

Pulmonary Embolism

This page looks at what happens when clots that form as a result of deep vein thrombosis end up in your lung.

What is pulmonary embolism (PE)?

An embolus is a 'wandering' blood clot that moves through your blood stream. All the blood in your body has to be pumped through your lungs to pick up oxygen from the air. If a blood clot develops in the deep veins of your leg - DVT or deep vein thrombosis - some or all of it may break off, go through your heart, and then block off part of your pulmonary (lung) circulation i.e. the blood vessels in the lungs.

Small clots may cause no symptoms at all and medium ones cause sudden breathlessness or chest pain. Sometimes, if a clot is big enough to block lung circulation, it can cause collapse or even sudden death.

Smaller wandering clots can break off a clot in your leg over several days. This causes increasingly troublesome symptoms. Your lungs can start to bleed temporarily, which causes sharp chest pains when you breathe. You can also cough up blood.

Who gets it?

Any condition that makes your blood sticky or slows down circulation in the veins of your legs may lead to pulmonary embolism. Common causes are:

- Orthopaedic operations - on the legs (e.g. hip or knee replacement)
- Other major surgery
- Leg fracture - with the leg being put in plaster
- Immobility - as can happen on bed-rest in hospital, or if you don't move around on a long-distance car or air journey
- Pregnancy – before, during and after delivery
- Previous DVT or pulmonary embolism
- Advanced cancer

However, in about half of cases there is no obvious cause – doctors call these idiopathic. Some people are born with a tendency to clot easily, but this makes little difference to treatment and testing for this possibility is usually not very useful.

How is it diagnosed?

Because the severity of the disease is extremely varied and all the symptoms are common in other conditions, diagnosis can be difficult. If a doctor is thinking about the possibility, suspicious features would be:

- The presence of one of the risk factors outlined above
- If there is a clot in one leg
- The lack of any other likely explanation for your symptoms

Because treatment is complicated and can cause side-effects, it is important to be sure of the diagnosis, and this requires a special lung scan, either a CT scan with IV contrast dye injection (called a CTPA), or a nuclear medicine scan of the lungs and its blood supply (called a V/Q scan).

What does treatment involve?

If your health professional diagnoses a blood clot in your lung (or leg), you will be treated with a tablet called warfarin. Warfarin takes time to have its full effect so you will also take a drug called heparin for the first few days (sometimes up to a week or so).

Nowadays heparin can be given as one injection per day, so some people can be treated as outpatients. The more mobile you keep the better.

You will need regular blood tests to check that you're getting the right dose of warfarin. These blood tests are called INR tests. If the dose becomes too high, there is a risk of bleeding; if it's too low, clotting might come back. Make sure you have these blood tests and change the dose of warfarin if your health professional tells you to do so.

Also, do not start or change any other medication without checking with your health professional or chemist, because warfarin interferes with many of them. The tablet comes in three strengths, each a different colour.

The benefits of treatment in preventing further clots have to be balanced against the risk of bleeding from the drug. If you develop a pulmonary embolism following an operation, you may only need treatment for six weeks. But if you develop it twice, for no obvious reason, you may need life-long treatment.

The body has a very efficient system for dissolving clots, so the great majority of people make a complete recovery, even with a large pulmonary embolism.

Can I fly?

If you are still on warfarin, it is safe to fly, but only if:

- Your blood tests have been stable for some time
- You are back in time for your next blood test (or can arrange in advance to get it done where you are travelling)
- You have enough tablets
- You are insured with a company who know that you are on warfarin

This brochure is one in a series produced by Lung Foundation Australia to provide information on lung disease, its treatment and related issues. The information published by Lung Foundation Australia is designed to be used as a guide only, is not intended or implied to be a substitute for professional medical treatment and is presented for the sole purpose of disseminating information to reduce lung disease.

Any information relating to medication brand names is correct at the time of printing. Lung Foundation Australia has no control or responsibility for the availability of medications, which may occasionally be discontinued or withdrawn.

Please consult your family doctor or specialist respiratory physician if you have further questions relating to the information contained in this leaflet. For details of patient support groups in Australia please call 1800 654 301.

If you are no longer on warfarin, it is safe to fly, but take the following precautions:

- Keep your legs moving during the flight (by bending your feet forward in your seat, getting an aisle seat so that you can walk around freely)
- Take one aspirin a day two days beforehand
- Get special stockings at the airport for the flight

What about the contraceptive pill?

Blood clots are uncommon in healthy people. The risk is only slightly increased by being on the contraceptive pill (or hormone replacement therapy), and is less than in pregnancy.

However, if you have had a pulmonary embolism, you will not be able to stay on hormone tablets.

The Lung Foundation Australia is here to help. We develop a large range of patient resources and support programs for people with lung disease.

For further information, call 1800 654 301 or visit www.lungfoundation.com.au

The Lung Foundation Australia wishes to acknowledge the British Lung Foundation with the development of this fact sheet.

Content updated July 2011

Last Updated (Tuesday, 19 July 2011)

This brochure is one in a series produced by Lung Foundation Australia to provide information on lung disease, its treatment and related issues. The information published by Lung Foundation Australia is designed to be used as a guide only, is not intended or implied to be a substitute for professional medical treatment and is presented for the sole purpose of disseminating information to reduce lung disease.

Any information relating to medication brand names is correct at the time of printing. Lung Foundation Australia has no control or responsibility for the availability of medications, which may occasionally be discontinued or withdrawn.

Please consult your family doctor or specialist respiratory physician if you have further questions relating to the information contained in this leaflet. For details of patient support groups in Australia please call 1800 654 301.