

Patient Fact Sheet

CREATINE

CREATINE is a substance found naturally in the body. It is used by muscle cells in their energy cycle, since it is needed to make ATP, the main substance that muscle cells use for energy. People normally get creatine from eating meat and fish, and the body also makes its own creatine from other proteins in the diet. Athletes take creatine supplements to boost the level of creatine in their bodies, hoping this will help their athletic performance.

WHAT IS IT USED FOR?

- ◆ The main use of creatine is to help athletic performance, especially for weight lifters and sprinters.
- ◆ It is being studied for patients with chronic heart failure.
- ◆ It is also being studied for patients with muscular dystrophy.

WHAT HAVE STUDIES SHOWN?

- ◆ Creatine supplements can improve **weight-lifting** performance.
- ◆ Creatine may improve **sprint** performance (running, bicycling, or swimming in short, intense bursts). However, some studies show that it helps, and some show that it does not. If it does help, the effect is not very strong.
- ◆ It does not help athletes in **endurance** sports, or activities lasting more than a few minutes.
- ◆ Several small studies show that creatine may help patients with **chronic heart failure**, by making their hearts work better and increasing their muscle strength.
- ◆ A study of creatine for patients with **muscular dystrophy** is planned.

WHAT ARE THE SIDE EFFECTS?

- ◆ Allergic reactions to creatine are possible.
- ◆ Creatine can cause kidney damage or kidney failure, but this is very rare in people who have no kidney problems and take creatine for a short time.
- ◆ It may also cause upset stomach, diarrhea, muscle cramps and heat intolerance.
- ◆ It may cause muscle weight gain of up to five pounds during the first few days.

Most studies have been for 12 weeks or less, and there are no studies of the long-term effects of creatine supplements.

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IS IT SAFE FOR CHILDREN AND PREGNANT WOMEN?

There are no studies of creatine's use in children or women who are pregnant or breastfeeding.

WILL IT INTERFERE WITH MY OTHER MEDICATIONS OR MY MEDICAL CONDITION?

- ◆ Creatine is not recommended for people who have kidney problems or are dehydrated.
- ◆ It is not recommended for patients who take diuretics (water pills).
- ◆ Tagamet (cimetidine), a medicine used for heartburn and to prevent ulcers, may increase the risk of kidney damage from creatine.
- ◆ Probenecid, a medicine for gout, may also increase the risk of kidney damage from creatine.

WHAT ARE TYPICAL DOSAGES?

Most studies in adults have used a loading dose (a high starting dose) of 10 grams two times daily by mouth for five to seven days, then 2.5 grams two times daily for maintenance.

WHAT ELSE DO I NEED TO KNOW?

- ◆ Always tell your doctor or nurse practitioner if you are taking any dietary supplement, and before starting any new one. Your health care provider needs to know everything you are taking to help you make decisions about your health care. Dietary supplements can cause problems with other herbs, dietary supplements, or medications.
- ◆ Taking creatine with a carbohydrate source (sugar or starch) increases how much is absorbed.
- ◆ Creatine does not help exercise performance at all in people who also drink coffee or take other sources of caffeine.

SEE ALSO:

Creatine Complete Monograph: <http://www.mcp.edu/herbal/creatine/creatine.pdf>

Creatine Clinician Information Summary: <http://www.mcp.edu/herbal/creatine/creatine.cis.pdf>

Column on OnHealth.com: <http://onhealth.com/ch1/columnist/item,44134.asp>