

## **Minimization Of Movement Restrictions After Total Hip Arthroplasty Does Not Increase Hip Dislocations.**

### **A Before-And-After Study With 10357 Patients.**

Orthopaedics / Pelvis, Hip & Femur / Joint Replacement - Primary

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#### **Background**

Dislocation of the hip is the main reason for early revision after total hip arthroplasty (THA). Movement restrictions can be prescribed to patients after THA to prevent early hip dislocation as a result of mobilisation. These restrictions can be uncomfortable and limiting for patients and are associated with a delay in returning to normal activity. Evidence that supports the effectiveness of these movement restrictions in preventing dislocation is limited. As a result, several hospitals have minimised movement restrictions for patients after THA.

#### **Objectives**

The aim of this study was to investigate whether the minimisation of movement restrictions after THA has resulted in an increased incidence of early hip dislocations. Secondary objectives were to study the effect of minimising movement restrictions on pain, patient reported hip function, and quality of life.

#### **Study Design & Methods**

In this multi-centre, before-and-after study, two groups were compared retrospectively. Patients in the first group (n = 7414) were prescribed strict movement restrictions and patients in the second group (n = 2943) were prescribed minimal movement restrictions after THA. Patients with a THA between 1-1-2015 and 31-3-2020 were included. Patient and prostheses characteristics were collected, as well as hip dislocations within 90 days after THA as a primary outcome. Secondary outcomes were pain, hip function and quality of life, measured with a Numeric Rating Scale (NRS), the Hip Outcome Score-Physical function Short (HOOS-PS) and EuroQoL 5 Dimension (EQ-5D) respectively at three months post-surgery.

#### **Results**

The rate of early hip dislocations within 90 days after THA was not significantly different in the two groups, with 112/7409 (1.51%) dislocations in the restricted group and 52/2943 (1.77%) dislocations in the group who received minimal movement restrictions (p = 0.348). No significant differences between the two groups were observed in NRS pain at rest (p = 0.163), HOOS-PS (p = 0.438), and EQ-5D thermometer (p = 0.437). EQ-5D utility score (p = 0.003) and NRS pain at weight-bearing (p = 0.029) were significantly better in the movement restrictions group but differences were small and not clinically relevant.

#### **Conclusions**

Changing to minimal movement restrictions does not increase the rate of early hip dislocations after THA.