

## **Study on risk creatine and dehydration in athletes training in a gym**

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*Introduction:* Creatine is a supplement widely used by force athletes or whose goal is to gain muscle mass storing water in the intracellular space. Creatine has the ability to remove plasma water from the bloodstream into skeletal muscle in a process called muscle myofibrillar hydration or hydration. Although this benefits the skeletal muscles, less water is available to other tissues since most cell physiological and chemical reactions in the body need water.

*Objective:* To present the use of creatine as an ergogenic supplement, and possible adverse effects related to hydration.

*Method:* Cross-sectional study in adult males between 18 and 35 years. You are advised to use 0.3 grams of creatine per kilogram for several weeks. The administration form is the most commonly used initial charge and maintenance; when supplementation before and after training; and consumption takes place largely with the addition of carbohydrates.

*Results:* 34.5% of people who use creatine have or have had side effects, mainly weight gain, but do not manifest signs of dehydration at the indicated dose.

*Conclusions:* Although at lower doses of 3 grams there is no scientific evidence that risk of dehydration occurs, the recommendation is to maintain a high fluid intake (200-250 ml of water per 2.5 grams of creatine) since this water needs to be stored and if the availability is low, it decreases absorption and retention within the cell. There is no evidence that taking creatine in normal doses increases heat stress or adversely affects the performance of the athlete in warm environments.

Key words: *supplementation, creatine, dehydration.*