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| MINERALS **Zinc**: "Zinc deficiency rapidly diminishes anti-body-and-cell-mediated responses in both humans and animals." (17) When there is a deficiency, large amounts of T and B cells are lost in bone marrow. Zinc is also involved in all new cell growth. They produce antibodies and T-cells. Zinc is one of the trace elements. Males, 11 years and older, should take 15 mg a day. Females, 11 years and older, should take 12 mg a day. Zinc is found in oysters, herring, clams, wheat germ, bran, oatmeal, liver, nuts, beef, lamb, peas, chicken, and carrots. (18)  **Selenium**: Although it is not clear why exactly Selenium is necessary for immune system efficiency, it is clear that it is. Some theories are that it helps protect prostacyclin, which in turn, promotes immune factors. It is also thought that it is a "shield for the body�s �warriors� as they douse the invading  organisms with lethal free radicals." Selenium is found in Brazil nuts, soybeans, tuna, seafood, meat and whole-grains.(19)  **Calcium**: Calcium is very important in preventing cancer because it attaches to fats and carries them out in feces. Vitamin D is essential in increasing calcium absorption. Calcium is most abundantly found in cooked bones, yogurt, turnip greens, broccoli, milk, and other dairy products. (20) Tofu and dried beans are also a great source of calcium. (21)  **Iron**: It helps in the creation of new blood when blood is lost due to illness or injury. It also helps to increase immune response. Iron is a component of hemoglobin. (22) Iron is found in pork liver, cream of wheat, clams, beef, veal, chicken, fish, spinach, asparagus, prunes, raisins, and seaweed.  **Copper**: This mineral, along with zinc, fights free radicals, which cause abnormality in cell growth. Copper helps in producing antibodies that fight infection. It is an antioxidant in the blood stream. Copper is found in shellfish, liver, cherries, nuts, cocoa, and gelatin. (23)  Other foods should be taken with serious moderation. Although in modest intake, they can be beneficial, in substantial amounts, they can cause serious problems.  **Protein**: Proteins are essential to the immune system, but if taken in a very large amount, can cause cancer. Ten percent of the human diet should contain protein, and half of that should be in plant food. (24) According to Liebig�s Hypothesis, only protein and a few minerals are the sole principles of a nutritionally adequate diet. (25) However, more recent studies have shown that high protein diets may not be the best nutritiously. Vegetarians� immune systems appear to be more efficient because vegetables are a greater portion of their diet. Vegetables contain large amounts of beta-carotene, which is essential for normal functioning of our body�s defense. A study at the German Cancer Research Center "found that vegetarians� white blood cells were twice as deadly against tumor cells as those of carnivores." (26)  Other foods that lower your immune system�s capabilities include high-fat diets including corn, safflower, and soybean oils. (27)  Some other factors that could have an impact on the immune system are exercise, amount of sleep per night, and stress levels. Exercise is an important factor that can be physically helpful as well as emotionally helpful. "Scientists have shown that �dis-eases� of old age may be caused by �dis-use� of the body." Sleep also can be a cause of a weakened immune system. Without an average of 7-8 hours of sleep a night, your immune system can become more vulnerable to bacterial and viral infections. Stress, as well, can cause your body�s defenses to weaken through too much worry, tension, or depression. According to Healing Nutrients, the main causes of disease and death are as follows:  S Stress level & Attitude: 25%  S Nutrition related: 25%  S Pollution: 11%  S Poor hygiene & poor medical care: 10%  S Sedentary lifestyle: 10%  S Infectious diseases: 3%  S Genetics: 3%  S Accidents: 2%  S Others: 11%  Although all of these factors impact our immune system, we focused on nutrition. However, we asked questions pertaining to these factors to help in determining if there were other variables that had a stronger impact than nutrition. In a way, it was our way of having a control group (by trying to eliminate lurking variables).    ([Intro1](http://docs.google.com/introduction.html))([Intro2](http://docs.google.com/intro2.html))([Intro3](http://docs.google.com/intro3.html))([Intro4](http://docs.google.com/intro4.html))  [[Home](http://docs.google.com/home.html)][[Introduction](http://docs.google.com/introduction.html)][[Hypothesis](http://docs.google.com/hypothesis.html)][[Procedure](http://docs.google.com/procedure.html)][[Data](http://docs.google.com/data.html)][[Conclusions](http://docs.google.com/conclusions.html)][[Bilio/Links](http://docs.google.com/biblio.html)]  [[2002 Projects](http://docs.google.com/AP2002/index.html)][[2001 Projects](http://docs.google.com/index.html)][[2000 Projects](http://docs.google.com/AP2000/index.html)][[1999 Projects](http://docs.google.com/AP99/index.html)][[1998 Projects](http://docs.google.com/AP98/index.html)] |