Suspected Pulmonary Embolism

Imaging tests are not necessary for many patients suspected of having a blood clot in the lungs known as a pulmonary embolism (PE) (https://www.radiologyinfo.org/en/info/pulmonary-embolism) . For medically stable patients, the risk of a PE should be assessed first by asking standard questions about the patient and his or her symptoms. If the answers to the questions result in a low risk score, no further testing is required.

If the answers indicate the possibility of PE, a blood test (D-dimer) to check for a substance released when a blood clot (https://www.radiologyinfo.org/en/info/bloodclot) breaks up is recommended. If the test comes back negative, no further testing is required. The D-dimer test should not be used for anybody expected to have blood clots due to other things, such as recent surgery or trauma, or for pregnant women.

If the answers to the standard questions indicate a high risk of PE and the D-dimer test is positive, in most cases a pulmonary CT angiography (CTA) (https://www.radiologyinfo.org/en/info/angioct) —a CT scan to look at the blood vessels in the lungs—is the next step. For people with symptoms of a blood clot in the lower legs, especially for pregnant women, an ultrasound (https://www.radiologyinfo.org/en/info/venousus) Doppler of the legs is often the first choice to reduce radiation exposure. Eighty percent of PEs are associated with blood clots in the lower legs. In addition, a chest x-ray (https://www.radiologyinfo.org/en/info/chestrad) may be performed to rule out other causes such as pneumonia or fluid in the lungs. Ventilation and perfusion nuclear medicine scans are sometimes used in place of CTA.

For more information, visit the Pulmonary Embolism (https://www.radiologyinfo.org/en/info/pulmonary-embolism) page.

— By Andrea Borondy Kitts, MPH. This information originally appeared in the *Journal of the American College of Radiology.*

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