

Warning to bariatric surgery patients: Take your supplements, for eye's sake

1 December 2014

Obese patients who have undergone bariatric surgery to shed weight should take the supplements prescribed to them to protect their eyes. Taking in too little Vitamin A, in particular, could in some cases actually cause night blindness, dry eyes, corneal ulcers, and in extreme cases total blindness. This advice comes from Rui Azevedo Guerreiro and Rui Ribeiro of the Centro Hospitalar de Lisboa Central in Portugal, who reviewed what little research there currently is on the occurrence of eye conditions following bariatric surgery. The review is published in Springer's journal *Obesity Surgery*.

Three different types of bariatric surgery are performed to help with weight loss in obese patients: restrictive (such as adjustable gastric banding and gastric sleeve), malabsorptive, and mixed procedures (including Roux-en-Y gastric bypass and biliopancreatic diversion) that combine the first two types of surgeries.

One of the drawbacks of these operations is that patients can develop nutrient deficiencies. This happens, for example, when patients vomit more often, eat less or develop food intolerances. People who have had restrictive bariatric surgery, for instance, often follow an unbalanced diet which subsequently influences their intake of the correct combination of vitamins and micronutrients. Moreover, malabsorptive and mixed bariatric surgeries decrease the surface area of the small intestine that plays an important role in the uptake of nutrients. As a result, too little vitamins and micronutrients may be absorbed properly by the body.

Nutrient deficiencies caused by bariatric surgeries can, in the mid to long term, cause eye-related complications that can affect almost every component of the optic system. It can lead to

conditions such as night blindness, ulcers, scarring and changes to the cornea, involuntary eye movement (called nystagmus), paralysis of the eye muscles (ophthalmoplegia) or dry eyes.

It is the lower intake of especially vitamins A, E, and B1 (thiamine) and copper that worry Azevedo Guerreiro and Ribeiro, as these help with the normal functioning of the eye and optic system.

Vitamin A deficiency, in particular, is linked to eye-related complications developing after bariatric surgery. However, the results of the handful of studies done on the subject is inconsistent. In general, Vitamin A deficiency and eye-related complications seem to be more prevalent after malabsorptive bariatric surgery.

"There is a risk that bariatric surgery patients, who do not take the vitamin and mineral supplements prescribed to them, could develop eye-related complications because of nutrient deficiencies," emphasizes Azevedo Guerreiro. "Such complications after bariatric surgery are not frequent, but if undetected, they can have devastating consequences for the patients."

"The real prevalence of these complications is unknown but the rarity of clinical reports that link nutrient deficiency with eye-related complications could also mean that no one is looking for such problems," adds Ribeiro.

More information: Azevedo Guerreiro, R. & Ribeiro, R. (2014). Ophthalmic Complications of Bariatric Surgery, *Obesity Surgery*, DOI: [10.1007/s11695-014-1472-y](https://doi.org/10.1007/s11695-014-1472-y)

Provided by Springer

APA citation: Warning to bariatric surgery patients: Take your supplements, for eye's sake (2014, December 1) retrieved 3 May 2015 from <http://medicalxpress.com/news/2014-12-bariatric-surgery-patients-supplements-eye.html>

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