

# SAMe



## CLINICAL APPLICATIONS

- Provides Mood Support
- Supports Musculoskeletal Health
- Supports Liver Health

## MOOD SUPPORT

### What is SAMe?

S-Adosylmethionine (SAMe) is the active methyl form of the amino acid methionine. SAMe is necessary for an array of biochemical pathways, including neurotransmitter synthesis, metabolism of homocysteine, and detoxification. As a donor of methyl groups, SAMe supports glutathione production, liver health, musculoskeletal and joint comfort, and a positive mood. This formulation of SAMe includes 400 mcg of 5-methyltetrahydrofolic acid, as pathways using SAMe are dependent on this methylated cofactor.

### Overview

SAMe is a principle methyl donor for biochemical reactions throughout the body.<sup>1</sup> This methyl transfer is critical to reactions involving proteins, phospholipids, DNA, RNA, creatine, hormones, development of cell membranes, degradation of histamine, and formation of norepinephrine and dopamine.<sup>2,3</sup>

### Deficiency†

SAMe levels tend to decline as people age. In addition, SAMe is used in the production of the mood elevating neurotransmitter serotonin as a methyl donor. Low levels of SAMe have been associated with certain mood challenges.

### Detox Support and Antioxidant Protection†

SAMe is an essential molecule in the synthesis of glutathione, a key component of antioxidant and detoxification.<sup>5</sup> After donating a methyl group, SAMe is converted to S-adenosylhomocysteine (SAH), a reaction that promotes the trans-sulfuration pathway in the liver that produces glutathione. SAH is then broken

down to trimethylglycine (TMG), or betaine anhydrous which plays an important role in maintaining a healthy SAMe:SAH ratio in the liver. Studies show SAMe supports liver health<sup>6,7</sup> and positively affects the cell-life regulation of hepatocytes.<sup>8</sup>

### Mood Health†

SAMe appears to support mood health, possibly due to its active role in methylation and involvement in the formation of monoamine neurotransmitters.<sup>9-12</sup> A meta-analysis showed SAMe supported a healthy mood compared to placebo, with an effect comparable to that of other treatments.<sup>13</sup> A 30-day, double-blind, placebo-controlled, randomized study of 80 women suggested that there was a significant improvement in mood after the women received an oral dose of 1,600 mg/day of SAMe compared to placebo.<sup>14</sup> Another study of 143 subjects who received an oral dose of 1,600 mg/day of SAMe suggested that SAMe yielded positive results that were comparable to other treatments for supporting a healthy mood, but SAMe was better tolerated.<sup>15</sup> In a small, four-week, double-blind, randomized trial comparing oral SAMe with other treatments, 62% of the SAMe group showed significant improvement in mood and the study revealed a significant correlation between plasma SAMe levels and the degree of healthy mood support, regardless of treatment type.<sup>16</sup>

### Folate

Folate is a water-soluble member of the B-complex vitamins that is critical for maintaining optimal methylation pathways. Malabsorption and genetic defects in the enzyme 5-methyltetrahydrofolate reductase (5-MTHFR) can result in an impaired ability to activate folic acid. Folic acid

supports the trans-methylation pathway, which metabolizes homocysteine into cysteine. Increases in oxidative stress may shift homocysteine metabolism towards trans-sulfuration to increase hepatic production of reduced glutathione.<sup>3</sup>

## Directions

1-2 capsules two times per day or as recommended by your health care professional.

## Does Not Contain

Gluten, corn, yeast, artificial colors or flavors.

## Cautions

If you are pregnant or nursing, consult your physician before taking this product.

## Warning

This product should not be taken with any anti-depressant drugs (MAO Inhibitors, bicyclic, tricyclic, Fluoxetine, etc.) unless under close supervision of your health care professional.

<b>Supplement Facts</b> <sup>ve</sup>		
Serving Size 2 Capsules		
Servings Per Container 30		
	Amount Per Serving	% Daily Value
Folate (from 400 mcg as Quatrefolic® 680 mcg DFE (6S)-5-Methyltetrahydrofolic acid glucosamine salt)		170%
SAMe (as S-Adenosyl-L-methionine disulfate p-toluensulfonate)	400 mg	*

\* Daily Value not established.

**ID# 513060 60 Capsules**

## References

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LT-PDN-207-A

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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