

# **Nutritional Management for Obese ESRD Patients Planning to Undergo Bariatric Surgery Prior to Kidney Transplantation**

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[Supplemental Video](#)

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**Background:** Patients with obesity and ESRD may undergo bariatric surgery to decrease complication rates during kidney transplantation (KT). Nutritional management for these patients may be complex; however, literature lacks specific guidelines to address these issues. A literature search was conducted to create a dietetic practice supporting recent evidence for patients undergoing bariatric surgery prior to kidney transplantation. Here, we present our recommendations.

**Methods:** Utilizing the Preferred Reporting Items for Systematic Review and Meta-Analyses guidelines, the authors reviewed all English language articles written between 2000-2021 in PubMed, Ovid, Embase, and Web of Science, reporting original outcomes on bariatric diet for ESRD patients planning to undergo bariatric surgery prior to kidney transplantation. We recorded qualitative and quantitative outcomes of reported dietetic practices. We included case studies, cohort studies, and modeling studies but excluded literature reviews/letters/commentaries. A total of 10 studies were included.

**Results:** A total of 135 patients were included, consisting of 2 retrospective studies, 4 case studies, 3 descriptive studies, and 1 modeling study. Multiple studies suggested patients follow a three-part bariatric diet before bariatric surgery, consisting of 55-65% carbohydrates, 20-30% fat, and 10-15% protein. Patients should also try to limit their sodium and potassium intake. Two weeks prior to bariatric surgery, patients should exclusively drink high-protein fluids that are less than 200 calories and contain less than 250mg and 450 mg of sodium and potassium, respectively, per serving. To prevent hyperoxaluria post-bariatric surgery, patients should decrease oxalate and vitamin C intake before surgery. Magnesium and Calcium can decrease gastrointestinal oxalate absorption, but there are no current guidelines on calcium dosing to prevent hyperoxaluria.

**Conclusion:** We present the current nutritional guidelines for ESRD patients with obesity planning to undergo bariatric surgery prior to kidney transplantation. We present our suggestions for best dietetic practices and acknowledge the challenge of following a bariatric diet while maintaining renal precautions in these patients. Since literature presently lacks guidelines, further cohort studies may elucidate the proper management of these patients.

Learning Objectives

Upon completion of this lecture, learners should be better prepared to discuss avenues of improvement in the dietetic guidelines of patients with obesity and ESRD undergoing bariatric surgery prior to kidney transplantation. Learners should also be better prepared to analyze essential dietary components specific to ESRD patients preparing to undergo bariatric surgery prior to bariatric surgery.

#### References and Resources

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