Essentials of Health

A recent study has found that acid reducing drugs used to treat gastroesophageal reflux disease (GERD) can reduce the amount of vitamin B12 that is absorbed and may lead to a deficiency.

Acid reducing medications increase risk of B12 deficiency

Vitamin B12 insufficiency is relatively common, especially in older adults. Over time, an insufficient intake of vitamin B12 can cause an outright deficiency. Vitamin B12 deficiency, if is not corrected, may lead to serious complications such as dementia, nerve damage, anemia and other potentially irreversible conditions.

A recent study has shown that the use of the acid suppressing drugs known as proton pump inhibitors (PPIs) and histamine 2 receptor antagonists (H2RAs) suppress the production of gastric acid and may further complicate B12 malabsorption.

In this study, published in the Journal of the American Medical Association, researchers sought to examine the association between long-term exposure to these medications and vitamin B12 deficiency.

The study included 25,956 adults diagnosed over the past 4.5 years with B12 deficiency and 184,199 subjects that were not deficient. Pharmacy records were used to provide information to determine who had been prescribed PPIs or H2RAs for at least two years.

Compared to those not taking the medications, there was a 65% greater risk of a B12 deficiency among those who were taking proton pump inhibitors and a 25% greater chance of deficiency among those using the histamine 2 receptor blockers for 2 years or more. The risk of deficiency was nearly doubled in those taking the higher dosages of PPIs compared to those not using the medications. After discontinuation of the drugs, the strength of the association was lessened.

The results of this study show that previous and current gastric acid inhibitor use is associated with an increased risk of vitamin B12 deficiency. While these findings do not recommend against the appropriate use of these medications, these results should be considered when balancing the benefits and risks of using these medications. In addition, it is also advisable that the lowest effective dosage should be used.

Lam JR, Schneider JL, Zhao W, Corley DA. Proton pump inhibitor and histamine 2 receptor antagonist use and vitamin B12 deficiency. JAMA. 2013 Dec 11;310(22):2435-42. doi: 10.1001/jama.2013.280490.