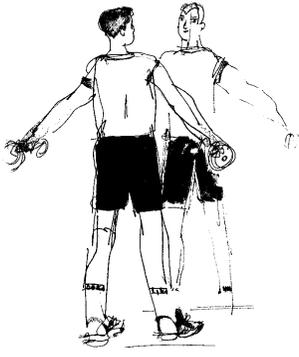


# Fit Facts™

FROM THE AMERICAN COUNCIL ON EXERCISE®



## How it Works

Here's how researchers believe creatine works: In its phosphorylated form, creatine plays a key role in the formation of ATP, the body's energy source. Without enough creatine, which is created in the liver and kidneys and stored in the muscle, the cycle that creates this energy is unable to produce enough ATP to meet the demands of short bursts of muscle activity. Researchers have discovered that a shortage of creatine can cause muscle fatigue. Because it is a nonanabolic substance naturally found in the body, researchers believe creatine to be a safer alternative to other muscle-enhancing drugs and potions.

### Supplementation Recommendations

(Mix creatine with water or sports beverage)

**LOADING PHASE**  
25 grams per day for five to seven days

**MAINTENANCE PHASE**  
3 to 5 grams per day for 30 days

Cost: approximately \$15 to \$50 per day depending on manufacturer

## Creatine Creates a Sensation

**EVEN IF YOU DON'T KNOW EXACTLY** what it is, chances are you've probably heard about creatine. With help from the media and high-profile athletes, this popular supplement exploded onto the scene several years ago as news spread of its potential as a muscle builder and sports-performance enhancer. Further proof of its popularity: Sales of creatine have skyrocketed from \$30 million in 1995 to a projected \$180 million in 1998.

Perhaps the greatest testament to creatine's effectiveness and, hence, its popularity is the fact that so many who use it — professional and amateur athletes alike — actually see results. Fast results. Unlike predecessors such as chromium picolinate, creatine has, from the outset, consistently demonstrated its usefulness in a variety of applications in numerous scientific studies. More than 50 studies examining creatine have been published and another 50 are expected to be published before year's end.

But neither its popularity nor reports of its effectiveness have completely erased the doubt and fears of those who question the safety of creatine supplementation. A recent survey of the Association of Professional Team Physicians indicated 85 percent would not recommend creatine until more research was completed. And, because no study of creatine has lasted longer than 51 days, it is impossible to know its long-term effects.

### Who's it for?

Each of us has varying levels of creatine stored in our muscles depending on our diets, activity levels and genetics. Those who appear to benefit most from creatine supplementation are those with the lowest amounts to begin with. After the initial recommended loading phase of 20 to 25 grams per day for five to seven days, the muscles become saturated with creatine and additional supplementation beyond a 3- to 5-gram maintenance dose becomes a wasted — and expensive — enterprise. In fact, the daily turnover rate for creatine is only about 2 grams per day, making large doses not only unnecessary, but potentially harmful since protocols deviating from the recommended dosages have yet to be studied.

The sports performance benefits of creatine are limited to activities requiring short, all-out bursts of

power, such as:

- jumping
- sprinting
- swimming
- high-intensity weightlifting

A recent statement by the American College of Sports Medicine notes that "creatine supplementation has not been shown to improve longer-duration aerobic-type exercise."

### The "More is Better" Syndrome

The controversy that continues to hound creatine stems from the fact that the controlled setting of a lab does not always reflect real life. In a if-a-little-is-good-more-is-better society like ours, it's no surprise that many people are taking far more than the recommended dosage of creatine, which is something the researchers have yet to examine. And few studies have been able to demonstrate creatine's effectiveness beyond the lab setting — on a baseball field, for example, or at a track meet.

"Much remains unknown about whether creatine is absolutely safe for long-term use at levels currently being recommended," said the Food and Drug Administration in a June 1998 statement cautioning consumers about the popular supplement. The FDA urges both current and potential users to see their doctors to identify any potential health problems.

Creatine supplementation is not for everyone, particularly those with a history of kidney problems, or who are younger than age 18 or are still developing. Nor should one expect the supplement to be effective without a well-designed training program. Every person should examine their own motives for taking creatine and weigh it against the potential unknown risks of long-term usage. But be sure to take the FDA's advice and check with your physician and don't exceed the recommended dose.

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