



SAMe

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According to webmd.com, **SAMe or s-adenosyl-methionine is a chemical that is found naturally in the body.** It can also be made in the laboratory. SAMe has been available as a dietary supplement in the US since 1999, but it has been used as a prescription drug in Italy since 1979, in Spain since 1985, and in Germany since 1989. Researchers discovered the potential usefulness of SAMe for treating osteoarthritis by accident. They were studying SAMe's effect on depression when the patients they were following reported an unexpected improvement in their osteoarthritis symptoms. SAMe is used for depression, anxiety, heart disease, fibromyalgia, osteoarthritis, bursitis, tendonitis, chronic lower back pain, dementia, Alzheimer's disease, slowing the aging process, chronic fatigue syndrome (CFS), improving intellectual performance, liver disease, and Parkinson's disease. It is also used for attention deficit-hyperactivity disorder (ADHD), multiple sclerosis, spinal cord injury, seizures, migraine headache, and lead poisoning. Some women use SAMe for premenstrual syndrome (PMS) and a more severe form of PMS called premenstrual dysphoric disorder (PMDD). The body uses SAMe to make certain chemicals in the body that play a role in pain, depression, liver disease, and other conditions. People who don't make enough SAMe naturally may be helped by taking SAMe as a supplement.

SAMe research pioneer G. Stramentinol notes; "[SAMe] is an important physiologic compound that occurs in every living cell... SAMe is probably second only to ATP in the variety of reactions in which it serves as a cofactor."

SAMe has been studied extensively in the treatment of osteoarthritis and depression. Many trials provide evidence that SAMe reduces the pain associated with osteoarthritis and is well tolerated in this patient population. Anti-inflammatory and analgesic (pain relieving) activity has also been attributed to SAMe.

Who might benefit?

1. People suffering from cirrhosis, chronic liver disease, alcoholic liver damage, toxic chemical exposure, NSAID-liver damage, estrogen induced liver problems, bile disorders, and environmental chemical hypersensitivity may all benefit from SAMe, as well as possibly suffer from SAMe metabolism "bottlenecks."
2. People who suffer from osteoarthritis, rheumatoid arthritis, fibromyalgia, joint injuries and osteoporosis may all benefit from SAMe. SAMe stimulates chondrocytes to increase production of new cartilage, UNLIKE NSAIDS (aspirin, ibuprofen, etc.) chronically consumed by many joint inflammation/ degeneration sufferers, which actually inhibit proteoglycan synthesis needed to renew cartilage and synovial fluid. Furthermore SAMe is actually protective of the stomach lining, while NSAIDs tend to damage and irritate the gut lining with chronic use.
3. People suffering from depression, especially people who cannot tolerate standard antidepressant drugs

(e.g. tricyclics, SSRIs, etc.), or who have minimal or no response to them. SAME has also shown considerable efficacy in treating depression secondary to chronic diseases such as arthritis, fibromyalgia, liver disease and alcoholism.

4. People suffering from chronic gastrointestinal lining irritation or ulceration, whether from alcohol abuse chronic NSAID use, chemical irritation, or unknown cause.
5. People who are concerned with their heart/ artery disease risk due to elevated blood levels of homocysteine (HCy). SAME activates the key B6-dependant enzyme, cystathionine synthase, which helps convert toxic HCy to the beneficial detoxifiers cysteine, N-Acetylcysteine, glutathione and taurine.
6. People wishing to protect their brain's from the entrophy of aging, or who are in early stages of dementia. SAME helps maintain youthful neuronal membrane ratios of phosphatidyl choline; cholesterol. This promotes more optimally fluid membranes, which in turn promotes optimal hormonal, neurotransmitter and electrical neuron signal reception and processing.

SAME is a compound produced by the liver and used throughout the body in a chemical process called methylation. Methylation, essential to many chemical reactions in the body, is one of the last steps in the production of the brain chemicals serotonin, dopamine and norepinephrine (which regulate mood).

Because there are no foods that have high SAME levels, our bodies must make this substance. Our liver usually creates SAME from the amino acid (protein) methionine, which is found in many foods.

Interestingly, supplementing with methionine does not work as well as supplementing with SAME, because creating SAME takes multiple steps and requires many co-factors (other nutrients, such as vitamin B12, folate and others) to ensure that the process is successful.

While the use of SAME in your body is diverse (it participates in over 35 biochemical processes), the process of interest in depression is the creation of the brain chemicals mentioned above (dopamine, serotonin and norepinephrine). People with depression often have low levels of these brain chemicals, and SAME affects these neurotransmitters in different ways. SAME slows the breakdown of these brain chemicals, allowing them to work longer. In addition, SAME speeds production of the receptors which receive these neurotransmitters. The presence of additional receptors allows the neurotransmitters that are present to work more effectively.

It appears that SAME works well for people with mild depressive symptoms (with no risk for or indication of suicidal behavior), rather than individuals with more severe major depression. SAME may also benefit people who cannot take standard antidepressant medications due to their side effects. SAME could also be used in conjunction with other (standard) anti-depressants, but only under the supervision of a qualified practitioner.

The potential usefulness of the SAME in liver disease is based on the following information. 1) SAME is a precursor of glutathione, which is an endogenous antioxidant. 2) Chronic ethanol intake depletes hepatic SAME levels that are associated with impaired metabolism of methionine, a precursor of SAME. 3) SAME has been shown to attenuate hepatotoxicity caused by TNF-alpha, which is known to trigger alcoholic hepatitis. 4) In animal models, SAME administration restored mitochondrial glutathione depletion and attenuated liver injury caused by alcohol and other hepatotoxins

Precautions:

If taken with OTC or other medication, please consult a professional health care provider.

Side effects may include dry mouth, nausea, gas, diarrhea, headache, anxiety, a feeling of elation, restlessness, and insomnia. For this reason, you should not take SAME at night.

Large doses of SAME may cause mania (abnormally elevated mood). Start at a low dose and gradually increase it; do not exceed recommended doses.

Pregnant and breastfeeding women should not take SAME.

People with bipolar disorder (manic-depression) should not take SAME since it may worsen manic episodes.

SAMe should not be combined with other antidepressants without first consulting your doctor.

Possible Interactions:

If you are being treated with any of the following medications, you should not use SAME without first talking to your health care provider.

Taking SAME at the same time as these drugs may increase the risk of serotonin syndrome (a potentially dangerous condition caused by having too much serotonin in your body):

- Dextromethorphan (Robitussin DM, other cough syrups)
- Meperidine (Demerol)
- Pentazocine (Talwin)
- Tramadol (Ultram)
- Antidepressant medications
- Levodopa (L-dopa)
- Medications for diabetes



Be sure to try NSP's [SAM-e \(200 mg Active\) \(30 tabs\)](#) from Nature's Sunshine. You can see other products containing SAM-e by [clicking here](#).

References

http://www.mayoclinic.com/health/same/NS_patient-same

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http://www.mentalhelp.net/poc/view_doc.php?type=doc&id=11880&cn=15

Yours in Good Health!

Sincerely,

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