Dynamic Chiropractic

VITAMINS / SUPPLEMENTS

Cutting Edge Compounds -- Androstenedione

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(*Editor's note*: part 4 of Dr. Andersen's series on obesity will be printed in the August 11, 1997 issue of *Dynamic Chiropractic*.)

If you treat athletes and haven't been questioned yet about androstenedione or pine tree pollen, you will. Androstenedione is the newest ergogenic aid to hit the market.

Androstenedione is an adrenal hormone produced in humans mainly from dehydroepiandrosterone (DHEA) and, to a lesser extent, from 17-hydroxyprogesterone. Reduction of androstenedione at one position on the molecule forms testosterone. Small amounts of testosterone are produced in the adrenal gland this way, but the majority of this conversion occurs in other tissues.[1] Androstenedione is also found in the pollen of scotch pine trees.

In unpublished documents recently released from the East German Research Institute for Body Culture and Sport, it was shown that 50mg of androstenedione given to men raised serum testosterone 140-183%. One hundred milligram doses yielded a 211-237% increase in serum testosterone.

Androstenedione is not an International Olympic Committee (IOC) banned substance. According to Phillips,[2] oral administration can raise the testosterone to epitestosterone ratio to as high as 14:1, which is more than double the 6:1 limit used to pass a drug test. Phillips further states that an olympic athlete who had failed a drug test for testosterone based on a 13:1 testosterone to epitestosterone ratio had his results overturned after explaining to officials that he had taken androstenedione, which was a legal substance. It also appears that the rise in serum testosterone caused by androstenedione ingestion quickly returns to normal levels in about a day, which means that if it were banned, a test other than testosterone to epitestosterone ratio would have to be devised to detect its use.

I expect androstenedione and/or scotch pine tree pollen to be marketed very aggressively to athletes of all sports, and no doubt it will sell. To the best of my knowledge, there is no research on the effects of androstenedione on strength athletes, or if it causes the same type of side effects that testosterone or anabolic steroids cause. If androstenedione does, in fact, raise testosterone levels, I would anticipate both accelerated gains in lean mass (assuming the athlete is training hard and eating right) and common side effects seen with steroid use.

If androstenedione works like it is expected, look for the governing bodies of various sports to add it to their banned substance list. In the meantime, as long as it is legal, look for a lot of athletes to use (and in some cases abuse) androstenedione.

References

1. Martin, Mayes, et al. Harpers Review of Biochemistry. 20th Ed. Lange Medical Publications. Los Altos, California, 1985.

2. Phillips, Bill. East German secret weapon: androstenedione. Muscle Media, July 1997.

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