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### **Serious or Competitive Athlete Part 3—Nutritional Supplementation**

Most individuals who are in excellent physical condition feel that they are the healthiest people in our society. Now, I don't want to burst anyone's bubble, but nothing could be further from the truth. In fact, Dr. Kenneth Cooper, the main researcher on the health benefits of exercise, wrote a book back in 1994 called *The Antioxidant Revolution* warning of the dangers of over exercise. This book focused primarily on warning the serious or competitive athlete that excessive exercise was actually dangerous to their health. He strongly recommended that everyone needed to be consuming nutritional supplements; however, for the competitive athlete it was absolutely essential. This edition of the Healthy for Life Newsletter will focus on why Dr. Cooper would make such dramatic conclusions from his research.

#### **Dr. Kenneth Cooper—Exercise and Health**

Dr. Kenneth Cooper began the exercise revolution in the early 1970's and actually coined the term aerobics. He is truly the father of preventive medicine. He convinced the medical community and society in general that there were significant health benefits to modest, consistent physical exercise. Now what he defined as modest exercise was aerobic exertion that equaled walking or

running 15 miles per week. This is the level of activity that Dr. Cooper found gave the individual the optimal health benefits of physical exercise. Now he initially felt that any exercise level above this recommendation was simply frosting on the cake and could only lead to further health benefits for those who desired to aggressively pursue an exercise program.

Dr. Cooper has established his Aerobic Center in Dallas, Texas. Thousands have come to his clinic to have a complete health assessment and to be followed by Dr. Cooper and his staff. In the early 1990's, Dr. Cooper became concerned about what he was observing. Many of his "Super" athletes were coming into his clinic in their mid-40's and 50's suffering and dying from diseases like heart disease, cancer, and stroke. These were individuals who had run 20, 30 or more marathons in their life. How could this be? Weren't these people supposed to be the healthiest people around? Why were they even getting these chronic degenerative diseases? What was even more concerning was the fact that they were getting them at such a young age. This caused Dr. Cooper to begin researching the medical literature to try and find the answer. The result of this research was his book, *The Antioxidant Revolution* [Thomas Nelson 2004]. In fact, this was the first book that I read and researched back in 1995 after I became interested in nutritional medicine.

Dr. Cooper began to realize that the root cause of diseases like heart disease, cancer,

diabetes, strokes, arthritis, Alzheimer's dementia, Parkinson's disease, and the list goes on and on was oxidative stress caused by excessive free radicals. He then began to study several of the athletes that were coming to his Aerobic Center in Dallas. What he found was very disturbing. When these athletes would exercise mildly or modestly, the number of free radicals they produced would go up just a little. However, when they over-exercised during any workout, the number of free radicals they produced would go up exponentially and just shoot off the graph. It did not matter what type of exercise his athletes were doing. They could be running, swimming, lifting weights or riding bikes. The findings were the same. His research of the medical literature demonstrated the same thing. This led him to conclude that over exercise is actually dangerous to your health.

Now, he was not telling his athletes not to be competitive. He concluded that if you wanted to be a serious or competitive athlete that was involved in heavy, excessive workouts, you had to take a significant amount of nutritional supplements. When he wrote his book, he primarily focused on vitamin C, vitamin E, beta carotene, and selenium because this is what had been studied the most. However, we now realize that you want to have all the antioxidants and their supporting nutrients at these optimal levels, which is what I refer to as cellular nutrition. I believe that all of my patients at least need to be taking nutritional supplements to provide this cellular nutrition. However, as I have stressed in my books and previous newsletters, balance is the key in avoiding the damaging affects to our health created by excessive free radicals.

### **Balance is the Key**

The key is the fact that you want to have enough antioxidants on board to handle the number of free radicals you are producing. If this is the case, you will not develop oxidative

stress. Antioxidants have the ability to neutralize these free radicals and render them harmless. When you have a mild or modest workout, the number of free radicals you are going to produce will only go up a little. However, if you are involved in an intense workout or a prolonged workout, the numbers of free radicals you produce are going to be tremendous. The competitive or serious athlete must realize this truth if they are going to be able to effectively protect their health. It does not matter how you are exerting your body. If you are over exerting it, you are placing your health in jeopardy. You are accelerating the aging of your body.

