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PPIs and B12 Deficiency

A large number of our residents take proton pump inhibitors – PPIs - (Pantoloc®, Tecta®, Prevacid®, etc.) for acid reflux conditions or to treat or prevent development of gastric or duodenal ulcers. Adverse effects, most notably, osteoporosis, magnesium depletion and development of *C. Difficile* are possible. Another negative outcome that has received considerable attention recently is the association of vitamin B12 deficiency with the long term use (more than two years) of PPIs.

A large retrogressive analysis in the *Journal of the American Medical Association* revealed that high dose PPIs (more than 1 ½ tablets or capsules per day) doubled the risk of developing B12 deficiency and low dose PPIs increased the risk by 63%. The authors concluded that vitamin B12 supplementation should be considered and levels should be monitored regularly. Routine supplementation with vitamin B12 1000 mcg p.o. daily is strongly recommended when metformin is prescribed

with a PPI, as metformin itself can cause B12 deficiency in 30% of treated patients.

PPI discontinuation is another option, but these drugs must be tapered very slowly if they are to be stopped. Rapid discontinuation often leads to rebound acid production and reinstatement of the PPI.

Multivites and Cataracts

Multivitamins and most other supplements are getting a bad rap in the general population these days. Those with good diets or no proven deficiencies often spend significant sums with the expectation that these products will improve their health or help them ward off disease. The majority of well designed scientific studies, however, show that there is no benefit and such money has not been well spent.

The elderly are an exception to this rule. Their nutritional status is often compromised and limited exposure to sunlight combined with multiple co-morbidities put them at increased risk of developing deficiencies.

That being said, an eleven year randomized, placebo controlled trial published in the journal *Ophthalmology* last month is of interest. Male physicians who were middle aged or older (11,497 participants) took either placebo or a vitamin/mineral

product (Centrum Silver®). Over the course of the study, those taking the vitamin were 9% less likely to develop new cataracts. Cataracts are very common, so this small reduction could save large numbers of cataract surgeries.

Stroke Deaths Down

As we look at the elderly residents in our facilities it may be difficult to believe, but mortality from strokes is down. Treatment of stroke victims is improving as well.

Back to 1900, there were 250 stroke deaths per 100,000 people in the U.S. That number improved to 60 per 100,000 in 2000 and dropped steeply over the next decade to 40 per 100,000 in 2010. Most of the improvement has been attributed to a systolic blood pressure reduction of 10 mmHg over the past 60 years. Increased use of anticoagulants, such as warfarin and now the newer agents has also played a major role. Optimal treatment clearly can make a difference in stroke prevention.

Tylenol + Alcohol

A U.S. nationwide health survey found that while moderate acetaminophen or alcohol intake alone had no impact on the kidneys, the combination could cause damage. It is prudent to limit alcohol if taking Tylenol.