

PUBLICATION: Food Marketing and Technology

DATE: October 2006

COVERAGE: Europe

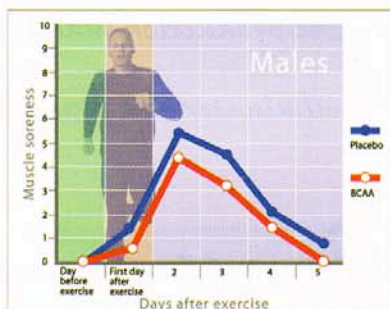
CIRCULATION: 18,500



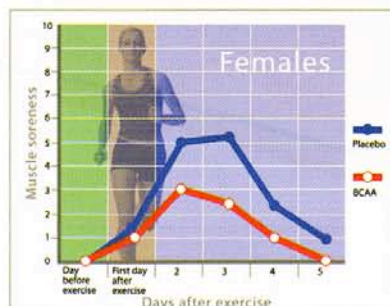
Amino Acids Help Exercise Recovery

A new scientific study has shown that adding small amounts of branched-chain amino acids to the diet can help people avoid muscle soreness and fatigue following exercise, adding to the growing body of evidence that amino acids can contribute to the performance and well-being of sportsmen and women.

The study, undertaken by a group of researchers in Japan and published in the *Journal of Nutrition*¹ shows that people who took a mixture of isoleucine, leucine and valine (the three branched-chain amino acids) before a work-out had less delayed-onset muscle soreness and less fatigue than those who did not.



Effect of BCAA supplements on delayed-onset muscle soreness



Combinations of branched-chain amino acids can play a role in helping the body to handle the stresses and strains of participation in sports. Branched-

chain amino acids work synergistically, reducing muscle protein breakdown during exercise, as well as stimulating muscle protein growth. By using combinations of branched-chain amino acids, recovery times following strenuous exercise can be cut. As the graphs show, amino acids can reduce muscle soreness for four days following exercise.

Other research suggests that amino acid supplements may help to reduce fatigue during sports. By replacing branched-chain amino acids used by the body during exercise, supplements can help maintain a normal balance of branched-chain amino acids in the blood. These amino acids help to prevent feelings of fatigue caused by increased levels of tryptophan. By competing with tryptophan in the bloodstream at the blood-brain barrier, branched-chain amino acids decrease the levels of tryptophan transported into the brain.

Sports drinks with amino acids are a substantial part of the beverage market

in Japan, enjoying a 10% share. Two of Japan's Olympic athletes who won gold medals in Athens included amino acid supplements in their training regime. In the meantime, amino acid based sports drinks have been introduced in Korea, Taiwan, and the United States.

Amino acids are a natural part of our food supply. They are the building blocks of protein and as such have a big potential to help people improve their sporting performance and recovery rates in a way that is in harmony with the body.

Key No. 62663

¹*Nutraceutical Effects of Branched-Chain Amino Acids on Skeletal Muscle*, Shimomura, Yamamoto et al. *J. Nutr.* 136: 529S-532S, 2006.