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Unintended Consequences: Commonly Used Medications and the Depletion of Important Nutrients

Recently, I was waiting to meet my wife for lunch. I stood on a drive way, which, with the benefit of a culvert, crossed a ditch. As I waited, I looked at the plastic culvert and wondered how strong it was. I wondered if I stepped on the edge of it, whether it would support my weight. I was tempted to try but realized that if it didn't, I could find myself face down in the ditch, which was not dry.

My intention, if I had taken the step, would simply have been to have found out how strong the culvert was. The unintended consequences could have been the inconvenience of getting my clothes dirty, or worse actually being injured. Frequently, in life, the unintended consequences of our actions are the most significant results. Many are in prison today because of unintended consequences. They didn't intend to hurt someone but it happened. Many young people didn't intend to have an accident but it happened because they initiated an action which resulted in something which was unintentional.

Once we initiate an action, we often cannot control all of the results. Perhaps, one of the principle benefits of maturing is to begin to anticipate unintended consequences and to avoid the negative results of inappropriate or risky behavior.

No where are unintended consequences more important than in your health. In fact, one of the major issues in healthcare delivery is to eliminate or minimize unintended negative consequences of actions which are intended to help, but which actually end up hurting. That is one of the reasons why every insert in a pharmaceutical package starts with the warning, the potential benefits of this medication must be weighed against the potential complications. Even aspirin has unintended consequences, and must be taken with proper precautions.

Almost everything we do in life, which has benefit, has the potential of harm. It is upon the balance between good and bad results we must make decisions. This is true when we take very good medications, but which, while they benefit us, they also can cause unintended problems.

The following is a discussion of a number of very good medications, all of which save lives, but each of which also causes depletion of or the inactivation of important chemical reactions in our bodies. It is possible to counteract the negative effects of these medications, while gaining their therapeutic benefit by:

- Knowing what their negative effects are.
- Supplementing our diet to allow the body to benefit from their pharmacologic effects while avoiding their negative effects.

Everything is not known about these interactions, but in the coming years, we will see more and more information on what we are discussing. It can truthfully be said that a great deal of 21st Century medicine is going to be nutritional and nutraceutacal.

Do the Prescriptions You Take Deplete Your Nutritional Status?

The answer is clearly many do. Read the following and see if you are taking medications which would require you to supplement your diet with vitamins, minerals and/or other nutrients (nutraceuticals) which are beneficial to your body but which are depleted by your medicines (pharmaceuticals).

Antacids these medications decrease the acid production in the stomach. While we now know that the overwhelming majority of ulcers are not due to acid but to infection with a organism called Helicobacter Pylori, antacids are still an important part of the treatment of reflux, a condition where acid irritates the lining of the esophagus and can cause severe health problems, including, in the extreme case, cancer.

The H2 receptor blockers Pepcid, Tagemet, Axid and Zantac interfere with the absorption of the Vitamins B12, Folic Acid, and Vitamin D, and also with the absorption of the minerals Calcium and Zinc.

Another class of drugs used in the treatment of gastroesophageal reflux (GERD) is proton pump inhibitors. Two drugs in this class are Prevacid and Prilosec both of which interfere with the absorption of Vitamin B12.

Antibiotics these medications are commonly prescribed for the treatment of infections. They may be the most over prescribed class of medications. A class of antibiotics known as Amino glycosides, which include Gentamycin, Neomycin and Streptomycin, along with two other classes of antibiotics, Cephalosporins and Penicillins, interfere with the absorption of most of the B vitamins (biotin, folic acid, pantothenic acid, B1,B2, B6, etc), and Vitamin K. Antibiotics also destroy beneficial intestinal bacteria which are important in many biochemical functions.

Another class of antibiotics which are commonly used for conditions such as acne and skin and lung infections is the Tetracyclines. Tretracyclines cause a decrease of absorption of the minerals Calcium, Zinc, Magnesium, and Iron, as well as the B vitamins B12 and Folic Acid.

Anti-Diabetic Drugs these life-saving drugs help those who have Type II Diabetes live successfully with their illness. The drugs Dymelor, Micronase, Tolinase are such drugs, but they interfere with the Coenzyme Q10, which is very important in helping the body deal with the free radicals produced by normal body functions and by the adding stress and effects of diabetes.