This is the primary reason that I recommend that anyone who is a serious athlete must consume antioxidant supplements that provide what I refer to as cellular nutrition. However, they must also add to this basic nutritional program additional potent antioxidants. I refer to these additional antioxidants as "Enhancers". When you add these potent antioxidants to the basic cellular nutrition, you give your body the best chance of handling this significantly elevated number of free radicals you are producing because of your intense workouts or competitions. Simply put, if you have enough antioxidants on board to handle the number of free radicals you are producing, you will prevent oxidative stress and protect your health.

### **Improved Athletic Performance and Recovery**

Competitive athletes are always looking for an edge to improve their athletic performance. Just look at the number of athletes who turn to drugs to try and accomplish this goal. They will jeopardize their entire career for even the possibility of improving or giving themselves a competitive edge. I have just shared with you the science and medical principles that will allow you to go to the next level. It is inexpensive, legal, and easy to accomplish. You simply need to consume high-quality,

complete and balanced nutritional supplements along with those potent "enhancers". In fact, I am aware of a company that actually guarantees their products will not create a positive drug test for the professional athlete.

Another aspect to improved athletic performance is simply the recovery time from an aggressive workout. Since excessive free radicals are known to damage tissue, especially muscle tissue during intense workouts, recovery is delayed. You have already learned from previous newsletters how nutrient timing can allow you to recover from a workout better and much quicker. However, if you do not address the problem of oxidative stress to the muscle tissue itself, nutrient timing will do little to speed your recovery. Many athletes have found themselves actually doing worse and having poorer and poorer workouts the more they push themselves. Thinking that there is no benefit unless they go all out, the serious athlete can actually develop the overtraining syndrome.

Dr. Kenneth Cooper evaluated a group of athletes who were suffering from the "Overtraining Syndrome." He related this syndrome to the excessive damage to the muscles and overall immune system during intense workouts via excessive free radicals. Not only did these athletes develop fatigue, muscle weakness, inability to complete workouts, but also noted frequent infections and a depleted immune system. What good does it do an athlete to be in super physical shape if he develops an infectious illness or significant fatigue due to his aggressive training schedule? Intense workouts, which are necessary for any serious, competitive athlete, are not only dangerous to your overall health but place the athlete at risk of actually developing the overtraining syndrome and interrupting their career. Optimizing the body's natural immune system, antioxidant defense system, and repair system is essential in protecting the competitive athlete.

## Cellular Nutrition

I define cellular nutrition as providing the cell with all the essential micronutrients at optimal levels or those levels that have been shown to provide a health benefit in our medical literature. This should be a high-quality, complete and balanced product that follows pharmaceutical-grade Good Manufacturing practices and USP (US Pharmacopeia). This cellular nutrition should provide you with a wide array of antioxidants and their supporting minerals and B cofactors. I also believe that this should include optimal levels of calcium and magnesium along with a filtered fish oil capsule. Every individual needs to be consuming this level of supplementation. However, the athlete needs to be also be consuming in addition what I refer to as "Enhancers."

## Enhancers

The best enhancer for the athlete is grape seed extract. When combined with other antioxidants it is 50 times more potent than vitamin E and 20 times more potent than vitamin C. It has some anti-inflammatory properties and anti-allergen properties. Many of the athletes that I have consulted who also had the diagnosis of exertional asthma have had significant improvement over time just by adding 200 to 300 mg of pharmaceutical-grade grape seed extract. It also allowed them to have quicker and more effective recovery from workouts. This potent antioxidant also easily crosses the blood brain barrier and improves your focus and concentration during workouts and competition.

The next best enhancer for the athlete is CoQ10. I recommend that the athlete take 100 to 200 mg of the powder form daily or 30 to 60 mg of the gel cap formula. The gel cap formula is absorbed about 3 to 3 1/2 times greater than the powder form. It is a potent antioxidant but also is a critical nutrient for the

production of energy within the muscle cell itself. It has another great quality in the fact that it significantly enhances our immune system.

Many athletes also like to supplement their diet with glucosamine sulfate. Glucosamine sulfate has been shown to increase joint fluid and actually rebuild cartilage. It is a tremendous nutrient for runners and dancers, since their joints are traumatized so much. I like to combine glucosamine with a natural anti-inflammatory like turmeric.

### **Conclusion**

Nutritional supplementation is critical for the serious or competitive athlete or, for that matter, anyone who has an aggressive exercise program. It not only helps to protect your health, but also, allows for quicker and more complete recovery from workouts. It will also optimize your athletic performance. When you combine the concept of nutrient timing with an aggressive nutritional supplement program, you are giving your body the best opportunity to perform at its optimal level.