

HEALTH NOTES by Evelyn Ames

“Flu Fighters” Which nutrients help boost immunity?

It’s a new year and a new decade! Are you off to a running start eating delicious foods that encompass colors of the rainbow? A recent article (November 25, 2009) in the health section of the Wall Street Journal highlighted vitamins and minerals that promote the body’s immunity system. Vitamins and minerals highlighted were:

- § Vitamin D (found in fortified milk and orange juice, salmon, and tuna).
- § Vitamin A (found in liver, pumpkin, spinach, carrots and other yellow fruits and veggies).
- § Vitamin C (found in red peppers, broccoli, oranges and other citrus foods).
- § Vitamin B-6 (found in potatoes, bananas, and garbanzo beans).
- § Selenium (found in brazil nuts, canned tuna in oil, and turkey).
- § Zinc (found in oysters, Alaska king crab, and pork shoulder).

Scientists in the field of nutritional immunology “are unveiling new evidence of the complex role that nutrition plays in fighting off infectious diseases like influenza. A diet rich in nutrients such as vitamin A, found in colorful fruits and vegetables, and zinc, found in seafood, nuts and whole grains, can provide the critical fuel the body needs to fight off disease, heal injuries, and survive illness when it does strike” (WSJ). Oregon State University researcher, Gombart, says that "Vitamin D won't prevent you from getting the flu, but it might allow you to mount an optimal immune response, suffer less of the effects, and resolve the infection more quickly" (WSJ).

Boosting Immunity Vitamins and minerals benefit different aspects of the immune system				
	Humoral Immunity Antibodies and proteins that bind to and neutralize infections	Barrier and Epithelial Integrity The body's physical barriers to infection, including skin, lining of the intestine and airways, and flushing effects of tears and mucus	Cell-mediated Immunity Immune cells that directly destroy bacteria, viruses and tumor cells	T-cell cytokine production Signal proteins that help immune cells communicate and be active
Vitamin A	■	■	■	■
Vitamin E	■		■	
Vitamin C		■	■	
Vitamin B-6	■	■	■	
Zinc	■	■	■	■
Selenium			■	■
Polyunsaturated fats			■	
Thiamin		■		
Iron	■		■	

Source: Anuraj Shankar, Harvard School of Public Health

Scientists still do not know the complex ways nutrients interact with the immune system but research studies do show that certain vitamins and minerals improve a person’s ability to fight off infections such as influenza. “To create immune cells to fight off a specific infection, the body has to rapidly draw nutrients from the bloodstream, says Anuraj Shankar, a researcher at the Harvard School of Public Health.” Shanker states that "If you don't have an adequate intake of vitamins and minerals, you won't be able to produce the number of immune cells you need, and the immune cells you do produce may be compromised" (WSJ).

“Aside from not smoking, the most important determinants of good health are what we eat and how active we are” (Harvard School of Public Health). Its Nutrition Source at www.hsph.harvard.edu/nutritionsource/ is designed to help people choose healthy diets. A web site at the Centers for Disease Control and Prevention (<http://www.fruitsandveggiesmatter.gov/>) is designed to help people calculate how many servings of fruits and vegetables are ideal based on calorie needs for age, gender, and activity level.

An interesting point in the WSJ was a comment about emerging and re-emerging infectious diseases worldwide. There is international concern about the vast numbers of malnourished people throughout the world. People who are

malnourished are less able to fight infections, and this enables pathogens, particularly viruses, to become more virulent. Such diseases know no borders! Also, obesity, which is becoming worldwide, “may make people more susceptible to infections like the flu. A diet heavy on processed and fast foods may be low in the vitamins and minerals important for health” (WSJ).

An interesting point in the WSJ article related to fish oil supplements and contradictory advice. On one hand, fish oil supplements (or diets of omega-3 fatty acids such as salmon, flaxseed, and walnuts) are recommended as heart healthy and as being beneficial in suppressing chronic inflammation. “But those same anti-inflammatory properties of fish oil can also suppress the immune responses necessary to combat an acute viral infection. Studies at the University of North Carolina have shown that mice fed with fish oil have an impaired resistance to infections, including the flu” (WSJ). It’s a conundrum!