Another, anti-diabetic drug, Glucophage, which is very commonly and appropriately prescribed

also interferes with the function of Coenzyme Q10 but also depletes the body of the B Vitamins B12, and Folic acid.

Antidepressants a number of commonly used and very beneficial antidepressants, including Adapin, Aventyl, Elavil, Tofranil, Pamelor, Sinequan, and Norpramin, deplete the body of Vitamin B12 and Coenzyme Q10.

Anti-Inflammatories -- Aspirin and salicylates are so commonly used we rarely think of them as causing problems but they interfere with the body s absorption of and/or deplete the body of the Vitamins C and Folic Acid and of the minerals Iron and Potassium.

Another class of commonly prescribed and/or used over-the-counter anti-inflammatories are the non-steroidal anti-inflammatories (NSAIDs), which include Advil, Aleve, Anaprox, Dolobid, Feldene, Lodine, Motrin, Naprosyn, and Relefen, all deplete the body of Folic Acid.

Another group of anti-inflammatories which are used for severe conditions of arthritis, allergy or respiratory illnesses such as Asthma, include the drugs Betamethasone, Cortisone, Dexemethasone, Hydrocortisone, Methylprednisolone, and Prednisone. These are powerful and life-saving drugs when used properly but they also deplete the body of Vitamin C, Folic Acid, Calcium, Magnesium, Potassium, Selenium, and Zinc. Often the beneficial effects of these drugs are minimized by the unrecognized secondary negative effects.

Cardiovascular Drugs a number of drugs used for hypertension, CHF and other chronic heart conditions are also life-saving but with deleterious secondary effects. Apresoline causes the depletion of the body's Vitamin B6 and Coenzyme Q10, as do Catapres and Aldomet. Other cardiac medications such as Corgard, Inderal, Lopressor, Betapac, Tenormin, Sectral, and Blocadren not only affect Coenzyme Q10, but also the important antioxidant, Melatonin.

Diuretics Fluid pills are commonly used, among which are Lasix, Bumex, and Edecrin. These drugs deplete the body of Vitamins B1, B6 and C and also the minerals, Magnesium, Calcium, Potassium, Zinc, and Sodium.

Other diuretics such as Enduron, Diuril, Lozol, Zaroxolyn, and Hygroton deplete the body of the minerals Magnesium, Potassium, Zinc and, Sodium, as well as the antioxidant Coenzyme Q10.

Cholesterol Lowering Agents all of the lipid lowering agents which are called statins such as Lescol, Lipitor, Mevacor, Zocor, Crestor and Pravacol deplete the body of Coenzyme Q10. It is imperative that anyone taking a statin take a supplemental dose of Coenzyme Q10 of at least 200 mgs a day.

Another class of lipid lowering agents which includes Colestid and Questran interfere with the absorption of Vitamins A, B12, D, E, K, Beta-carotene and Folic Acid, as well as the mineral, Iron.

Hormone replacement Therapy (HRT) the hormone replacement drugs Evista, Prempro, Premarin, and Estratab deplete the body of Vitamins B2, B6, B12, C and Folic Acid, as well as

the minerals Magnesium and Zinc.

Oral Contraceptives birth control pills such as Norinyl, Ortho-Novem, Triphasil, etc deplete the body of Vitamins B2, B3, B6, B12, C and Folic Acid as well as the minerals Magnesium, Selenium and Zinc.

Summary

A quick review of the above will reveal that the most commonly affected Vitamins are: B12, and Folic Acid, making these vitamins an imperative part of a supplement regimen, if you are taking chronic medication and particularly if you are a woman taking hormone replacement therapy or oral contraceptives.

Vitamins which are depleted by fewer medications but nonetheless by very commonly prescribed medications are: Vitamins B1, B2, B3, B6, Pantothenic Acid (B5), Vitamin D, Vitamin C, Vitamin A and Vitamin K.

Minerals which are commonly depleted by commonly prescribed medications are Zinc, Magnesium, Iron Calcium and the trace mineral Selenium.

Perhaps the most important and most commonly depleted antioxidant is the Coenzyme Q10. In coming years, it, along with other nutraceuticals, will become mainstays in the treatment of many chronic conditions and that treatment will improve the general health of those who take it.

Another important but little known and rarely used antioxidant is Melatonin.

If you are looking for a reasonable supplement regimen and if you commonly and/or chronically take any of the medications listed above, this is the place to start. Remember, it is you life and it is your health.