



### Jury's out on effectiveness of creatine

Recently, there have reports about a supplement called creatine. You may have seen these reports or heard others talking about the wonders of creatine. Does it really build muscle? Can it help someone become stronger? The definitive answer is "MAYBE".

For the last few years body builders and weight lifters have been avid users of creatine supplements. Without a doubt, it has been one of their most popular supplements and is now being used by many other athletes. Claims usually center on increasing weight-lifting capacity and building muscle bulk.

Creatine is a natural compound found primarily in muscle tissue. It serves as a rapidly available but short-lasting source of energy for contracting muscle fibers. It is especially important for very high-intensity muscle contractions that can be maintained for only very short periods (about 10 seconds).

Creatine is made by the body, so it is not considered a nutrient and is not needed in the diet to maintain health. Meats, poultry and fish contain creatine but in amounts too low to make much change in muscle levels.

Creatine supplements can increase muscle creatine levels in many people. The common approach is to take up to 20 grams of creatine daily for five to seven days. This increase muscle creatine content by about 20 percent, which appears to be the limit. Taking more will not increase the amount of creatine in the muscle.

After this initial "loading phase," a reduced dose of 2 to 5 grams per day will maintain the increased muscle levels. The response to creatine loading can vary from one person to another. Some people have naturally higher creatine levels, so supplements likely would have less effect.

It is important to realize that creatine loading by itself is not likely to increase the size or strength of muscles. What builds muscle size and strength is high intensity resistance exercise such as weight lifting. More creatine in muscles can allow a weight lifter to lift heavier weights more times, resulting in building more muscle.

In short, when it comes to building muscle, the old adage is still true – no pain, no gain.

Besides helping athletes do more work to build more muscle, some

recent research suggests performance benefits for high-intensity explosive-burst sports such as ice hockey and soccer, and short distance running, swimming, rowing and bicycle racing. Before you go out and start creatine loading, you should know that not all studies have found increased performance from creatine supplementation. So it is no guarantee.

Research does not suggest any benefit to endurance athletes such as runners, distance swimmers or triathletes.

Is it safe? Studies of creatine supplementation (multiple grams per day) have been for less than 2 weeks. It is not known if there are any adverse effects from long-term supplementation. Taking creatine may decrease the amounts your body makes, but it is not known if you re-adjust internal production when supplements are removed. There also is some concern for possible liver and kidney damage to athletes taking daily dosages of 40 grams or more. And there are anecdotal reports of athletes getting more muscle cramps with creatine supplementation, but this remains to be studied properly.

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