

# Hip replacement an excellent option to relieve pain in juvenile arthritis patients

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Dr. Mark Figgie's study found that hip replacement can relieve pain and restore mobility in young juvenile arthritis patients. Credit: Hospital for Special Surgery

Hip replacement is often performed in patients with juvenile arthritis when their joints have been severely damaged by the disease. A study at

Hospital for Special Surgery (HSS) finds that the procedure is an excellent option to alleviate pain and improve function in juvenile arthritis patients under age 35 when conservative treatments fail to provide relief.

The study, to be presented at the American Academy of Orthopaedic Surgeons annual meeting on March 24, found that total hip replacement (THR) lasted at least 10 years in 85 percent of [patients](#), and 20 years in 50 percent of patients. When the implant wears out or is no longer viable, [juvenile arthritis](#) patients generally have a revision surgery, or second hip replacement.

An estimated 300,000 children in the United States have been diagnosed with juvenile arthritis, technically known as [juvenile idiopathic arthritis](#) (JIA) or juvenile rheumatoid arthritis. The disease is diagnosed before age 16 and often persists into adulthood. It frequently affects the hip joint, and total hip replacement is the standard treatment to relieve pain and restore mobility when nonsurgical treatments no longer help.

"The surgery in this patient population, although performed by only a small number of specialized orthopedic surgeons, is life-changing for JIA patients," said Mark P. Figgie, M.D., senior author of the study and chief of the Surgical Arthritis Service at HSS. "Joint replacement can free patients from a life of unrelenting pain. It can enable those in a wheel chair to walk again. Patients can go back to school or work and get their lives back."

This study, titled, "Implant Survival and Patient-Reported Outcomes After Total Hip Arthroplasty in JIA Patients Under the Age of 35" evaluated the longevity of implants in juvenile arthritis patients ages 35 or younger who underwent hip replacement at Hospital for Special Surgery. Researchers also looked at long-term patient-reported outcomes after the surgery.

"This study followed one of the largest groups of JIA patients to date to see how they fared 10 years and 20 years after total hip replacement," said Ishaan Swarup, M.D., an orthopedic surgery resident at HSS. "It is also one of the few studies to look at patient-reported measures, such as pain and the ability to perform activities of daily living."

Patient characteristics and implant data were collected by a retrospective chart review and follow-up surveys were conducted. Kaplan-Meier survival analysis was performed to evaluate how long the implant lasted, and the hip disability and osteoarthritis outcome score (HOOS) was used to describe patient-reported outcomes.

Data were collected for 56 patients. Forty-one patients had undergone bilateral hip replacement, while 15 individuals had only one side replaced, for a total of 97 hip replacement surgeries. The mean time for follow-up was 12 years. The implant lasted at least 10 years in 85 percent of cases and 20 years in half of the patients who had the surgery.

The researchers found that hip replacement in patients who were 25 or older lasted longer compared to THR in younger patients. There were no other significant differences in implant longevity based on gender or the use of custom versus standard implants.

Male patients reported better outcomes with respect to activities of daily living, and patients who had received custom hip implants did worse in their reporting of pain and the ability to perform daily activities.

"We were not surprised that the patients who received custom implants had lower scores, since the very fact that they needed a custom implant meant they had more severe joint deformities and more severe disease," Dr. Figgie explained.

"We concluded that overall, hip replacement is an excellent treatment option for young JIA patients with reasonable long-term implant survival and favorable patient-reported outcomes after surgery," Dr. Swarup said.

Although a good treatment, Dr. Figgie noted that the longevity of the implants needs to be improved, especially since the patients are so young. "The next step will be to evaluate which factors affect how long the implants last and work on improving implant design and durability," he said.

Dr. Swarup noted that ongoing studies at HSS will look at hip replacement outcomes in patients under 35 with other diagnoses, as well. "Our goal is to provide a comprehensive understanding of total [hip replacement](#) in young patients," he said.

**More information:** "Implant Survival and Patient-Reported Outcomes after Total Hip Arthroplasty in JIA Patients Under the Age of 35"  
American Academy of Orthopaedic Surgeons annual meeting

Provided by Hospital for Special Surgery

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