# ✚ Evidence in focus

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Smith+Nephew

## REDAPT◊ Revision Femoral System decreases the incidence of subsidence compared to modular stems in revision total hip arthroplasty (rTHA)

## ✚ Plus points

**Significantly lower subsidence** with REDAPT stems versus modular stems (p<0.001)

**61%** **Relative reduction in subsidence >5mm with REDAPT stems versus modular stems** (11.3 vs 29.2%; p<0.001)

**REDAPT stems deliver lower levels of subsidence irrespective of Paprosky classification of femoral defect compared to modular stems (p<0.05)**

## Overview

- Retrospective, observational study comparing rates of subsidence >5mm in modular versus non-modular tapered, fluted, titanium (TFT) stems
  - Non-modular stems, n=80 (REDAPT Revision Femoral System)
  - Modular stems, n=106 (Restoration Modular, Stryker, Kalamazoo, MI; ZMR, Zimmer, Warsaw, IN; Arcos, Biomet, Warsaw, IN)
- Surgeries performed by 17 orthopaedic surgeons at a single US centre
- Radiographic follow up: 3 months to 3 years (mean, 14 months)

## Results

- Average subsidence was significantly higher with modular stems compared to REDAPT stems (3.9±2.6mm vs 2.3±2.5mm; p<0.001)
- Significantly greater proportion of modular stems underwent >5mm subsidence at latest radiographic follow-up compared to REDAPT stems (29.2 vs 11.3%, p<0.001; Figure)
- REDAPT stems had a significantly lower rate of subsidence in low grade femoral defects (6.5 vs 25.3%, p=0.0265) and high grade femoral bone defects (14.3 vs 38.7%, p=0.0124) compared to modular stems†

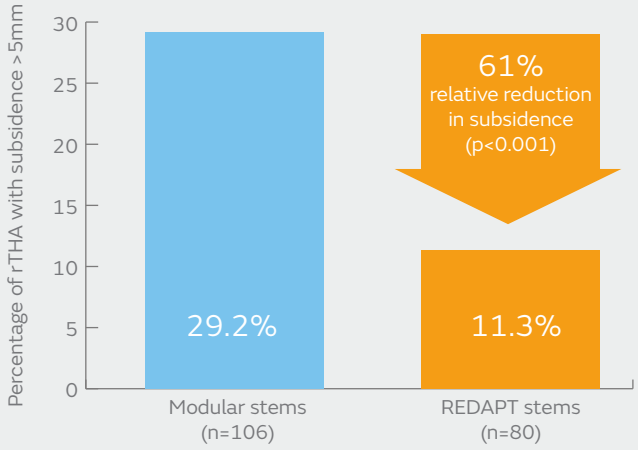


*Figure 1. Subsidence rates (>5mm) at last follow-up*

## Conclusions

REDAPT Femoral Revision System reduces the incidence of post-operative subsidence and fewer stems undergo >5mm subsidence compared to modular stems in patients undergoing rTHA. The authors note that the modular trials for the REDAPT stem help maintain the surgeons' ability to achieve the ideal leg length, offset, and version without sacrifice through an individualised implant.

### Citation

*Clair AJ, Gabor JA, Patel K, Friedlander S, Deshmukh AJ, Schwarzkopf R. Subsidence following revision total hip arthroplasty using modular and monolithic components. *J Arthroplasty*. 2020;35:S299-S303.
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†Low grade femoral bone defects defined as Paprosky I and II; high grade femoral bone defects defined as Paprosky IIIA, IIIB, and IV.

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