

Creatine Supplementation Influences Cognitive Function

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Cognitive function is the term used to describe a person's state of consciousness (alertness and orientation), memory, and attention span. A mental status examination (MSE) is a standard test used by healthcare professionals to measure a patient's overall mental health. Evaluating a patient's cognitive function includes, first of all, measuring their level of alertness and orientation.

Creatine plays an important role in the production of energy and in the process of building muscle tissue. While creatine can be produced in the body from certain amino acids, many athletes are using creatine as a performance-enhancing agent. Studies suggest creatine may enhance the performance of high-intensity, short-duration exercise. However, it is not useful in endurance sports. Creatine is found in the body in muscle, brain, and blood. However, most creatine in the body is stored in muscles. Scientists think its potential for increasing energy comes from its ability to help the body increase the efficiency with which cells use energy.

A recent study published in the *British Journal of Nutrition* showed that cognitive functioning in vegetarians was improved with creatine supplementation. The study included 128 young adult women, both vegetarians and omnivores. The participants were then randomly assigned to receive either placebo or 20 grams of creatine supplement daily for five days. Researchers conducted a battery of tests to determine the women's cognitive function both before and after creatine supplementation. The results revealed a 40 percent improvement in memory in the vegetarians who were consuming creatine as compared with those who were receiving placebo. It was also found that creatine reduced the variability of the women's responses to a choice reaction-time task in both vegetarians and omnivores. These findings suggest that creatine supplementation influences cognitive function and warrants further investigation.¹

¹ Benton D, Donohoe R. The influence of creatine supplementation on the cognitive functioning of vegetarians and omnivores. *Br J Nutr.* Dec2010.