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Overlooked Anti-Microbials (Part 2)

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October 2009

Special Report

Volume 5 : Issue 10

VIRAL RESISTANCE

A number of nutrients have profound influence upon ability to resist viral infections. The primary foundation of the understanding of immunity is that the better and more complete the nutrition the less likely people or animals are to become ill.

Secondarily, there are specific nutrients which have profound impact on disease resistance. Lack of these can result in immune collapse. Generous supply of these nutrients can allow an individual to become almost invulnerable to bacterial or viral attack. The previous newsletter focused on vitamin D and vitamin C as cornerstones of resistance to viral and bacterial attack.

Vitamin D appears to be of particular importance in prevention of the flu. The flu is a seasonal disease, but researchers have found that supplementation with 2,000 IU of vitamin D will abolish the seasonality of the flu. Because excess vitamin D can be toxic it is a good idea to find the blood level of this nutrient. Optimal for prevention of disease is probably between 40-60 ng/ml. Over half the population falls below this level. You will find a link to a chart at the end of this introduction which shows the relationship between reduced incidence of a number of common diseases and blood levels of vitamin D. For example, a blood vitamin D level of 50 ng/ml is associated with an

83% reduction in risk of breast cancer. Not only does vitamin D appear to reduce the risk of influenza, but it also decreases risk of a number of cancers including breast, colon, ovarian, kidney, endometrial and Non-Hodgkins lymphoma. It also decreases risk of type 1 diabetes, fractures, multiple sclerosis, and heart attack.

This newsletter focuses on the importance of carotenoids, vitamin A and iodine. I have also included a discussion of silver. While not an essential nutrient, silver does have pronounced antibacterial and antiviral properties and under the proper circumstances its use can be life-saving.

REFERENCE:

http://www.grassrootshealth.net/media/download/disease_incidence_prev_chart_101608.pdf

IODINE AND IMMUNE FUNCTION

I first read of the importance of iodine in the work of Dr. John Meyers who found that this nutrient is essential for the health of the mucous membranes in the mouth and vagina. Iodine could make the dif-

ference between a sticky, thick mucous and a flowing limpid mucous.

Meyers found that infectious mononucleosis often responded remarkably to supplementation with iodine.

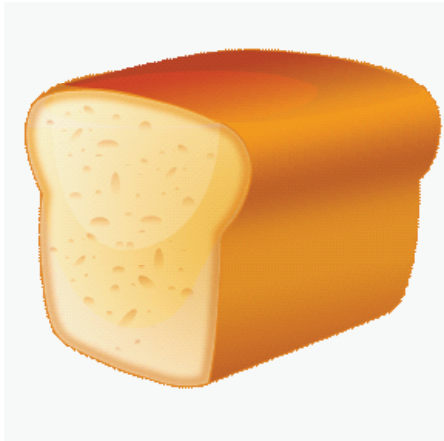
While alcohol has little effect upon viruses, they are rapidly inactivated by iodine. "Iodine is the most effective broad-spectrum antiseptic with low toxicity." (Derry) Iodine solutions of one part per million have demonstrated viral inactivation. Aerosols containing iodine inactivate many viruses within 30 seconds.

Ingested iodine in foods or supplements is taken up by most body tissues. The thyroid glands are iodine hogs and seize what they need in order to produce thyroid hormone.

A second tier of tissues also attempts to seize iodine and to use it for its antimicrobial properties. These tissues include the salivary glands, nasal mucous membranes, mucous membranes of the stomach, and the lungs. Free iodine is released into the mucous secretions of the body and functions as a natural antibacterial and antiviral barrier.

A daily intake of over 3 mg of iodine a day will usually saturate the thyroid gland. Surplus iodine then tends to be picked up by mucous in the respiratory and gastrointestinal tracts. Viruses and bacteria become trapped in this mucous and are then easily killed by the free iodine. Viruses and bacteria have not shown





development of resistance to iodine.

IODINE ANTAGONISTS

Iodine is antagonized by bromide, chloride, and fluoride. Large quantities of these substances are found in the environment often making it difficult to obtain optimal iodine nutrition.

Iodine was used as a dough conditioner in the 1960's and 1970's, but was replaced by bromine which is an iodine antagonist in the 1980's. Brominated oils are added to many beverages in order to prevent a ring from forming at the top of the beverage.

