

## Are Patient Reported Allergies a Risk Factor for Poor Outcomes in Total Hip and Knee Arthroplasty?

**Christopher M. Graves, MD,** Jesse E. Otero, MD, PhD, Melissa Willenborg, MD, Yubo Gao, PhD, Steve Liu, MD, Devon Goetz, MD, Richard C. Johnston, MD, MS, John J. Callaghan, MD

**Introduction:** Patient reported dissatisfaction rates following elective TKA and THA range from 14 to 28%. Government organizations and insurers are considering payments to hospitals and surgeons based on patient reported satisfaction. Numerous investigators are researching the factors associated with dissatisfaction following joint replacement. The authors have hypothesized that patients with multiple reported allergies report higher rates of dissatisfaction following TKR and THR. The purpose of this study is to compare patient reported outcomes in patients with and without multiple reported allergies.

**Methods:** At the authors institution patient reported SF36 and WOMAC scores are reported preoperatively and at follow-up of THR and TKR procedures. As a study group, we evaluated 459 patients undergoing THR or TKR who completed preoperative and postoperative WOMAC and/or SF36 surveys. Medical comorbidities and reported allergies were also recorded. Evaluation of surveys was compared for patients with or without 4 or more reported allergies using ANOVA and regression analysis.

**Results:** Patients with 4 or more reported allergies had less improvement on SF36 Physical Component Score ( $\Delta$ PCS avg +4.2) than those with 0-3 allergies ( $\Delta$ PCS avg +10.0,  $p = 00002$ ). Regression analysis showed that this change was independent of self-reported comorbidities. Patients reporting 4 or more allergies also had less improvement in WOMAC function ( $\Delta$ F avg 21.4) than those with 0-3 allergies ( $\Delta$ F = 27.2  $p = 0.036$ ). Similar non significant trends occurred in SF36 mental and WOMAC pain and stiffness scores.

**Conclusion:** Patients with multiple reported allergies who undergo THR and TKR report less improvement in SF36 physical components scores and WOMAC functional scores following the procedure. Surgeons and patients should be aware of these findings and the patient subgroup with multiple allergies should be counseled as to the potential for less satisfactory outcomes than the patients without multiple allergies.

