

BMI and Orthopaedic Elective Surgery

Many patients live with health risks and comorbidities that can be improved prior to considering referral for a surgery. When exposed to the increased physiological risks of surgery, latent health conditions can lead to serious deleterious implications. Most patients with reversible risks can be optimized in preparation for surgery before or during the referral process. Some patients are challenged by risk optimization and will be considered for palliative surgery, some will not be sufficiently improved, and surgery is not appropriate.

All patients considered for surgery will require optimization of the following risk factors:

1. Medical conditions including hypertension, renal function and anaemia/low iron.
2. Chronic skin conditions including cellulitis, eczema, oedema and psoriasis
3. Smoking cessation. At a minimum, abstinence from smoking for a minimum 6 weeks prior to surgery is recommended.
4. Diabetes - HbA1C > 7.5.
5. Obesity is a major risk factor that should be considered prior to seeking a surgical referral.

Obesity Guidelines for Orthopaedic Surgery

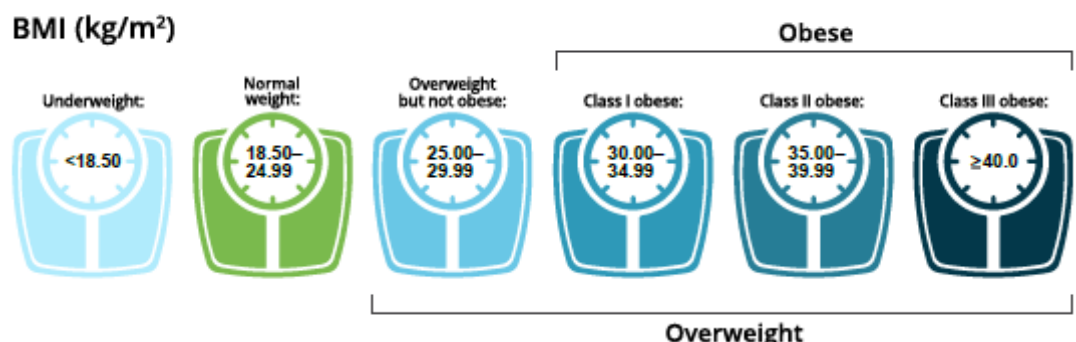
Underweight: refer as required, consider effect of medical comorbidities.

Normal and overweight: refer as required.

Obese class 1-2 (BMI 30-40): refer as required, weight optimization recommended.

Obese class 3 (BMI >40): elective surgery inappropriate. Initiate weight optimization prior to surgical referral.

Note: Persisting obesity despite weight optimization may be considered for palliative surgery in extreme circumstances.



Weight Management Options

Obese patients are more likely to achieve weight reduction with proactive intervention. Intervention is recommended for overweight patients as part of their orthopaedic management. Intervention should be initiated prior to referring patients with class 3 obesity (BMI >40). The following services may be considered;

1. GP Management Plan with Team Care Arrangement (TCA) for EP, physio or dietitian
2. GP Group Allied Health Services for 9 sessions for patients with Type 2 Diabetes.
3. Country Patients: NJF Wellness have contact details for GP on 1300890507 admins@njfwellness.com.au
4. Get Healthy Information and Coaching Services. Free Information and telephone based coaching service for lifestyle choices. <https://www.gethealthy.sa.gov.au>
5. **Reboot Your Life: Living Well with Arthritis.** Free 10-week online program for people over 50 living in regional SA with arthritis. <https://arthritissa.org.au/services/reboot-your-life/>
6. **Arthritis SA hydrotherapy or MOTUM classes.** <https://arthritissa.org.au/services/>
7. **Heart Foundation Walking** – free walking groups within communities. <https://walking.heartfoundation.org.au/>
8. **HEAL** (Healthy Eating Activity & Lifestyle) program. Free 8 week program. Check with local council or Adelaide Primary Health Network
9. Centre for Activity in Ageing. Exercise physiologist running low cost Metabolic Group program. 207-235 Hampstead Rd Lightview. Ph: 82221891
10. **Strength for Life** which is subsidized by COTA (Council of the Aging), is for those over 50 and is a group exercise program at \$7 session and \$8 for <https://www.cotasa.org.au/Programs/life/default.aspx>
11. Weight watchers
12. Gyms: ACH & ECH <https://achgroup.org.au/health-and-wellbeing/exercise-groups/>
<https://www.ech.asn.au/en/wellness/flexible-fitness/>

Life Expectancy and Obesity

Obesity is associated with increased all-cause mortality with hazard ratios of 1.44 for class-1, 1.88 for class-2 and 2.51 for class-3 indicating morbidly obese patients have an increased mortality of 2.5 times people of healthy weight. (1)

Obese patients do not lose weight following joint replacement surgery and most have a non-significant increase in weight following surgery. (2,3) It can be assumed surgery has no benefit on weight-related medical conditions. (4) Combination bariatric surgery followed by arthroplasty surgery has been described in small numbers with persisting weight loss. (5)

Surgical Risk in Obese Patients

Obese patients have more infections and medical complications compared with non-obese patients. Complications increase as the BMI categories increase. Patients with a BMI >40 kg/m² have longer operating times, length of stay, higher rates of readmissions, reoperations, deep venous thrombosis, renal insufficiency, superficial infections, deep infections, and wound dehiscence. (17)

Post-operative infections are exponentially increased with BMI. Morbidly obese patients have 3.3 to 9.0 times higher prevalence of deep prosthetic infections. (18-21) Wound complications

are similarly increased. The Australian Joint Replacement Registry (22) has identified obesity as an independent risk of implant failure with 2.47 times increased risk of hip revision and 1.47 times knee revisions after two years in patients with morbid obesity. This increased failure rate is comparable to results seen with implants of inferior performance that are identified and not recommended for use. There are few long-term studies in morbidly obese patients but radiolucent lines, inferior implant survival and ligament damage are reported with increased frequency.

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