

Patient information from BMJ

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Pulmonary embolism: what are the treatment options?

A pulmonary embolism is a blockage in one of the main blood vessels that takes blood to your lungs. It is a medical emergency that needs to be treated as quickly as possible.

What treatments work?

The main treatment for PE are anticoagulants. These are medicines that stop the blood from clotting too easily. But if you have a serious PE (i.e., you've become very unwell because of the clot), you may also need some additional treatment.

Oxygen

If you are having trouble breathing as normal, you will probably be given oxygen to breathe in through a mask. If you are having severe difficulty breathing, your doctor might suggest that you use a ventilator to help you breathe.

A ventilator is a machine that helps you breathe if your lungs are struggling to do the work by themselves.

Treatments for low blood pressure

Some people who have a PE develop low blood pressure. There are several treatments your doctor might suggest to help with this, including:

- Intravenous (IV) fluids for rehydration
- Medicines called vasopressors to boost blood pressure and help your heart pump blood more easily).

Medicines to stop your blood clotting too easily (anticoagulants)

The blood's ability to coagulate (form clots) is important. It means that wounds can heal quickly without too much loss of blood or risk of infection. But if you have a PE you need to slow down this clotting until the blockage in your blood vessel is resolved.

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If your doctor suspects that you have a PE, they will recommend that you start taking an anticoagulant medicine straight away, even if the results of your tests haven't come back yet. This is because it's important to start treatment as soon as possible.

If tests then show that you haven't had a PE, you can stop anticoagulant treatment. If they show that you have a PE you will need to keep taking the anticoagulant treatment for at least 3 months.

The main side effect of these medicines is excessive bleeding. So your doctor will only recommend this treatment if it is suitable for you. If anticoagulants are an option, your doctor will monitor you for any problems whilst you are taking it.

Medicines to dissolve blood clots

If you have a serious PE that is causing a major blockage in your blood vessel your doctor might recommend a treatment called thrombolysis. This is done with medicines that dissolve blood clots.

Thrombolysis can be given by intravenous (IV) drip or via a thin tube (called a catheter) directly to the clot. Thrombolysis can sometimes cause side effects, including dangerous bleeding in the brain. So doctors will only recommend it if you have a major blockage and if it is a suitable treatment for you.

Surgery

Surgery to remove the blood clot is not usually used to treat PE. But your doctor might suggest it if you have a severe blockage of the pulmonary artery and you can't have thrombolysis or anticoagulation.

What will happen?

Most people recover from a PE. But it can be fatal, especially in more serious cases.

Most people who have a PE can leave hospital within a few days. But you will need to have regular checks with your doctor if you are taking anticoagulant medicines.

If doctors cannot find a reason to explain your PE, you may also need to have some follow-up tests to rule out underlying problems.

Some people can get a PE again so it's important to be aware of the symptoms. You should seek urgent medical help if you are concerned about a blood clot.

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