



Having a VQ lung scan

A VQ scan is a nuclear medicine test that looks at your lungs and how they are working. There can be 2 parts to the scan. One part looks at the blood flow to your lungs (this is called the perfusion) and the other part looks at the airflow to your lungs (called the ventilation). By comparing the 2 sets of pictures, it is possible to investigate various lung conditions such as pulmonary hypertension and pulmonary embolism (PE). A PE is a blockage of one of the arteries in the lung caused by a blood clot. You may need to have both parts of the test or just one.

Is it safe for me to have the scan?

For this scan it is necessary to inject a small amount of radioactive tracer, called a radiopharmaceutical, in order to take the pictures. The small risk from this radiation dose is outweighed by the information that will be gained by having the scan. There is a table at the end of this leaflet giving radiation risk from various sources. Ask if you want any more information. All investigations are vetted to make sure this is the appropriate test for you. If you don't understand why you need to have this scan please speak to the doctor who referred you.

For female patients

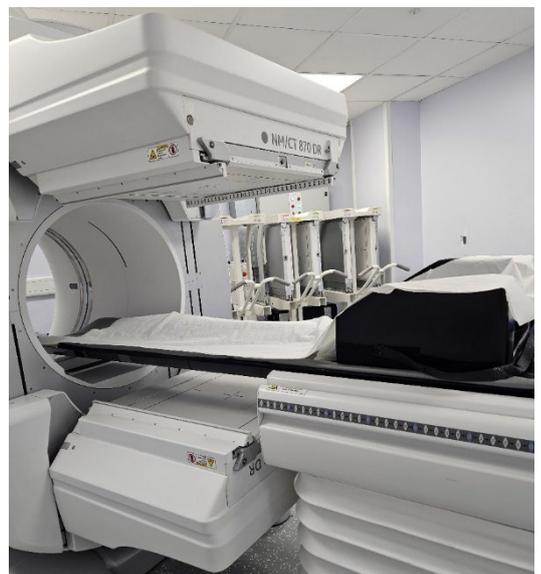
If you know that you are pregnant, or there is any chance that you may be pregnant, then please tell staff in the department where you will be having your lung scan so that they can discuss this with you. In urgent cases, it is still safe for you to have a lung scan even if you are pregnant because the risk to your unborn child is very low. **Also contact the department if you are breastfeeding**, as we may give you special instructions.

Preparation for your scan

There are no special preparations for a lung scan. You can eat, drink and take any medicines as normal. You may be asked to have a chest x-ray before having a lung VQ scan.

Your scan

For the ventilation part of the scan you will be asked to breathe in air mixed with a small amount of radioactivity. You will be shown how to do this using a special tube and mouthpiece. It is similar to breathing through a straw. For the perfusion part of the scan a small amount of radioactive tracer will be injected into a vein in your arm or hand using a cannula (plastic tube).



For the images, you will be lying on your back for up to 1 hour. It is very important that you keep still during this time.

If you think you will find this difficult, please contact the medical physics department before your test. You will not be left on your own – there will always be someone immediately available.

After your scan

It is very unlikely that you will feel any side effects after the scan, but if you think that you have please let the Nuclear Medicine Department know. You may continue all your normal activities unless you have been advised otherwise.

Your results

Your VQ lung scan will be looked at by a specialist doctor, who will issue a report. The report will be sent to the doctor who requested your scan rather than to your GP. This is because the doctor who requested your scan will have all the results from other tests and will be able to tell you how the result of your scan affects your care.

Contacting us

Medical Physics Department, Level 1 North Block, Monday to Friday, 9am to 5pm.

If you have any questions about your treatment, please ask the staff looking after you or telephone **0118 322 7355** or email: **rbb-tr.physics@nhs.net**.

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

RBFT Physics & Clinical Engineering Department, March 2026
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The table below is a simple guide to the levels of radiation risks for various examinations. These are measured in millisieverts (mSv).

Source of exposure (using RBFT local diagnostic reference levels (DRLs) for Nuclear Medicine)	Dose
Having a chest x-ray	0.014 mSv
Taking a transatlantic flight	0.08 mSv
VQ lung scan (VQ SPECT)*	2.7 mSv
UK average annual radiation dose	2.6 mSv
CT scan of whole spine	10 mSv

*Please note that the dose stated is for the radiopharmaceuticals that are inhaled/injected. If you require the addition of a CT scan as part of the procedure, it will incur an additional dose: the estimated dose for an average adult CT chest is approximately 2.1mSv. Not all patients having a VQ SPECT will need a CT scan.