Fluoride is commonly added to water to prevent tooth decay. Foods processed in areas with fluoridated water tend to have a high fluoride content as well.

BROMINE

Bromine lies just above iodine on the periodic table of elements. Because it has similar size and shape it has a tendency to bind to the iodine receptors in the body. This may explain some of the toxicity of this substance.

Bromine toxicity is called bromism. It is characterized by delirium, schizophrenia and hallucination. Excesses of bromine can make a person feel dull and apathetic and make concentration difficult. The level of bromine intake necessary to create a toxic reaction is not clear, and probably varies with an individual's iodine status.

Bromine is used as an antibacterial in pools and hot tubs. It is used as a

toxic fumigant in agriculture and as a pesticide to rid dwellings of termites and other pests. Brominated vegetable oils are used in beverages to prevent the formation of a ring around the top of a can or bottle. It is found in a number of medications. Bromine has also replaced iodine as a dough conditioner in white flour. Increasing iodine intake has been shown to promote the excretion of bromine from the body.

Iodine is often added to table salt. The iodine in table salt is often adequate to prevent goiter. A good quality salt is generally not harmful if used in moderation. Salt has actually been shown to reduce bromine toxicity and a low salt diet can increase bromine toxicity. Other forms of chloride in the diet may not be so benign. For example, chlorine is found in Splenda, an artificial sweetener. Many question the safety of this artificial sweetener.

Nitrates also interfere with iodine metabolism. The nitrates from fertilizers and those added to foods as preservatives can interfere with the transport of iodine from the blood to the thyroid and the mucous glands in the mouth, respiratory tract and digestive tract. This will tend to interfere with immune function.

OPTIMAL INTAKE

It is difficult to gauge the optimal intake of iodine for a particular individual. The Japanese have consumed about 12 mg a day for centuries and do not appear to be any the worse for it so many consider this level of intake safe and at the upper end of normal human dietary intake.

An iodine supplement called Iodoral is available which attempts to provide iodine and iodide at levels approximated by the intake of the Japanese. The best dietary source of iodine is kelp. Most multiples contain enough iodine to prevent outright deficiency of the nutrient. The amounts in multiples may not be adequate to provide optimal protection from a

serious viral or bacterial infection.

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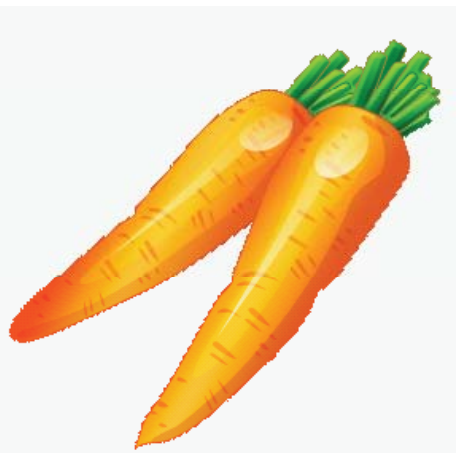
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VITAMIN A AND CAROTENOIDS

Carotenoids are the fat-soluble yellow, orange, and red, coloring pigments found in fruits and vegetables. Some of these carotenoids can be manipulated by the liver and converted into vitamin A. Carotenoids are the primary source of vitamin A in the diet of most people. Preformed vitamin A is found in only a handful of foods including liver, egg yolk, cream and butter, and cod liver oil. The vitamin A content of eggs and butter will depend upon the diet of the animals from which it comes. Cattle grazing on green grass tend to produce cream with a high vitamin A content.

Vitamin A is one of the most forgotten and overlooked nutrients with regard to overall immune function. It can be produced within the body from carotenoids, but this process of manufacture is not always efficient. In addition, if blood sugar problems exist it tends to hinder vitamin A synthesis. Altschule writes, "Is it possible that





vitamin A deficiency can arise through inadequate transformation of carotene to vitamin A?...I believe that this disorder occurs more frequently in diabetic patients than is usually recognized.”

Vitamin A is critically important for the health of the surface or epithelial tissues of the body and also for healthy mucous production. So common are infections with a deficiency of vitamin A that “some early authors gave vitamin A a specific role as a preventive of all infections.”

