

# Study reveals dramatic fall in death rates after hip replacements

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Mortality rates in the first 90 days following hip replacement surgery have halved, according to a study led by the University of Bristol on behalf of the National Joint Registry for England, Wales and Northern Ireland (NJR) and published in *The Lancet*.

A team of researchers led by Professor Ashley Blom from the University of Bristol have analysed data on death after [hip replacement](#) for the NJR as one of a programme of in-depth studies.

The researchers from Bristol, Oxford, East Anglia and Exeter studied 409,000 patients who had hip replacements for osteoarthritis between 2003 and 2011 and report some fascinating findings.

The study found:

1. Between 2003 and 2011 [mortality rates](#) in the first 90 days following surgery halved from 0.6 per cent to 0.3 per cent.
2. Four simple treatment options are associated with lower death rates. These are: the use of spinal anaesthetic, the posterior surgical approach, the use of chemical thromboprophylaxis with heparin and the use of mechanical thromboprophylaxis.
3. Overweight patients with a [body mass index](#) between 25 and 30 kg/m<sup>2</sup> have a lower risk of death than those with a "normal" body mass index of 20-25 kg/m<sup>2</sup>.
4. Patients with certain medical conditions are at a much higher risk of death in the 90 days following surgery. Severe liver disease is

associated with a ten-fold increase, a previous heart attack is associated with a three-fold increase and both diabetes and renal disease are associated with a two-fold increase.

Ashley Blom, Professor of Orthopaedic Surgery in the University's School of Clinical Sciences said: "It is extremely good news that the risk of death after hip replacements has reduced so dramatically in England and Wales. It is also very exciting that we can further reduce the risk of post-operative death by adopting four relatively simple measures.

"The finding that overweight people have a lower risk of death is surprising, but has been confirmed by other recent studies, and challenges some of our preconceptions. We need to concentrate efforts on reducing the risk of death in high risk groups such as those with severe [liver disease](#)."

**More information:** 90-day mortality after 409 096 total hip replacements for osteoarthritis, from the National Joint Registry for England and Wales: a retrospective analysis, Linda P Hunt, Yoav Ben-Shlomo, Emma M Clark, Paul Dieppe, Andrew Judge, Alex J MacGregor, Jon H Tobias, Kelly Vernon, Ashley W Blom, on behalf of the National Joint Registry for England, Wales and Northern Ireland, *Lancet* 2013; Vol 382: 1097, September 28, 2013.

Provided by University of Bristol

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