# SAMe – Mood, Osteoarthritis, and More

## About SAMe

- S-adenosyl-L-methionine (SAMe) is a naturally occurring compound found in almost every living cell.<sup>1</sup>
- Key factor in several biochemical pathways, including methylation reactions, glutathione formation, and glutathione S-transferase activity.<sup>1,2</sup>
- Supports the integrity of cell membranes.
- Increases production of proteoglycans, needed for cartilage formation.<sup>2</sup>
- Helps in the production and breakdown of several important brain chemicals, including dopamine and serotonin.
- Involved in controlling cell growth.
- Aids the body in the production of glutathione, a major antioxidant.
- Helps maintain cartilage and joint health.<sup>3–5</sup>
- Helps support emotional well-being.<sup>6–8</sup>
- Suitable for vegetarians/vegans.
- Delayed-release tablets promote optimal absorption.
- Prepared using a natural biofermentation process that yields higher active ingredients over synthetic variations.
- Useful for a wide number of other health concerns.

## How to Use SAMe

- SAMe should always be taken on an empty stomach and for a minimum of 2 weeks, at which time effects should be observed.
- For mood balance (adults): 1–4 tablets 2 times per day or as directed by a health care practitioner. Consult a health care practitioner for use beyond 6 weeks.
- For osteoarthritic pain (adults): 2 tablets 3 times per day or as directed by a health care practitioner. Not to exceed 6 tablets per day. Consult a health care practitioner for use beyond 12 weeks.

# **Cautions and Contraindications**

 Consult a health care practitioner prior to taking SAMe if taking antidepressants, hepatotoxic drugs or monoamine oxidase (MAO) inhibitors. Not recommended for use in children. Do not use if you are pregnant or breastfeeding or if you have bipolar disorder (manic-depressive illness). Do not take at night as SAMe may cause anxiety, restlessness, and insomnia. Possible side effects are: mild gastrointestinal upsets (such as stomach pain, nausea, diarrhea, and flatulence), anxiety, hyperactive muscle movement, insomnia, and hypomania. When these side effects occur, they

#### PATIENT NAME:

#### PRACTITIONER NOTES:

often diminish with time or resolve with lower doses or cessation of use. Keep out of reach of children.

## **Drug Interactions**

 Deficiency of vitamins B6, B12, and other methyl donors may exacerbate SAMe deficiency. Should not be used in conjunction with the anti-Parkinson's drug Levodopa.<sup>9</sup> Consult a health care practitioner for use of SAMe with tricyclic antidepressants (i.e., Anafranil) or other antidepressants.

# **Quick Tips for Optimal Health**

- Cognitive behavioural therapy is a very effective approach for mental health management.<sup>10</sup>
- Therapeutic laser therapy helps relieve joint pain by decreasing levels of inflammation.<sup>11</sup>
- The use of simple relaxation techniques, like guided imagery, helps reduce the pain as well as the amount of medication used for osteoarthritis.<sup>12</sup>
- Acupuncture has been shown to have long-lasting relief for pain, including osteoarthritic pain.<sup>13</sup>
- Following a Mediterranean diet may help reduce pain and joint stiffness in people with osteoarthritis.<sup>14</sup>

#### PRACTITIONER CONTACT INFORMATION:

59135

This information is for educational purposes only, and is not intended for self-diagnosis or self-treatment of conditions that should be assessed and treated by your health care practitioner. This product is not intended to diagnose, treat, cure, or prevent any disease. © All rights reserved – Bioclinic Naturals® Canada. Bioclinic Naturals Canada is distributed by Assured Natural Distribution Inc.



## References

- 1. Bottiglieri, T. (2002). S-adenosyl-L-methionine (SAMe): From bench to the bedside—molecular basis of a pleiotrophic molecule. Am J Clin Nutr, 76 (suppl), 1151S-75.
- 2. Harmand, M.F., Vilamitjana, J., Maloche, E., et al. (1987). Effects of S-adenosylmethionine on human articular chondrocyte differentiation. An in vitro study. Am J Med, 83(5A), 48-54.
- 3. Müller-Fassbender, H. (1987). Double-blind clinical trial of S-adenosylmethionine versus ibuprofen in the treatment of osteoarthritis. Am J Med, 83, 81-3.
- 4. Vetter, G. (1987). Double-blind comparative clinical trial with S-adenosylmethionine and indomethacin in the treatment of osteoarthritis. Am J Med, 83, 78-80.
- 5. Caruso, I., & Pietrogrande, V. (1987). Italian double-blind multicenter study comparing S-adenosylmethionine, naproxen, and placebo in the treatment of degenerative joint disease. Am J Med, 83, 66-71.
- 6. Kagan, B.L., Sultzer, D.L., Rosenlicht, N., et al. (1990). Oral S-adenosylmethionine in depression: A randomized, double-blind, placebo-controlled trial. Am J Psych, 147(5), 591-5.
- 7. Bell, K.M., Plon, L., Bunney, W.E. Jr., et al. (1988). S-adenosylmethionine treatment of depression: A controlled clinical trial. Am J Psych, 145, 1110-4.
- 8. Williams, A.L., Girard, C., Lui, D., et al. (2005). S-adenosylmethionine (SAMe) as treatment for depression: A systematic review. Clin Invest Med, 28(3), 132-9.
- 9. Charlton, C.G., & Crowell, B. Jr. (1992). Parkinson's disease-like effects of S-adenosyl-L-methionine: Effects of L-dopa. Pharmacol Biochem Behav, 43, 423-31.
- 10. Wuthrich, V.M., & Rapee, R.M. (2013). Randomised controlled trial of group cognitive behavioural therapy for comorbid anxiety and depression in older adults. Behav Res Ther, 51, 779-86.
- 11. Jang, H., & Lee, H. (2012). Meta-analysis of pain relief effects by laser irradiation on joint areas. Photomed Laser Surg, 30, 405-17.
- 12. Baird, C.L., Murawski, M.M., & Wu, J. (2010). Efficacy of guided imagery with relaxation for osteoarthritis symptoms and medication intake. Pain Manag Nurs, 11, 56-65.
- 13. Vickers, A.J., Vertosick, E.A., Lewith, G., et al. (2018). Acupuncture for chronic pain: Update of an individual patient data meta-analysis. J Pain, 19(5), 455-74.
- 14. Buck, A.N., Vincent, H.K., Newman, C.B., et al. (2023). Evidence-based dietary practices to improve osteoarthritis symptoms: An umbrella review. Nutrients, 15(13), 3050.