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Effects Of Educational Weight Loss Interventions On Knee Arthroplasty For Obese Patients

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EDUCATION FOR OBESE PATIENTS UNDERGOING TKA

Abstract

Background: Obese patients (BMI > 30) with osteoarthritis undergoing total knee arthroplasty (TKA) surgery are at an increased risk for operative failure, higher pain level, lengthier recovery time, and decreased mobility post-surgery.

Objective: To analyze and synthesize existing evidence to determine the efficacy of educational weight loss interventions prior to TKA on adult obese patients' recovery time, pain level, and mobility post-surgery. Weight loss intervention education was provided to obese patients aged 35-55 years in the form of nutrition and exercise programs to encourage weight loss. The study group was compared to patients who did not receive this pre-surgical education.

Methods: Using the Preferred Reporting Items for Systemic Reviews and Meta-Analysis checklist guide, we conducted database searches for peer-reviewed literature published between 2012-2022 regarding osteoarthritis and obesity, TKA on obese adult patients, and weight loss education for obese patients prior to undergoing TKA.

Results: A total of 18 studies (17 quantitative and 1 qualitative) matching the pre-determined criteria for literature appropriate for consideration were identified and objectively evaluated. Thirteen studies did not find significant evidence supporting the hypothesis that weight loss improved TKA outcomes. Seven studies did find evidence supporting this hypothesis, but few directly correlated weight loss education as the only intervention that resulted in positive outcomes six months after TKA.

Conclusion: A majority of studies did not report evidence that weight loss education for obese patients undergoing TKA had significant effects six months post-operation on improving surgical outcomes by reducing recovery time, improving the efficacy of the prostheses, or decreasing patient pain levels post-surgery. More research is needed to determine the most effective

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interventions for long-term improvement of these outcomes among adult obese patients undergoing TKA.