

## **Clinical Profile and Disability Levels of Younger vs. Older TKR and THR Patients in a National Research Consortium**

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### **Introduction:**

A growing number of patients under 65 years old undergo total knee replacement (TKR) and total hip replacement (THR).<sup>1</sup> This trend has raised concerns that younger patients may receive surgery prematurely. We examined demographic and clinical factors in younger versus older patients in a national sample of TKR and THR patients.

### **Methods:**

Patients undergoing primary TKR and THR from 7/1/11 through 12/03/12 were identified from a national research consortium that gathers demographics, comorbid conditions (Charlson Comorbidity Index), Short Form 36 Physical Component Score (PCS) and Mental Component Score (MCS), burden of musculoskeletal disease using the Knee injury and Osteoarthritis Outcome Score (KOOS) or the Hip injury and Osteoarthritis Outcome Score (HOOS) and the Oswestry Low Back Pain Disability Questionnaire. Descriptive statistics were performed.

### **Results:**

TKR patients included 1326 younger (<65) and 1988 older (≥65) patients. Younger patients were more likely nonwhite (13.6% vs. 7.3%) and Hispanic/Latino (3.3% vs. 2.2%), with worse functional impairment as measured by the PCS (32.14 vs. 33.0). Younger patients had fewer comorbid conditions, but were heavier (mean BMI 33.0 vs. 30.5), smokers (9.4% vs. 2.6%), with worse mental health (mean MCS 49.1 vs. 52.4).

THR patients included 1175 younger (<65) and 1245 older (≥65) patients. Younger patients were more likely nonwhite (12.1% vs. 6%) and Hispanic/Latino (2.2% vs. 0.8%). Both had substantial functional impairment with PCS of 31.2 and 31.4. Younger patients reported greater operative hip joint pain and stiffness. Younger patients had fewer comorbid conditions but were heavier (mean BMI 29.8 vs. 28.5), smokers (13.1% vs. 3.0%), with worse mental health (mean MCS 48.4 vs. 51.5).

**Conclusion:** Younger patients have fewer medical illnesses at the time of TKR or THR, but have greater functional impairment and higher rates of obesity and smoking as well as lower mental health scores.

1. Kurtz, S. M., Lau, E., Ong, K., Zhao, K., Kelly, M., & Bozic, K. J. (2009). Future young patient demand for primary and revision joint replacement: National projections from 2010 to 2030. *Clinical Orthopaedics and Related research*. 467(10):2606-12.