CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Weight, Obesity and Joint Health

Excess weight loads joints and raises surgical risk; even modest loss can ease symptoms and improve outcomes.

Kieran Hirpara 4.0

What it is

Obesity is more than a mechanical burden on your joints. It is a systemic disease that causes profound inflammation, which can damage joint health over time. High body mass index raises your risk of wear-and-tear arthritis in your knees and hands, regardless of your metabolic health. This inflammation and extra weight can speed up the progression of arthritis, especially after injuries like meniscus tears.

Your doctor considers your body mass index when planning your care, but it is not a strict barrier to surgery. Current evidence does not support using body mass index alone to exclude you from primary total joint arthroplasty. A body mass index greater than 40 is not linked to early complications at ambulatory surgical centers. A body mass index of 45 is considered a safe cut-off for cementless total knee arthroplasty. However, the data for body mass index greater than or equal to 45 is limited, so your doctor will evaluate your specific case carefully.

Focusing on managing preexisting health conditions and custom surgical planning can help you achieve outcomes comparable to patients with normal body mass index. While obesity increases the risk of mechanical failure in some robotic-assisted knee surgeries, modern techniques have reduced many traditional risks. Concern for stiffness or reoperation should not stop you from having surgery when it is clinically needed. Your doctor will tailor the approach to your anatomy and health status to give you the best chance at a successful recovery.

Does it work?

Yes, joint replacement generally works well for patients with higher body weight. Modern surgical practices and implant designs have reduced many traditional risks. Your doctor can achieve outcomes comparable to those of patients with normal weight by managing health conditions before surgery and planning carefully. A body mass index of 45 is considered a safe cut-off for cementless knee replacement. However, sample sizes were too small to draw firm conclusions for patients with a body mass index of 45 or higher.

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Obesity is a systemic disease that affects joint health beyond just mechanical stress. It increases inflammation in the body. This does not mean you cannot have surgery. For example, obesity does not increase the risk of infection or revision surgery after shoulder replacement. It also does not increase the risk of stiffness after knee manipulation. In fact, hip arthroscopy for hip pain yields long-term improvements in obese patients that are equivalent to those in normal-weight patients.

There are some areas where evidence is limited or mixed. Current data on tibial stem extensions in knee replacement for obese patients is insufficient. We cannot routinely recommend them due to low-certainty data. Specific designs may help selected individuals, but more research is needed. High body mass index is associated with higher mechanical failure rates in robotic knee replacements. Obesity also increases the risk of revision after knee arthroscopy and unicompartmental knee replacement.

If you are considering surgery, your doctor will evaluate your specific risks. Type 2 diabetes is not an independent risk factor for reoperation when adjusted for body mass index. Semaglutide appears to be a safe alternative to bariatric surgery for weight management before hip replacement. It offers similar implant survival and complication rates. While obesity increases the risk of all-cause revisions in shoulder replacement for fractures, it does not increase infection risk in other shoulder procedures. Your doctor will use this evidence to tailor your care plan.

Is it right for you?

Your doctor likely recommends joint replacement if you have severe wear-and-tear arthritis that limits daily life. Current evidence shows that a high body mass index does not automatically rule you out. For example, a body mass index greater than 40 is not linked to early complications in ambulatory settings. A body mass index of 45 is also considered a safe cut-off for certain knee replacements. Your doctor can manage pre-existing health conditions and plan your surgery carefully to achieve outcomes similar to those with lower body weights.

Obesity affects joint health through systemic inflammation, not just mechanical stress. This means you may face specific risks depending on the procedure. Obese patients have higher rates of revision after partial knee replacements. They also face increased risks of implant loosening or instability after shoulder replacements for fractures. However, modern surgical techniques and implants have reduced many traditional risks associated with higher body weight.

If you are considering hip surgery, obesity is not linked to the need for future reoperations. Semaglutide appears to be a safe option for weight management before hip replacement, with results similar to bariatric surgery. For knee stiffness concerns, increasing obesity severity does not lead to worse outcomes after manipulation under anesthesia.

Your doctor will review your specific health profile. They will determine if you are a good candidate based on more than just your weight. This decision should be shared between you and your medical team.

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The bottom line

Your doctor can safely perform joint replacement even if your body mass index is high. A BMI up to 45 is considered a safe cutoff for knee surgery. Higher weight does not increase your risk of early complications or stiffness. You can expect outcomes similar to those with a normal weight. The most important caveat is that obesity increases inflammation in your joints. This systemic effect may influence long-term joint health beyond just mechanical stress.

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