

### FIGHT THE BAD GUYS

July, Issue 1

# ANTIOXIDANTS - Winning the War on Free Radicals

The bad guys are Free Radicals - highly reactive chemicals that damage cells and DNA by pilfering electrons in a relentless quest to enhance their own stability. The good guys are Antioxidants - a group of compounds that help prevent the damage caused by Free Radicals. A war is being waged inside your body between these two and only good nutrition and a healthy lifestyle can ensure that the good guys win. Even if you do lead a healthy lifestyle, Free Radicals are present in your body in abundant numbers and their numbers can multiply quickly due to pollution, pesticides, alcohol, tobacco, ultraviolet light, stress and (although you probably wouldn't guess) - exercise.

Exercise releases Free Radicals which can lower your immune system and slow your progress in the gym. The most common Free Radicals in the body are by-products of exercise and they bind to cells (like those in muscle tissue), causing damage to membranes. Unless you can find a way to stop breathing (which I don't advise), a certain amount of "Oxidative Stress" is inevitable. Oxidative Stress is caused because working out can increase the

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amount of Oxygen your body processes by as much as ten times more than when it is in a resting state. Oxygen can also have a detrimental effect on the body in that it actually breaks down your body's tissue on a cellular level. Over time, Free Radical accumulation can do more harm than simply slowing your progress in the gym. They can also contribute to major health problems; i.e. cancer, diabetes, atherosclerosis and Alzheimer's, to name a few. Recovery Shakes do more than just replace Glycogen levels and stop the cannibalization of your musclesthey are loaded with Antioxidants that can help you win the battle against Free Radicals. Try a shake rich in Raspberries, Strawberries, Blueberries or Blackberries.





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#### ANTIOXIDANTS - Why You Need Them

Muscle growth occurs during the recovery phase after an exercise session. Antioxidants are great for boosting recovery because they bind to the Free Radicals produced during your workout before they can cause cellular damage. Antioxidants also help in strengthening cell membranes. By avoiding damage to your muscles, you allow for more growth than would be possible if damage were allowed to occur.

# ANTIOXIDANTS PROTECT YOU IN (AT LEAST) FOUR WAYS:

- Antioxidants keep Free Radicals from forming and also stop certain metals, like copper, cadmium, mercury and lead from initiating Oxidation.
- Antioxidants intercept Free Radicals that are formed through natural body functions, as well as those introduced to our bodies from the environment.
- Antioxidants can build up second and third lines of defense.
- Antioxidants eliminate and replace molecules that have been damaged beyond repair.

#### WHERE DO THEY COME FROM?

Some Antioxidants are enzymes produced by the body, while others are nutrients that come from our diets. Experts concur, increasing the amount of Antioxidants obtained through diet is particularly important for people who train hard. Typically, the greatest concentrations of Antioxidants are found in dark or brightly colored fruits and vegetables. Try eating more citrus fruits, nuts & seeds, berries, green leafy vegetables, tomatoes, and legumes. Don't forget, immediately following your workout, throw in a scoop of the 'Get Recovered'. This powerful blend of Antioxidants and L-Glutamine will speed recovery and help you to achieve your fitness goals faster than you ever dreamed.



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## FIGHT THE BAD GUYS

July, Issue 3

# ANTIOXIDANTS - Did you know that some vitamins are antioxidants?

#### VITAMIN E

This vitamin is one of the most powerful Antioxidants that will minimize damage and speed recovery. Vitamin E is an essential vitamin- in that our bodies cannot produce it naturally and must obtain it from our diet. There are eight different forms of Vitamin E that are divided into two groups: Tocopherols and Tocotrienols. The former is the best form to look for known as Alpha-Tocopherol. When looking for a Vitamin E supplement, look for one that has all of the Tocopherols plus all of the Tocotrienols -Vitamin E Complex.

#### WHAT DOES VITAMIN E DO?

Aside from its powerful Antioxidant properties, Vitamin E also has these benefits:

- Heals and repairs damaged tissues and reduces scars
- Lowers blood pressure
- Supports normal clotting
- Contributes to healthy nerves, muscle, skin and hair

### WHERE DOES VITAMIN E COME FROM?

It is found in food, particularly: raw vegetables, oils & butters, avocado, egg yolk, liver (yum), peanut butter, and in small quantities in leafy green vegetables. Supplements are another excellent source of ensuring you are getting enough Vitamin E.

#### DOSAGE

Recommended dosages range from 200 to 1,200 IU's. You will find Vitamin E combined with C and A to create a powerful blend of Antioxidants in our 'Get Recovered' Core Supplement. Maximize recovery by adding this to your favorite Recovery Shake.



### PROJECT PFC: MISSION STATEMENT



#### ANTIOXIDANTS- Other Powerhouse Antioxidant Vitamins

Vitamins A & C- These Antioxidants are the powerhouses that will minimize damage and speed recovery.

### VITAMIN C

What's really happening in our bodies? Free Radicals attack our mitochondria (the energy factories of cells) which do have defenses against Oxidation, however, preventing these attacks is vital to maintaining excellent mitochondria health. Vitamin C floats freely in the liquid of the cell, neutralizing Free Radicals before they can reach the mitochondria. Aside from its Antioxidant properties, Vitamin C also blocks the activation of viral agents, aids in wound healing, prevents & treats cardiovascular diseases and can lower blood pressure and cholesterol levels. Finally, Vitamin C can assist and amplify the work of other Antioxidants, especially Vitamin E.

### Where Does Vitamin C Come From?

Our bodies cannot produce Vitamin C, it must come from the diet. You will find Vitamin C plentiful in fruits & veggies; i.e. berries, cantaloupe, grapefruit, oranges, strawberries, alfalfa, broccoli, brussel sprouts, cabbage, etc.

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#### **VITAMIN A**

Vitamin A is also called retinol. It is a fatsoluble Vitamin, meaning it is stored in the fat tissues of the body for up to six months. Aside from its Antioxidant properties, Vitamin A can also reduce the risk of heart disease and cancer.

### Where Does Vitamin A Come From?

Vitamin A mostly comes from animal-based foods, but some plant-based foods supply beta-carotene, which your body converts into Vitamin A. It can be found in beef liver, egg yolk, fortified milk, sweet potato, carrots, pumpkin and broccoli.

#### DOSAGE

It's recommended that women consume 800 mcg and men consume 1000 mcg of Vitamin A daily. You will find Vitamins C & A combined with E to create a powerful blend of Antioxidants in our Core Supplement 'Get Recovered'.