Lack of zinc can also interfere with the functioning of vitamin A. Altschule writes, “Low serum zinc levels are associated with the inability to mobilize liver stores of vitamin A. This may be due to a deficiency of a retinol-binding plasma protein. the vitamin deficiency may be cured by giving zinc.”

Vitamin A has been studied rather thoroughly with regard to its ability to improve immune resistance to measles. The fatality rate which can be over one percent is cut in half simply by giving children 200,000 IU of vitamin A for two consecutive days. Vitamin A appears to enhance antibody formation in animals.

Trials of vitamin A supplementation in hospitals has been shown to reduce child mortality by 20-30%. Semba notes, “Vitamin A and related retinoids have therapeutic potential as immune modulators. Immune responses regulated by retinoids include keratinization, mucin pro-

duction, hematopoiesis, apoptosis, neutrophil function, natural killer cell function, monocyte/macrophage function, Langerhans cell function, T lymphocyte function, cytotoxic T lymphocyte function, B lymphocyte function, immunoglobulin production, interleukin production, tumor necrosis factor production and phospholipase A2 production.”

Carotenoids are powerful immune boosters as well. Carotenoids have been shown to enhance lymphocyte proliferation and natural killer cells. They also function as powerful antioxidants.

Human testing on GNLD Carotenoid Complex demonstrated a 37% increase in lymphocyte proliferation within 20 days, a 20% increase in natural killer cells, and a 44% reduction in oxidative damage to cells. Both vitamin A and carotenoids offer significant immune enhancement and protection from bacterial and viral pathogens.

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SILVER AS AN ANTIMICROBIAL

Several years ago at a clinical nutrition meeting Jonathan Wright, M.D., was asked about the use of silver as an antimicrobial substance. He told the story of one of his patients

who had acquired a bacterial infection which showed resistance to all antibiotics. He administered a silver solution which eradicated the infection and saved his patient’s life. He was reticent to recommend silver as a daily supplement, however, felt that silver could be of great value as a natural antimicrobial substance.

Years ago farmers milked their cows into a silver milk pail. The silver in the pail kept the milk from souring in warm temperatures. Early Americans also threw silver dollars into their wells or water barrels to kill bacteria. Wealthy families in Europe gave their children silver spoons to suck on during plagues. This is how we get the saying, “Born with a silver spoon in one’s mouth.” Even today silver-plated Foley catheters are used to prevent urinary tract infections. Silver has also been widely used as a mechanism for purifying water. NASA chose a silver purifier to cleanse the water on the space shuttle.

Metallic silver radiates energy in very narrow wavelengths between ultra-violet “A” and ultra-violet “B”. This wavelength is quite harmful to a number of pathogens. As a result silver can function as an excellent anti-microbial.

Ultraviolet light is unquestionably a powerful antimicrobial. A double-blind study in Montreal found that use of ultraviolet radiation resulted in a 99% reduction in microbial and endotoxin concentrations within ventilation systems in buildings. The use of the ultraviolet radiation was associated with significantly fewer work-





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related symptoms as well as fewer respiratory and mucosal symptoms.

It should be noted that some air purification devices utilize ultraviolet light, ozone, or similar technologies to kill bacteria and viruses in the air. Use of these units may provide protection from bacterial and viral infections.

American Biotech Labs holds a patent on a manufacturing process which breaks silver into very fine particles greatly improving the antimicrobial activity of silver particles. The very small silver molecules (nano particles) also means that one is exposed to much lower intake of silver than one would find with other silver solutions. Smaller particles means greater surface area.

Silver replaces hydrogen atoms which supply energy to bacteria and viruses. No living organism can survive without energy. Microbes are often killed within minutes. Microbes have not shown the development of resistance to silver. Silver has been found to kill about 650 pathogens.

Many of the worst pathogens found in nature are susceptible to destruction by silver including those responsible for pneumonia, meningitis, sinus and ear infections, food poisoning,

wound infections and eye infections.

Silver is not a nutrient as far as we know so I do not recommend it as a daily supplement. On the other hand, it does have powerful antibacterial and anti-viral properties and I would prefer silver to antibiotics if I had a choice between the two.

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CONCLUSION

A scientist once remarked that some people are like a glass doll, some are like a celluloid doll, and

others are like a steel doll. When hit with a hammer one will shatter, one will bruise, and one will make a melody. Nutrition is the primary determinant of the robustness of our response to viral and bacterial infections.

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