

Anabolic Steroids, Part III

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When you have a patient who smokes cigarettes and will not quit, I feel it is unethical not to advise that patient to take antioxidants. The same is true for patients on anabolic steroids who will not quit. The first step in designing a program for the steroid user to minimize the side effects is to make it clear that taking supplements does not make the use of anabolic steroids safe.

Steroids do not produce desired muscular hypertrophy without a very high calorie, high protein diet. This is common knowledge to most steroid users. It is tempting to lower protein intake in those unaware of its importance. If anabolic steroids do not work, it will be easier to have a patient stop using them. However, what inevitably happens is that the patient discusses the lack of progress with the dealer or friends in the gym who will recognize the problem as inadequate protein intake. They would then strongly advise your patient not to seek your services anymore because you gave wrong information. The bottom line is deception usually comes back to haunt you. Therefore, what you can do with the rest of the diet is to make sure it is low in fat, high in complex carbohydrates, and low in the stressors -- sugar, salt, caffeine, and processed food.

I could not locate any studies in the literature concerning micronutrient support for the steroid user. We do know that the chances of side effects are increased when athletes consume higher doses of steroids. We also know that athletes who are on steroids longer also have greater chances of side effects. Finally, oral steroids are harder on the liver than parenterals and C-17 alkalinated parenterals cause more side effects than non-alkalinated types.

Unfortunately, there is no magic steroid support formula. I recommend a good, strong multi-vitamin, multi-mineral formula with the above diets. Added to this are additional micronutrients tailored to the patient's individual symptomatic requirements. The ranges I am listing are amounts that have been most commonly studied. The more nutrients you add to a multi-supplement for specific conditional support, the lower the dose you can use due to the synergistic effects of like nutrients.

We will now briefly review the types of micronutrients used for various conditions that have theoretical application for steroid induced symptoms.

1. The cardiovascular system.

A. Antioxidants. There are many types of antioxidant micronutrients. Below are some of the most common and best-studied substances:

Vitamin C: 1-5 gm

Vitamin E: 400-800 IU

Beta Carotene: 10-50 mg

Coenzyme Z10: 30-120 mg

Thiamine: 25-100 mg

*Zinc: 30 mg**

*Copper: 2 mg**

*Manganese: 20 mg**

Selenium: 200-300 mcg

B. Antiplatelet aggregates

Fish oil (EPA and DHA): 3-6 gm

Gamma linolenic acid (GLA): 200-500 mg

Garlic oil: 25 mg

- These minerals are precursors to superoxide dismutase. There remains controversy as to whether superoxide dismutase itself can be absorbed in people with a healthy intestinal mucosa.

C. Other cardiovascular protectors include:

Pantetheine: 900-1,200 mg per day (increases HDL, decreases LDL, decreases triglycerides)

Taurine: 1-3 gm per day (maintenance of myocardial electrolytes especially K+)

L-carnitine: 0.5-2.0 gm per day (decreases triglycerides)

Magnesium: 400-800 mg per day (only a matter of time before it is routinely used by cardiologists)

2. Hypertension:

Calcium: 1,000 to 1,500 mg per day

Magnesium: 800-1,200 mg per day

3. Hepatic Support: Lipotropic factors:**

Glutathione: 250-1,000 mg (antioxidant which binds liver toxins)

Phosphatidylcholine: 2-5 gm (a component of lecithin; look for brands that contain 75%)

Silymarin: 50-150 mg (from the herb milk thistle if it has strong hepatic regenerating properties)

- Most professional companies have lipotropic formulas. You should look for a product that includes choline, inositol, betaine, and methionine.

4. Androgen-related side effects:

I came across a very interesting study that showed when females consumed dietary fiber in the form of wheat bran in the range of 30 or more grams per day, the amount of circulating estrogen in the blood stream was decreased. Although this has not yet been tried on males consuming anabolic steroids, consuming a diet high in insoluble wheat fiber certainly would do no harm and there is an excellent chance that if the wheat fiber drops estrogen levels in females, it may work the same in males. As we all know, when men consume pharmacologic amounts of testosterone, the body reacts by (1) slowing or stopping internal testosterone production, and (2) increasing estrogen production in an attempt to maintain a homeostatic environment. Unfortunately, high estrogen levels in males can result in unwanted side effects, the most common being gynecomastia.

Prostate enlargement and premature hair loss for males genetically susceptible to baldness can be helped by the herb Saw Palmetto (60-320 mg per day). It blocks enzymes that convert testosterone

to dihydrotestosterone (DHT) and enzymes involved in DHT cellular uptake. Increased levels of DHT in steroid users have been implicated as a cause of these conditions. Alopecia in athletes without male pattern baldness may, in some cases, be retarded by Saw Palmetto and Ginseng. Testicular atrophy and azoospermia may be retarded by 50-100 mg zinc per day. I recommend a highly absorbable form such as picolinate. To make sure a copper deficiency is avoided, your athlete should consume plenty of legumes, whole grains and green leafys. When dosing with amounts approaching 100 mg of zinc, a copper supplement is a good idea. I recommend 4 mg in a well-absorbed form such as copper sebacate.

5. Aggressiveness

Valerian: (Non-toxic, non-addictive natural relaxants) Passiflora

6. Kidney Support.

Consume plenty of water

Zinc: 40-60 mg per day (for ammonia to urea conversion)

When looking at a patient's blood work, check the BUN.

When it is borderline high there is a good indication that the body is receiving protein in amounts it is unable to optimally metabolize.

In the years to come, it is my hope that strong, safe alternatives to steroids will be developed and research on natural protectants will commense.

References

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