

Obesity link to increased risk for orthopedic conditions and surgical complications

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Obesity affects individual patient care, the healthcare system and nearly every organ in the body. People with obesity often have other health problems, including diabetes, heart disease, certain tumors and cancers, and psychiatric disorders. However, the role of obesity in orthopaedic conditions and their treatment is less well-publicized.

According to orthopaedic surgeon William M. Mihalko, MD, PhD, of Campbell Clinic Orthopaedics in Memphis, Tenn., "obesity can accompany a multitude of comorbidities that can have a significant impact on a patient's outcome from elective orthopaedic surgery." He and his co-authors of "Obesity, Orthopaedics, and Outcomes," a study published in the November issue of the *Journal of the American Academy of Orthopaedic Surgeons (JAAOS)*, suggest that even though [patients](#) with obesity face higher surgical complication rates, orthopaedic procedures can help minimize [pain](#) and improve bone and joint function.

The Pains of Excess Weight

Obesity is a strong independent risk factor for pain. Adolescents with obesity were more likely to report musculoskeletal pain, including chronic regional pain, than their normal-weight peers. The disease nearly doubles the risk of [chronic pain](#) among the elderly—causing pain in soft-tissue structures such as tendons and ligaments, and worsening conditions such as fibromyalgia in individuals already living with constant pain in their muscles and joints.

Obesity and Osteoarthritis

Osteoarthritis (OA)—a progressive "wear and tear" disease of the joints—is frequently associated with obesity. Every pound of body weight places four to six pounds of pressure on each knee joint. Research suggests that excess weight increases pressure, or the biomechanical load, on the knees and increases the likelihood of wearing away the cushioning surface of the knee joint, resulting in the development of OA and the need for [total knee arthroplasty](#) (TKA). The need for a TKA is estimated to be at least 8.5 times higher among patients with a body mass index (BMI) greater than or equal to 30, compared with patients who have a BMI within the normal range of 18.5 to 24.9.

Obesity and Injury

In addition to the increased likelihood of wear and tear on joints, [excess weight](#) also affects injury status. The odds of sustaining musculoskeletal injuries is 15 percent higher for persons who are overweight and 48 percent higher for people who are obese, compared to persons of normal weight.

Statistically, overweight and obese children also have significantly greater odds of lower extremity injuries and pain than do children of normal weight. Back and lower extremity pain, especially of the knee and foot, are more common among children with obesity.

Pre-Surgical Considerations

"Although no upper weight limits have been established that would contra-indicate elective [orthopaedic surgery](#), every surgeon must understand the unique risks an obese patient faces and understand how to

optimize and treat each of these patients on an individual basis," says Dr. Mihalko. The study authors recommend that patients with [morbid obesity](#) (BMI of 40 or higher) be:

- advised to lose weight before total joint arthroplasty (TJA);
- offered resources for weight loss before surgery; and,
- counseled about the possible complications and inferior results that may occur if they do not lose weight.

While patients with [obesity](#) may experience slower recovery and higher risks of surgical complications that can compromise outcomes, outweighing the functional benefits of TJA in some cases, orthopaedic interventions still can provide improvements in quality of life for even super-obese patients.

Provided by American Academy of Orthopaedic Surgeons

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