

## Niacin: To Flush or Not to Flush

By Bryon Verhaeghe

For a long period in history there was a disease that was called pellagra. This is an Italian word that means “rough skin”. The disease includes skin problems, diarrhea, dementia and death. In 1912 the medical researcher Joseph Goldberger 1874-1929 found a substance that he named “pellagra preventive” (P-P). This substance had been isolated and purified in 1867 and called nicotinic acid. It was not until 1937 that this substance was identified as the actual pellagra preventive. It was later included in the family of Vitamins as B3 and to avoid confusion with nicotine in tobacco it became common to call it niacin.



More confusion has occurred recently with the by-product of niacin (nicotinic acid) which is niacinamide (nicotinamide). In the body niacin picks up an ammonia molecule and becomes niacinamide that is eliminated mostly in the urine. If we take niacinamide the reaction runs backward and we become tired with excessive ammonia. This ammonia is toxic to the brain and liver and from this we are told that niacin is toxic when in fact it is the more commonly used niacinamide, as often found in multi-vitamins.

Niacin is essential for most reactions in the body. In a reaction there is always a movement of electrons or electrical energy. Niacin works by transporting a hydrogen in one direction and an electron in the opposite direction. This electrical movement is necessary for all biologic activity; life. Calcium pushes electrons away from it and the movement of electrons tends to mobilize calcium. This mobilization of calcium allows the surface membranes in our body to function. These membranes include the nerves. A lack of niacin is associated with dementia. The movement of calcium also helps to prevent osteoporosis.

Along with moving molecules along the surface of membranes such as the nerves, the calcium channels of the membranes are affected. One group of the blood pressure medications are calcium channel blockers. These are somewhat selective to particular membranes in the body and slow down nerve function to result in a slowing of the heart. In 1987 sales of calcium channel blockers in the U.S. was approximately \$700 million. By 1992 they were \$3 billion. The top sellers are; Nifedipine (Procardia), diltiazem (Cardizem), and verapamil (Calan). In Canada— Adalat, Apo-Diltiaz, Apo-Nifed, Apo-Verap, Cardizem, Isoptin, Nimotop, Norvasc, Novo-Diltazem, Novo-Nifedin, Novo-Veramil, Nu-Diltiaz, Nu-Nifed, Nu-Verap, Plendil, Renedil, Sibelium, Verelan.

Calcium channel blockers are associated with dementia.

Another medical manipulation of calcium movement is with the popular heartburn medications. By mobilizing calcium around the digestive tract the body increases production of stomach acids. These acids are essential for digestion and when they are low we become slightly malnourished and tend to need supplemental digestive enzymes. The prolonged use of acid pump inhibitors such as the drugs in this class; Esomeprazole (Nexium), Lansoprazole (Prevacid), Omeprazole (Prilosec), Pantoprazole (Protonix), Rabeprazole (Aciphex) has been linked with death in the hospital from bacteria that should have been killed in the stomach acids escaping into the bowel.

When niacin opens up the calcium channels the immune compliment is allowed to pass through the membrane. These membranes are found throughout the body and act as barriers to the spread of bacteria, viruses and fungi (yeast). We experience a movement of blood and immune compliment into the skin when we take niacin. This is the flushing and warming of the skin. After a couple of weeks this subsides and it takes an increased dose to achieve this again. Think of the niacin going through layers in the body like those around an onion. If we take a low dose we will stay with improvement to health only at the surface. When we clean up the outer layer we need to take more to get deeper. As we go deeper we detoxify, clean and repair tissues in every part of the body.

One thing that everyone notices is that their skin begins to improve. This is the opposite of rough skin “pellagra” and what begins to happen is the disappearance of the dark “age spots” that we sometimes call liver spots. The skin is the immune system on the outside and the liver is the immune system on the inside and they mirror each other. As the dark, hyper-pigmented areas clear you can be sure that your liver is improving.



Example of liver spots or 'age spots'

With the improvement of the liver there is also an improvement in DNA. Broken DNA is repaired by niacin and low levels of niacin are associated with all cancers. Along with the cellular repair we have improved bone marrow function. The bone marrow produces our immune cells called white blood cells. When the white blood cells are low we are anemic and pale looking. Niacin corrects this condition.

Niacin is also related to dementia diseases. Some work has been done in relationship with manic depression, mood disorders and schizophrenia. In this work, low levels are associated with the onset of the disease and supplementation has been noted to reverse the condition.

The main vitamin in coffee is niacin. Men who consume six or more cups of coffee per day have a 54% lower rate of diabetes. A mug of coffee is a few cups. This study was done by following 125,000 people between 12 to 18 years. The Parkinson's disease study was done at the University of Honolulu in Hawaii where they followed 770,000 veterans over long periods and found that the more coffee consumed, the lower the rate of this disease.



One of the first signs of pellagra, or niacin deficiency, is the skin's sensitivity to light. The skin becomes rough, thick, and dry. The skin then becomes darkly pigmented, especially in areas of the body prone to be hot and sweaty, or those exposed to sun. The first stage of this condition is extreme redness and sensitivity of those exposed areas, and it was from this symptom that the term "redneck," describing the bright red necks of eighteenth and nineteenth-century niacin-deficient fieldworkers, came into being.

It is ironic that taking niacin produces red skin. Many people are panicked by this and refuse to take anymore. I spend much time convincing people that niacin is safe. Niacin, but not niacinamide, is safe. It has been used with benefit and safety in medicine for over thirty years.

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