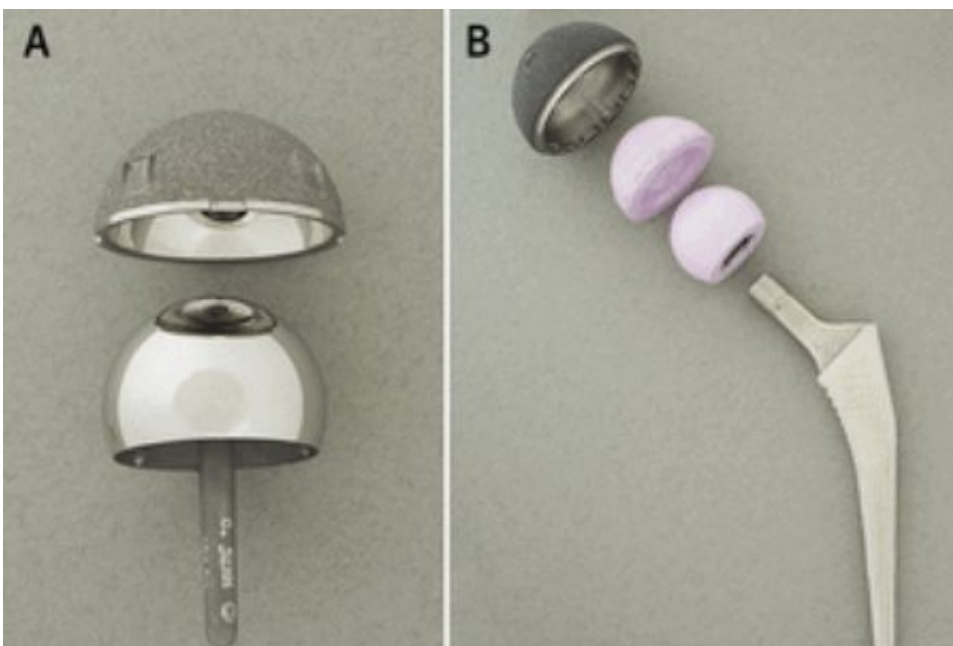


What is the most effective type of hip implant combination for patients undergoing a hip replacement?

November 3 2017



(A) resurfacing implant; (B) ceramic-on-ceramic, large head, uncemented implant (components disassembled). Credit: University of Bristol

Researchers from the Bristol Medical School have found that there is no evidence that any of the newer hip implant combinations, such as ceramic or uncemented, are better than the widely used small head metal-on-plastic cemented hip combination, which has been commonly used since the 1960s.

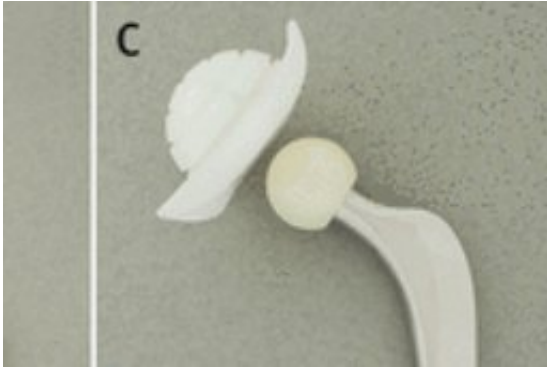
The National Institute for Health Research (NIHR)-funded research also confirms previous knowledge from observational [evidence](#) that resurfacing hip replacements and metal-on-metal implants fail more than the metal-on-plastic small head cemented implants.

The research team reviewed 77 randomised controlled trials and analysed data from 3,177 hip replacements to estimate which implants fail less in total [hip replacement surgery](#). Hip replacement implants can have different materials such as metal-on-plastic, ceramic-on-plastic, ceramic-on-ceramic, or metal-on-metal, with large or small head sizes, and can be fixed to the bone with or without cement.

The research paper, published in *BMJ*, is the most comprehensive review of all the available information to date, and the analysis excluded low-quality studies.

Dr Elsa Marques, Research Fellow in the Musculoskeletal Research Unit at the Bristol Medical School: Translational Health Sciences, who led the study, said: "Around 30 per cent of the total hip replacements in the UK use the traditional metal-on-plastic, small head, cemented implants. Our trials review also confirms observational findings from joint patient registry data, suggesting that national registries are a good source of real-world evidence for patients who are considering a [total hip replacement](#).

"This study is reassuring to patients that there is no evidence to show that the newer hip material combinations are superior to the traditional [hip replacement](#) implants."



(C) ceramic-on-polyethylene, small head, cemented implant (head assembled with stem). Credit: University of Bristol

More information: José A López-López et al. Choice of implant combinations in total hip replacement: systematic review and network meta-analysis, *BMJ* (2017). [DOI: 10.1136/bmj.j4651](https://doi.org/10.1136/bmj.j4651)

Provided by University of Bristol

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