

Nutritional deficiencies common before weight loss surgery

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Malnutrition is a known complication of weight loss surgery, but findings from a small study by researchers at Johns Hopkins show many obese people may be malnourished before they undergo the procedure.

"Our results highlight the often-overlooked paradox that abundance of food and good nutrition are not one and the same," says senior investigator Kimberley Steele, M.D., Ph.D., associate professor of surgery at the Johns Hopkins University School of Medicine.

"Overweight and [obese people](#) can suffer from [nutritional deficiencies](#), and those who care for them should be aware of it."

The results, described online Aug. 22 in the journal *Obesity Surgery*, fly in the face of the commonly held belief that reduced food consumption following bariatric, or weight loss, surgery is the main driver of nutritional deficiencies, Steele says. Because the surgery works by reducing the amount of food absorbed by the body, [patients](#) get [vitamin](#) supplements as part of their standard postoperative care. But the new findings, which reveal multiple nutritional deficiencies in more than 20 percent of patients preparing to undergo surgery, suggest that a nutritional workup should also be part of the presurgical care, the researchers say.

"Finding and correcting the problem before surgery would likely blunt or avert surgery-induced malnutrition in some patients," she concludes.

For the study, investigators performed nutritional assessments in 58

patients, ages 18 to 65, scheduled to undergo [bariatric surgery](#) at Johns Hopkins. They analyzed blood levels of vitamins A, B12, D and E, as well as iron, folate and thiamine.

One in five patients had three or more deficiencies. The most prevalent were subpar levels of iron—in 36 percent—and vitamin D, in 71 percent.

By comparison, the average rate of iron deficiency in the [general population](#) is 2 percent for men and 9 percent for women. The researchers say that an estimated 42 percent of the general population is deficient in vitamin D, adding that vitamin D deficiency is also a common metabolic aberration of obesity. Even so, the researchers say, the average vitamin D level among patients in the study was well below that seen in the average adult—17 nanograms per milliliter of blood, compared with 22 in the general population.

And because nutritional deficiencies—notably vitamin D—are believed to precipitate problems such as inflammation, higher infection risk and delayed wound healing, addressing them early on is particularly important in patients before they undergo surgery, researchers say.

"Correcting malnutrition is not only easier before [surgery](#), but it may also play a role in reducing surgical complications in the short term and improving overall health in the long run," says study first author Leigh Peterson, Ph.D., M.H.S., a nutritionist and postdoctoral research fellow at the Johns Hopkins Center for Bariatric Surgery.

The investigators point out that a well-balanced, healthy diet should also be incorporated into the presurgical consult.

"While deficiencies require carefully dosed supplementation, eating nutritious, quality food should be at the core of all dietary interventions,"

Peterson says.

Provided by Johns Hopkins University School of Medicine

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