GP or the hospital when you have your next blood test.

In some severe cases of PE patients need a 'clot busting treatment' called thrombolysis. This decision is usually made by a senior clinician.

Patients do not usually need to stay in the hospital for treatment.

Some patients with PE can be treated either in the community or on an ambulatory basis.

## **Ambulatory (daily return to ward) treatment of patients with a diagnosis of PE**

If the clinician decides to treat a patient with PE under the ambulatory pathway, the patient is commenced on treatment and may need to come back daily to the ward for dalteparin injections and a blood test, until the blood is adequately thinned.

If you are deemed suitable for ambulatory treatment for your PE, then you will need to be aware of some symptoms you need to look out for:

### **These are:**

- Blackout.
- Dizzy spell.
- Coughing up blood.
- Worsening shortness of breath.
- Sharp chest pain especially when taking a deep breath in.
- Any bleeding that does not stop with simple measures.

## **If you have any of these symptoms, please contact:**

**Doncaster Royal infirmary, Acute Medical Unit (AMU),**

Tel: 01302 642617.

**Bassetlaw Hospital, Assessment and Treatment Centre (ATC),**

Tel: 01909 502 186 (direct dial).

## **If you are very unwell, call 999 to get yourself to the hospital.**

It is very important that you come back to the ward for daily Dalteparin Injections unless it has been arranged for the district nurse to administer it in the community.

If for any reason you cannot attend the ward for the injections or you do not receive a dose of the injection in the community, please call the ward to inform them so that they can give you further advice.

### **Patient Advice & Liaison Service (PALS)**

The team are available to help with any concerns, complaints or questions you may have about your experience at the Trust. Their office is in the Main Foyer (Gate 4) of Doncaster Royal Infirmary. Contact can be made either in person, by telephone or email.

#### **The contact details are:**

**Telephone:** 01302 642764 or 0800 028 8059

**Email:** [dbth.pals.dbh@nhs.net](mailto:dbth.pals.dbh@nhs.net)