

## Treatment Success Following Joint Arthroplasty: Defining Thresholds for the Oxford Hip and Knee Scores

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### BACKGROUND

Patient-reported outcome scores are the mainstay method for quantifying success following arthroplasty. However, it is unclear when a "successful outcome" is achieved. We calculated threshold values for the Oxford Hip and Knee Score (OHS and OKS) representing achievement of a successful treatment at 12-month follow-up.

### METHODS

Questionnaires were administered to patients undergoing total hip (THA) or knee (TKA) arthroplasty before and 12 months after surgery alongside questions assessing key aspects of treatment success. A composite success criterion was used to perform receiver operator characteristic analysis. Thresholds providing maximum sensitivity and specificity were determined for the total sample and subgroups defined by presurgery scores.

### RESULTS

Data were available for 3203 THA and 2742 TKA patients. Applying the composite treatment success criterion, 67.3% of the TKA and 77.6% of the THA sample reported treatment success. Accuracy for predicting treatment success was high for the OHS and OKS (both areas under the curve, 0.87). For the OHS, a threshold value of 37.5 points showed highest sensitivity and specificity in the total sample, while for the OKS the optimal threshold was 32.5 points. Depending on presurgery scores, optimal thresholds varied between 32.5 and 38.5 for the OHS and 28.5 and 36.5 for the OKS.

### CONCLUSION

This is the first study to apply a composite "success" anchor to the OHS and OKS to evaluate outcome following total joint arthroplasty. Notably fewer patients report a "successful outcome" using a composite outcome threshold than report being "satisfied."

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