

## Impact of hip precautions on fear and functional outcomes in patients undergoing total hip arthroplasty: A Randomized Controlled Study

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**INTRODUCTION:** Hip precautions are routinely prescribed after total hip arthroplasty (THA) to promote healing and prevent dislocation. However, its impact on patient-reported outcomes remains unclear. This study aims to evaluate the effects of hip precautions on kinesiophobia, function, and health-related quality of life (HRQoL) in patients undergoing THA.

**METHODS:** We conducted a single-blind randomized controlled trial, recruiting participants undergoing unilateral primary THA for osteoarthritis or osteonecrosis via the anterior approach. Subjects were randomly allocated to receive standard hip precautions or no hip precautions. The Oxford Hip Score (OHS), Tampa Scale for Kinesiophobia, Forgotten Joint Score (FJS), and EQ-5D-5L score were recorded preoperatively, six weeks, and six months postoperatively. The primary analysis was performed using repeated measures ANOVA. Based on a minimal clinically important difference of 5 points in the OHS, an alpha level of 0.05, and a power of 80%, 46 participants per group were calculated as necessary.

**RESULTS SECTION.** Ninety-nine participants were randomized into two groups: Precautions (n=52, mean age 63.1 years, 44% female) and No Precautions (n=47, mean age 67.8 years, 43% female). Within 90 days post surgery, two patients (4%) in the Precautions group returned to the emergency department due to swelling and urinary retention, and four patients (9%) in the No Precautions group returned due to urinary retention, nausea, stitch abscess, and dislocation. No statistically significant differences were found between groups in OHS (P=0.56), Tampa Scale for Kinesiophobia (P=0.46), FJS (P=0.93), and EQ-5D-5L (P=0.18) at six weeks and six months. Although not statistically significant, the No Precautions group had a slightly higher mean OHS at six months and a higher mean FJS at six weeks and six months.

**DISCUSSION:** Across validated measures of function, joint awareness, kinesiophobia, and HRQoL at six weeks and six months, hip precautions did not confer a measurable benefit after anterior approach THA. The direction of effect favored no precautions on several outcomes, though differences were not significant. These findings, together with very low early complication rates in both groups, suggest that routine precautions may be unnecessary for most anterior approach patients. Main limitations include single-approach enrollment and sample size powered for OHS rather than rarer adverse events.

**SIGNIFICANCE/CLINICAL RELEVANCE:** In anterior approach THA, omitting routine hip precautions did not worsen function or HRQoL and may support earlier return to normal activities. Programs can consider simplifying postoperative instructions without compromising outcomes.