

Preterm, low birth-weight babies may need new hips in adulthood

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Researchers from Australia report that low birth weight and preterm birth are linked to increased risk for osteoarthritis (OA)-related hip replacements in adulthood. Findings published in the American College of Rheumatology (ACR) journal, *Arthritis Care & Research*, indicate that low birth weight and pre-term babies were not at greater risk of knee arthroplasty due to OA as adults.

According to the ACR, 27 million Americans over the age of 25 are diagnosed with clinical OA. Symptoms of OA range from mild to severe and include pain, stiffness, and swelling of joints. In fact, OA is the most common cause of disability, with medical evidence reporting OA of the knees and hips totaling 71 million years lived with disability (2010)—a worldwide increase of 64% since 1990.

Lead investigator, Professor Flavia Cicuttini with the School of Public Health and Preventive Medicine at Monash University and Alfred Hospital in Melbourne, Australia says, "Currently there are no disease-modifying medications available to treat OA, which makes understanding the risk factors associated with OA so important for improving prevention of this disabling disease."

Previous research found that [low birth weight](#) and preterm birth have been linked to hypertension, cardiovascular disease, insulin resistance and reduced bone mass in [adulthood](#). With understanding of these adverse outcomes, the research team set out to investigate if low birth weight and preterm birth also played a role in increased risk of joint

replacement surgery as adults.

The present study used data from 3,604 participants of the Australian Diabetes, Obesity and Lifestyle Study who were 40 years of age or older at the time data of joint replacement surgeries were collected.

Participants provided information about their weight at birth and if they were prematurely delivered. The participants' records were then linked to knee and hip replacements due to OA data (2002-2011) from the Australian Orthopaedic Association National Joint Replacement Registry.

Of the participants, 116 had knee replacement surgery and 75 underwent hip arthroplasty for OA. Low birth weight and preterm birth were linked to increase incidence of hip arthroplasty independent of age, sex, body mass index (BMI), education level, hypertension, diabetes, smoking and physical activity. Researchers found no significant association between low birth weight or [preterm birth](#) and knee replacement surgery.

"Our findings suggest that individuals born prematurely or with low birth weight are more likely to need hip replacement surgery for OA in adulthood," concludes Professor Flavia Cicuttini. "While further investigation is needed to confirm these findings, indentifying those at greatest risk for hip OA and providing early interventions may help reduce the incidence of this debilitating disease."

More information: "Association of Low Birth Weight and Preterm Birth with the Incidence Of Knee and Hip Arthroplasty for Osteoarthritis." Sultana Monira Hussain, Yuanyuan Wang, Anita E. Wluka, Jonathan E. Shaw, Dianna J. Magliano, Stephen Graves and Flavia M. Cicuttini *Arthritis Care and Research*; Published Online: November 3, 2014 [DOI: 10.1002/acr.22475](https://doi.org/10.1002/acr.22475)

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