

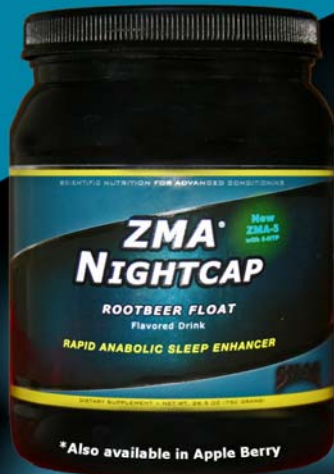
BALCO Mastermind Victor Conte Introduces



Victor Conte

Victor Conte
World-renowned sports
nutritionist and founder of
SNAC System, Inc.

ZMA-5 The Next Generation



ZMA plus 5-HTP

Over the last decade ZMA® has become one of the most popular sports nutrition products ever developed. This highly bio-available zinc and magnesium formula was the first product designed specifically to enhance recovery, regeneration and growth by improving sleep efficiency. ZMA was originally created to significantly increase muscle strength and endurance.

ZMA-5 is the next generation in recovery and sleep enhancement supplementation. This innovative new formula combines ZMA with the amino acid 5-hydroxytryptophan (5-HTP) to create a synergistic and highly potent combination of ingredients. The zinc, magnesium and vitamin B-6 contained in ZMA are all three co-factors in the conversion of 5-HTP to the hormone serotonin, an important neurotransmitter that helps to regulate mood and sleep. A precise amount of folic acid has also been added to ZMA-5 to further increase the bioavailability and conversion of 5-HTP to serotonin. The normalization of serotonin levels during sleep may help to elevate mood upon waking from a deep and restful sleep.

5-HTP has been shown to significantly increase REM (rapid eye movement) sleep while simultaneously increasing SWS or slow-wave sleep (deep sleep stages 3 and 4) and without increasing the duration of total sleep time. (1, 2) The benefits of REM sleep have been shown to include cognitive function enhancements such as improved problem solving ability and memory. (3, 4) Adequate SWS and REM sleep are both essential to the various functions of the sleep process.

Magnesium has been found to significantly increase the depth and duration of slow-wave sleep and also without change to total sleep time. (5, 6)

Sleep quality declines with age, with progressively less time in SWS, which occurs during the initial part of sleep. Age related declines also occur in lean body mass, growth hormone (GH) and insulin-like growth factor 1 (IGF-1). (7)

In normal young adults, a major burst of growth hormone occurs shortly after sleep onset, in association with the first period of slow wave sleep. In men, approximately 70% of the daily GH output occurs during this same period of slow wave sleep throughout adulthood. (8) Extensive evidence also indicates the existence of a consistent relationship between increased SWS and increased GH secretion and, conversely, between awakenings and decreased GH release.

Studies involving the effects of different types and duration of exercise on sleep efficiency have yielded conflicting results. However, in a study of the effects of power exercise on the sleep of a group of trained power lifters,

the tendency was for this type of more strenuous exercise to affect sleep adversely. (9) Excessive training has also been reported to cause sleep disturbances as well as mood changes, and the sleep disruption was greater at higher training volumes. (10) In addition, long duration daytime exercise of moderate intensity has been shown to decrease GH and testosterone production during nighttime sleep. (11)

So, it is extremely important for athletes to get a deep and restful sleep because this is the when healing, tissue repair, anabolic hormone production and muscle growth are maximized.

This novel ZMA-5 formula provides all of the proven benefits of the precise dosages and ratios of the ingredients contained in ZMA plus the added synergistic and powerful effects of 5-HTP to help establish the next generation of recovery and sleep enhancement supplementation.

ZMA-5 is available both in capsules and in ZMA Nightcap, exclusively from SNAC system, Inc.



*Selected references (1-11) are available at www.snac.com

SNAC

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