

# Gluteal Tendinopathy Negatively Impacts Outcomes of Total Hip Arthroplasty

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## Introduction:

A common cause of hip pain is tendinosis or tear of the gluteus medius and minimus tendons of the hip. The aim of this study was to examine the relationship between GT and patient reported outcomes (PROM) before and after total hip arthroplasty (THA). The hypothesis was that subjects undergoing THA with GT would have worse Hip dysfunction and Osteoarthritis Outcome Score (HOOS), compared to those without GT.

## Methods:

Consecutive patients undergoing primary THA for osteoarthritis via a posterior approach over 5 years were recruited in a prospective study. Gluteal tendinopathy was assessed and graded at the time of surgery, but not repaired. A total of 1,538 (93%) completed the patient-reported outcome measures (PROMs) at 1 year after surgery and were included in the analysis. The PROMs included the Oxford Hip Score (OHS), Hip Disability and Osteoarthritis Outcome Score Joint Replacement (HOOS JR), and EuroQol 5-Dimension, and were collected preoperatively and one year after THA.

## Results:

The gluteal tendons were graded as 4 distinct grades: normal, 66%, tendinopathy but no tear 22%, partial thickness tear 9%, and full thickness tear 3%. The occurrence of GT was associated with age, body mass index, and sex. There was no significant difference in baseline OHS or HOOS JR scores according to GT grade. As GT grade increased, lower median 1-year OHS ( $p=.001$ ) and HOOS JR ( $p=.016$ ) were observed (Fig 2). This association was confirmed by linear regression analysis with 1-year OHS ( $B=0.5$ , 95% CI  $-0.9$  to  $-0.1$ ,  $P$

$=.011$ ) when controlled for age and sex. A clear negative trend was shown in the prevalence of subjects reporting that they were very satisfied with the outcome of their surgery in relation to decreasing GT grade ( $p=.016$ ) (Fig 4).

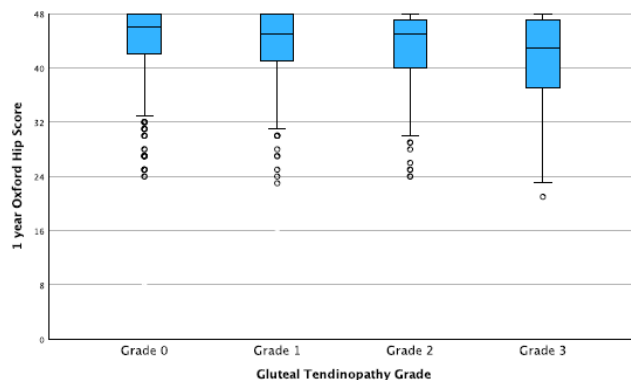


Fig. 2. Oxford Hip Scores at 1 year by Gluteal Tendon Grade. As Gluteal Tendon Grade increased, lower mean and median OHS ( $P = .001$ ) were observed. OHS, Oxford Hip Score.

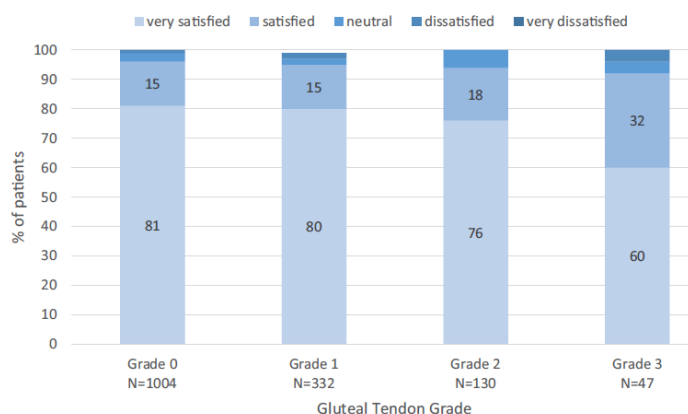


Fig. 4. Satisfaction with surgery by Gluteal Tendon Grade.

## Conclusions:

This study demonstrated that GT is commonly observed and is associated with inferior 1-year postoperative PROMs in patients undergoing THA for OA. An increasing degree of tendinopathy was a negative prognostic factor for functional outcomes and overall patient satisfaction.

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