

# New risk score spots patients at high risk of serious blood clots

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A new risk prediction tool can identify patients at high risk of serious blood clots (known as venous thromboembolism) who might need preventative treatment, says a study published in the *British Medical Journal* today.

The tool, which can be found at [www.qthrombosis.org](http://www.qthrombosis.org), is based on simple variables which the patient is likely to know and could be easily integrated into GP computer systems to assess patients' risk prior to hospital admission, long haul flights, or starting medications that carry an increased clotting risk.

Venous thromboembolism is a common potentially lethal disease which can be prevented. In England alone, it claims over 25,000 lives each year and, of those who survive, almost a third experience long term effects.

In 2010, the National Institute for Health and Clinical Excellence (NICE) issued guidance to encourage the identification of high risk patients and effective use of preventative measures. Yet there are no validated risk prevention algorithms suitable for use in primary care.

So researchers from the University of Nottingham set out to develop and validate a new clinical risk prediction algorithm (QThrombosis) designed to predict a person's risk of developing a potentially fatal clot.

Using data from 563 general practices in England and Wales, they studied over 3.5 million patients aged 25 to 84 years with no previous

history of blood clots. First cases of venous thromboembolism (either [deep vein thrombosis](#) or [pulmonary embolism](#)) were identified from a patient's medical record or death certificate at one and five years.

The rate of venous thromboembolism was around 15 cases per 10,000 person years of observations.

They show that the risk of venous thromboembolism in both men and women increased with increasing age, [body mass index](#) and quantity of cigarettes smoked each day. Risks were also elevated among those with varicose veins, [congestive heart failure](#), [chronic kidney disease](#), [chronic lung disease](#), [inflammatory bowel disease](#), and any cancer.

Admission to hospital in the last six months also conferred a greater risk, as did taking antipsychotic drugs, oral contraceptives, HRT or tamoxifen.

The authors conclude: "We have developed and validated a new risk prediction model which identifies patients at high risk of venous thromboembolism. The algorithm is based on simple clinical variables which the patient is likely to know or which are routinely recorded in GP computer systems. The algorithm could be integrated into GP computer systems and used to risk assess patients prior to hospital admission or prior to the initiation of medication which might increase risk of venous thromboembolism."

They add: "Further research is needed to assess how best to use the algorithm and whether, upon implementation, it has any impact on health outcomes."

Provided by British Medical Journal

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