

Title: Effect of Creatine Supplementation on Muscle in the Elderly

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Abstract:

Sarcopenia, or muscle loss due to aging, is a serious health concern made worse by poor nutrition and lack of physical activity. Although the compound creatine has been used to increase muscle power in young adults, the studies in elderly patients have failed to consistently prove an increase in muscle mass or strength. The safety of creatine should be compared to the possible benefit on a case-by-case basis.

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## Creatine Safety

*The Food and Drug Administration does not control creatine.*

Creatine is likely safe when given by mouth at proper doses in adults.

There is some concern that very high doses of creatine might cause high blood pressure or other health problems such as kidney, liver, or heart problems; however, this has not been proven.

In addition, Creatine can cause:

- Gastrointestinal pain
- Nausea
- Diarrhea
- Muscle cramps
- Dehydration

**For further information about Creatine, go to:**

Medline Plus  
[www.medlineplus.gov](http://www.medlineplus.gov)

Mayo Clinic  
[www.mayoclinic.com](http://www.mayoclinic.com)

**Developed by  
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## Creatine Supplementation

Effect on elderly  
muscles



**University of Minnesota  
Primary Care Clerkship  
Patient Education Tool**

## What is Creatine?

Creatine is a compound that is naturally made in the body and also eaten in our diet. It is made in the kidneys and liver and travels through the blood to muscle. About 95% of the total creatine in our body is stored in skeletal muscle.

Although it has not been proven totally effective, creatine is used for the following:

- Increasing exercise tolerance
- Improving muscle strength
- Depression
- Bipolar disorder
- Rheumatoid arthritis
- Neurological diseases such as Parkinson's Disease and Lou Gehrig's Disease

## Age-Related

## Muscle Loss

Age-related muscle loss, also called sarcopenia, is a serious health concern. It leads to decreased muscle strength and power. Muscle loss is worsened by a poor diet and lack of physical activity. It is improved with strength resistance exercises, and possibly nutritional supplements such as creatine.

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

## Does Creatine help elderly muscles?

Many studies have researched the effects of creatine supplementation on elderly muscles. However, these studies have had conflicting results, with some reporting improved muscle mass, and others reporting no difference.

### Creatine Dosing

For increasing muscle mass, many dosing regimens have been tried. Patients usually take creatine by mouth, and are often "loaded" with 20g per day for 5 days, followed by a maintenance dose of 2g