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# 04 DEC Risk of blood clots after surgery higher than expected



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Health

The risk of having a potentially fatal blood clot after surgery is higher and lasts for longer than had previously been thought, research led by the University of Oxford has shown.



The risk of having a blood clot after surgery is greater and lasts for longer than previously thought.

This study published in the *British Medical Journal* has implications for how drugs like heparin or warfarin are used after surgery to help prevent blood clots. Most patients receive these anti-clotting drugs only while in hospital, or for up to five weeks afterwards for certain high-risk operations. Those undergoing day surgery are unlikely to be considered for preventive therapy at all.

The risk of blood clots is known to increase after surgery, particularly after major orthopaedic surgery such as hip replacements. The risk is thought to be highest during the first few weeks after an operation but little is known about the exact pattern and scale of this increased risk.

The international team, led by researchers at the Cancer Epidemiology Unit at Oxford and funded by Cancer Research UK and the Medical Research Council, set out to examine the pattern of increased risk over time and after different types of surgery.

' We have known for a long time that blood clots are more common after some kinds of surgery, but we haven't had a clear picture of the size of these risks before, or of how long they last,' says Dr Jane Green, one of the study authors at the Cancer Epidemiology Unit.

### Further information

- › British Medical Journal
- › Cancer Epidemiology Unit
- › Cancer Research UK
- › Medical Research Council



Their findings are based on NHS hospital admission and death records for almost 950,000 middle-aged women in the UK recruited in 1996-2001 as part of the Million Women Study. Each woman was tracked for an average of 6.2 years.

Women were almost 70 times more likely to be admitted to hospital with a blood clot during the first six weeks after an inpatient operation, compared to the normal risk of a blood clot without any surgery. After a day case operation, they were almost 10 times more likely to be admitted.

**We found that the risk of a blood clot is much higher and last considerably longer than was suspected previously.**

Dr Jane Green

The risks were lower, but still higher than normal, 7–12 weeks after surgery, and in most cases the risk remained for at least one year.

Risk also varied considerably by type of surgery, being highest after inpatient surgery for hip or knee replacement, cancer and broken bones.

In real terms, this means that 1 in 140 middle-aged women in the UK will be admitted with a blood clot during the 12 weeks after any inpatient surgery, 1 in 45 after hip or knee replacement surgery, and 1 in 85 after surgery for cancer.

This compares with 1 in 815 after day case procedures and only 1 in 6,200 women during a 12 week period without surgery.

These findings suggest that there is a substantially increased risk of a clot after many different types of surgery that lasts for up to 12 weeks after the operation.

‘ The results were surprising. We found that the risk of a blood clot is much higher and last considerably longer than was suspected previously,’ says Dr Green.

‘ More work is now needed to determine the best use of anticlotting drugs after different types of surgery, while recognising that they can be unpleasant or difficult to take for long periods. Current guidelines on the use of these drugs after surgery may need to be reviewed, with the possibility of offering them to more patients and for longer times, particularly for those types of surgery with the highest risk.’

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