

Creatine Monohydrate Fact Sheet

What is Creatine Monohydrate?

Creatine is a substance that is naturally made by our bodies. It is an amino acid (amino acids are the building blocks of protein) made in the body by the liver and kidneys, and derived from the diet through meat and animal products. Creatine is also sold as a nutritional supplement.

What does creatine normally do in the body?

In the body, creatine is changed into a molecule called "phosphocreatine" which serves as a storage reservoir for quick energy. Phosphocreatine is especially important in the muscles and nervous system, which periodically need large amounts of energy.

Is creatine the same as creatinine?

No. In healthy muscle tissue, some creatine is converted into a waste product called creatinine. Creatinine enters the blood and that is filtered out by the kidneys. Creatinine levels are used to assess kidney function.

How will it help me?

The amount of phosphocreatine in the muscles of people with mitochondrial disorders is lower than normal. Researchers suspect that creatine supplementation may improve muscle strength by bolstering the muscles' energy stores. Creatine may therefore give your muscles more energy and help to prevent lactic acid from building up in your muscles (prevent the burning feeling in muscles after exercise).

How much do I take?

Take 4-6 grams per day. You may divide this into two doses

How do I take it?

Creatine comes in powder, liquid and pill forms. You can add the powder to sugar-free drinks, including hot drinks, but do not boil it. Boiling or adding sugar to creatine will increase its conversion to creatinine.

Where can I get it?

Creatine monohydrate is available at most health food stores and pharmacies. It is always advisable to "shop around" to get the best price. Purity is an important issue. There are some concerns that impure creatine monohydrate is being marketed from China. It looks brownish. Products made in USA, Germany and Canada are usually free from impurities. The label should indicate "99% pure creatine monohydrate". It should be pure white. Do not buy a product called "Muscle Marketing USA" sold in running stores.

Please note: If a **muscle biopsy** has been scheduled for you, please do not take this supplement for a month prior to the biopsy. Once you have the biopsy, you may resume taking it.