



SAM-e

Supplement to aid liver detoxification, lift depression and ease arthritis

S-adenosylmethionine (abbreviated as SAME or SAM-e) is a natural substance the body makes to facilitate certain chemical reactions. It is synthesized in the body from the amino acid methionine and adenosine triphosphate (ATP). Most of it is created and used in the liver. First discovered in Europe, and available there by prescription since 1975, SAME has a number of potential therapeutic benefits. It may be helpful for depression, liver problems (such as cirrhosis of the liver, chronic viral hepatitis, jaundice and Gilbert's syndrome), arthritis (including osteoarthritis), fibromyalgia, Parkinson's disease and Alzheimer's disease.

SAME is a methyl (CH₃) donor, which means it helps in a variety of biological processes that involve methyl-based substances. These substances include: glutathione, carnitine, creatine phosphate (used in ATP energy production), epinephrine (adrenaline) and phosphatidyl choline (a nutrient that protects the nerves). Let's take a closer look at some of the potential uses for SAME as a supplement.

Depression

Studies have suggested that SAME can be effective for mild to moderate depression. It helps the body produce more mood-enhancing neurotransmitters such as dopamine and serotonin. It works in conjunction with folic acid, B12 and B6 to produce these neurotransmitters, so it would be wise to use a B-Complex supplement when taking SAME. It can also aid energy production. Unfortunately, the dose required to manage depression is quite high. European studies typically use 800 to 1600 mg. (4-8 tablets) daily. SAME can move a person from depression to mania and is therefore contraindicated with bipolar disorder.

Liver Function

Methylation is one of the major pathways the liver uses to detoxify. As a methyl-donor, SAME helps increase methylation in the liver. Methylation also occurs in every cell of the body and helps the body get rid of excess hormones and neurotransmitters, including steroidal hormones like estrogen, adrenaline, dopamine, melatonin, histamine and serotonin. It also helps eliminate homocysteine, a compound associated with increased risk of heart disease. A variety of chemicals (amines, phenols, etc.) are also eliminated through methylation.

It also helps to increase glutathione production. Glutathione is a major antioxidant in the body and helps protect the liver from free radical damage. It also helps in liver detoxification through a process called glutathione conjugation. Heavy metal poisoning depletes glutathione levels. These properties give SAME some

benefits in situations such as cirrhosis of the liver, chronic viral hepatitis and jaundice related to pregnancy.

Methylation is also aided by B-vitamins (B6, B12, folic acid and choline) and magnesium is essential for the methylation enzyme. So, these supplements will also enhance methylation and may help support the action of SAM-e.

Arthritis

SAME also shows promise with arthritis, particularly osteoarthritis. It has been shown to be as effective as nonsteroidal anti-inflammatories in relieving pain without the side effects. It may also prevent damage to cartilage and may help rebuild cartilage when taken for long periods of time (more than 3 months).

Other

Several studies have been conducted using SAME with fibromyalgia. The results are promising, but not conclusive at this point. Patients taking SAME reported improvements in pain, fatigue, morning stiffness and mood. Studies suggest that people with Parkinson's disease have low levels of SAME. SAME can slow the progression of Parkinson's disease in some cases and reduce some symptoms of Alzheimer's. More research is needed.

Usage

For arthritis, liver detoxification and other related uses take 1 tablet of SAME with breakfast and the other with lunch. A third may be added at dinner, but taking SAME at night can cause restlessness. Larger doses are needed for depression (2 tablets twice daily).

Side effects are rare, but may include heartburn, dry mouth, restlessness, diarrhea, headaches and mania. SAME is contraindicated in bipolar disorders and is not recommended for use by children. Be cautious when using SAME with antidepressant medications or other drugs as negative interactions have been reported. SAME should be considered a medicinal supplement and is not recommended for healthy people, only for assisting people with specific health problems.

Selected References

PDR for Nutritional Supplements Edited by S.S. Hendler, PhD and D. Rorvik,

Herbal Therapy and Supplements by Merrily Kuhn and David Winston

The Comprehensive Guide to Nature's Sunshine Products by Tree of Light Publishing

<http://www.umm.edu/altmed/ConsSupplements/SAdenosylmethionineSAMec.html>

http://www.stoneclinic.com/sam_e.htm

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