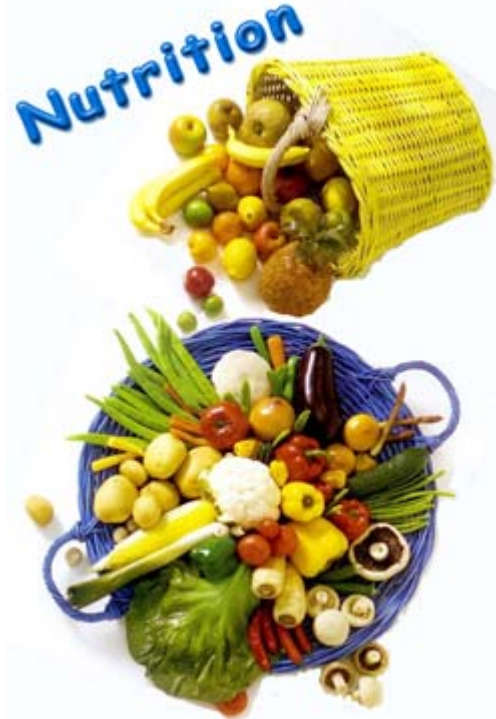


## Nutrition Strategies for a Healthy Immune System

Jennifer Hutchison has some diet tips to help you avoid getting sick this season

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**There is nothing worse than getting sick when you are in the final phases of your Ironman training. I know first hand as I am still recovering from a week-long bout of this seasons “new and improved” flu. As a health care professional I know there are increased risks associated with heavy training during the winter months, but I was counting on my good nutritional habits to protect me. As (bad) luck would have it, I had a chink in my immune armor, which temporarily brought my Ironman comeback to a screeching halt!**

So, as I lay on my couch trying to distract myself from how much quality training I am missing, I figure I could use this month’s article to touch on immune system basics and give some nutritional tips to keep you healthy as you prepare for your season.

As endurance athletes so much of our focus is on the development of our cardiovascular system. Our ability to get fitter, stronger and race to our true potential is dependent on our ability to stay healthy and recover from the stress of training. Unfortunately we don’t usually give our immune system much thought unless we get sick or injured.

The primary job of the immune system is to recognize and get rid of foreign substances that enter

the body and to handle the “wear and tear” of both physical and mental stress. A person’s immune system can be positively and negatively affected by endurance training. Moderate levels of exercise can enhance the immune system and make you less likely to become ill. Long-term endurance training, (which is a necessary part of Ironman preparation), can undermine even the healthiest athlete’s immune system.

Even after a single bout of an intense or long training session, the immune defense system is weakened. The response is one that is very similar to infection (bacterial or viral), or injury (muscle damage or tear). In response to this “stress” there is a significant increase in blood leucocytes, lymphocytes and stress hormones that are secreted to help fight invaders and start with the “healing” process. The 24 to 48 hours following a stressful workout or week has been associated with increased risk for upper respiratory illnesses and greater susceptibility to viral infections. As Ironman athletes enter the later stages of base and build preparation, the cumulative nature of training (combined a haphazard fueling plan and insufficient recovery) can result in an elevation in stress hormones, which can further erode the immune system. The key to preventing illness during your Ironman preparation is to avoid other sick people, practice exceptional hand washing technique, adhere to a sound nutritional plan and get adequate rest and recovery.

#### Nutrition Tips for a Strong Immune System

- Fuel your workouts appropriately. Workouts greater than one hour should be fueled with at least 30 to 60 grams of carbohydrate per hour along with sufficient fluid to maintain a hydrated body. An athlete who chooses to severely restrict their fuel intake during longer training sessions will cause more stress hormones to be released, which in turn will impact the body’s immune system. Carbohydrates before, during and after training and racing will help maintain a healthy immune system.
- Eat regularly timed meals with emphasis on antioxidant rich foods. This should be a high priority year round but especially during the heavy training periods of the year. If you do get sick and your appetite is lacking, try some of these nutrient rich foods: Tomato Florentine (Spinach) soup, Butternut or Yellow Squash Soup, V8 Fusion (Pomegranate Blueberry) or a fruit smoothie made with low fat milk, yogurt and frozen berries.

- Eat a low fat diet, but make sure your get in your omega 3 fatty acids. Having an adequate amount of the right type of fats is essential to a healthy body. Both very high and very low fat diets can undermine your immune system. Good fats such as omega 6 and omega 3 supports a healthy immune system but most folks get more than enough omega 6s and need to bring balance back to their diet with omega 3 fats sources. Foods that are good sources of omega 3 fatty acids that you should include daily in some form are: Soy, canola oil, flaxseed, walnuts and fatty fish such as salmon.

- Don't skimp on the protein. Protein needs are increased with endurance training and elevated even more if you are fighting an infection. Unfortunately, when most people do not feel well the thought of a nice piece of chicken, steak or veggie burger does not sound too appetizing. Most foods people use to comfort themselves when sick do not contain adequate amounts of protein. To continue to meet your needs in spite of a decline in appetite use smoothies made with soy or whey protein powder, low fat dairy or cottage cheese. Also, you can blend in finely chopped meats or add more beans/legumes to soups.

- Get on board with a one-a-day multivitamin and mineral preparation providing 100 to 200% of the RDA. This is a prudent suggestion for any endurance athlete as an "insurance policy" against inconsistent eating habits.

- Ironman training increases oxidative stress on the body producing free radicals which, if not neutralized with sufficient antioxidant nutrients, can erode your immunity. There may be some benefit to supplementing with 500 to 1000 mg Vitamin C, 200 to 400IU Vitamin E and 15 to 20mg Zinc. According to some studies Vitamin C and Zinc will not prevent you from getting sick, but may lessen the symptoms and decrease the duration of illness. Avoid the "little is good, more is better" philosophy - many individual vitamins or minerals taken in excess can actually weaken the immune system.

- Include some of these immune boosting foods during your day: Blueberries, Beans/Legumes (Soy), Almond Butter, Canola Oil, Flaxseed, Lean Beef, Low fat Dairy, Salmon, Walnuts, Whole grains.

Consuming sufficient levels of nutrients and preventing deficiencies in vitamins and minerals known to have a role in maintaining a healthy immune system is primary objective of a sound nutritional approach. Good nutritional strategies do not guarantee you will not get sick during

training, but, if you eat well you should be able to bounce back more quickly and get back to training in no time.

"Let food be thy medicine and let medicine be thy food" -Hippocrates, the Father of Medicine  
(460-377 B.C.)

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