Leiden University Medical Center

LOAS
Longitudinal Leiden Orthopaedics
Outcomes of Osteo-Arthritis Study

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Adherence to the Dutch recommendation for physical activity
Prior to and after primary total hip and knee arthroplasty

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Background

Physical activity(PA) has many benefits, especially in patients with osteoarthritis (OA). OA patients often have difficulties maintaining sufficient PA-level due to:
- Pain
- Functional limitations

Patients have the ability to become more active after total hip/knee arthroplasty (THA/TKA)

Objectives

1) Describe the course of self-reported adherence to the Dutch PA-recommendation in THA/TKA patients
2) Identify predictors for non-adherence to the Dutch PA-recommendation 12 months after arthroplasty

Methods

Population: Ongoing cohort study (LOAS) including OA patients scheduled for THA/TKA in 8 hospitals

Collected patient characteristics and PROMs

Dutch physical activity guideline:
Adults: ≥30 minutes of moderate intensity PA/day, ≥5 days/week

- **Prior to surgery**

Postoperative:
- **6 months**
- **12 months**

Statistical analysis:
1. Adherence over time to the PA-recommendation
2. Multivariable logistic regression to identify predictors
(Stratified by preoperative adherence)

Conclusion

- Preoperative adherence: 50%
- Adherence at 12 months: 59%
- PA-level at 12 months ↓: 22%
- PA-level at 12 months ↑: 40%

Non-adherence at 6 months was highly predictive for non-adherence at 12.

Take home message: Highlighting the impact of PA on health benefits is especially important in non-adhering patients at 6 months.
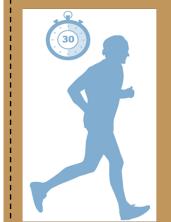
Results

Strongest predictor for non-adherence at 12 months:
Non-adherence at 6 months postoperative (OR range: 0.16-0.29)

Lower score on 1 of the HOOS domains at 6 months:
THA preoperative adherers: Pain (OR=0.99)
THA preoperative non-adherers: Daily living (OR=0.99)
Lower score on 1 of the KOOS domains at 6 months:
TKA preoperative adherers: Quality of life (OR=0.99)
TKA preoperative non-adherers: Daily living (OR=0.99)

Hip (n=1005)

Preoperative Adherers (n=497)	6 months	12 months
Adherers (=)	388 (78%)	386 (78%)
Non-adherers (↓)	109 (22%)	111 (22%)

Preoperative Non-adherers (n=508)	6 months	12 months
Adherers (↑)	207 (41%)	204 (40%)
Non-adherers (=)	301 (59%)	304 (60%)

Knee (n=972)

Preoperative adherers (n=465)	6 months	12 months
Adherers (=)	345 (74%)	365 (78%)
Non-adherers (↓)	120 (26%)	100 (22%)

Preoperative Non-adherers (n=507)	6 months	12 months
Adherers (↑)	220 (43%)	206 (41%)
Non-adherers (=)	287 (57%)	301 (59%)

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