

NEW YORK BUYERS' CLUB: DEPRESSION AND DIETARY SUPPLEMENTS-- SUMMARY OF CURRENT EVIDENCE AND SUGGESTED USE

SUPPLEMENT	DOSAGE	EFFECT	CAUTIONS
DHEA	100mg/day	Anti-depressant (mild to moderate); may also improve sexual function	Dosage varies by sex; not recommended if you have prostate problems or cancer diagnosis
SAMe	400-800mg/day for mild to moderate depression; 800-1600mg/day for moderate to severe	Anti-depressant (mild to severe); supports joint health and may decrease pain related to osteoarthritis	Do not use if diagnosed with bipolar disorder or Parkinson's; use with caution with other anti-depressants; take with B-complex to avoid homocysteine buildup
St. John's Wort	900mg/day	Anti-depressant (mild to moderate)	Interacts with pharmaceuticals; do not take with other anti-depressants, protease inhibitors, or many other drugs
5-HTP	50 - 500mg/day	Anti-depressant; sleep aid; appetite suppression; may also decrease symptoms of fibromyalgia and migraine headaches	Suppresses appetite; some gastrointestinal side effects
L-Tryptophan	500mg/day	Anti-depressant; sleep aid; anti-manic; used with lithium for bipolar disorder	Suppresses appetite; some gastrointestinal side effects
Fish Oil	3 - 10g/day	Anti-depressant; used for bipolar disorder; also used to lower triglycerides and improve cardiovascular health	Blood-thinning effects

In recent years there's been a lot of good scientific work about using supplements to address depression. The supplements studied have ranged from the herb St. John's Wort, which has a long tradition of use, to molecules like SAMe, L-Tryptophan, and 5-HTP, which have drawn attention because of their role in the body's production of serotonin, a "neurotransmitter" intimately connected with mood and cognitive function. Other developments in depression research involve the steroid DHEA and—surprise!—fish oil.

Take a look at the chart above for a quick comparison of effects, suggested dosages, and cautions for each of these supplements. For more information, read the discussions below.

DHEA (DeHydroEpiAndrosterone) probably escaped being banned in the U.S. in 2005 partly because, unlike other steroids, it can't be used for "doping"—it can't be abused in the way that other steroids are notoriously misused as "performance enhancers."

Now to recent investigations of DHEA as an anti-depressant. A pilot study a few years back found that after three weeks of treatment at 90mg/day of DHEA, people experienced significant improvement with many types of depressive symptoms, including "loss of energy, lack of motivation, emotional 'numbness,' sadness, inability to cope and worry." A later, larger-scale study sponsored by the National Institute of Mental Health found DHEA to be an effective therapy for mild-to-moderate midlife depression, on a par with some prescription drug treatments. Moreover, the NIMH data showed that taking DHEA resulted not only in a significant lifting of depression, but also a parallel improvement in sexual functioning. This is particularly welcome news for those who have tried certain prescription anti-depressants, only to find that the drugs have the unwanted side effect of inhibiting sexual function.

Note that dosing recommendations vary for men versus women, and DHEA is not recommended for those diagnosed with prostate problems or cancers.

SAMe (S-adenosyl-L-methionine): First studied by Italian researchers in the 1950s, SAMe is produced naturally in the body from the amino acid methionine. When taken as a supplement, it increases

concentrations of the neurotransmitters serotonin and L-dopamine, which have to do with mood. Several studies done over the years show SAME to have an anti-depressant effect comparable to prescription drugs. A dose of 400-800mg/day has been studied for mild to moderate depression, and 800-1600mg/day for the moderate to severe condition.

SAME generally has fewer side effects than prescription anti-depressants. However, it should be avoided in people with bipolar disorder or Parkinson's, and should be used cautiously with other antidepressants, because the combination may push serotonin levels too high. Taking a B-complex vitamin while using SAME can counter its potential to build up the body's levels of homocysteine, which is associated with heart disease. It's best to take them separately.

SAME has also been investigated as an aid to joint health, and to counter pain related to osteoarthritis.

St. John's Wort is a common herb whose active ingredient is hypericin. The herb has clinically proven (multiple, well-controlled studies, mostly in Germany) antidepressant effects for mild to moderate depression – without the side effects the drugs can cause. While a recent U.S. study found no benefit from St. John's Wort for severe depression, the same study found no benefit from the use of the drug Zoloft, either. High doses of the herb may cause a sensitivity to light (phototoxicity), so avoid direct sunlight or sunbathing while using. Do not take St. John's Wort with 5-HTP, serotonin re-uptake inhibitors (like Prozac), or with protease inhibitors, as it may affect beneficial liver enzymes. St. John's Wort may also have activity against Epstein-Barr and herpes infections.

L-Tryptophan and **5-HTP** (5-hydroxy L-tryptophan): These closely-related supplements are converted in the body to serotonin and to melatonin. (Specifically, L-Tryptophan converts to 5-HTP, which then converts to serotonin or melatonin.) Their use as anti-depressants has been studied, and they have also been found to aid sleep and suppress appetite. (To minimize appetite suppression, try taking the supplement an hour before bedtime.) Mild gastrointestinal side effects have been reported with both. For best absorption, take separately from protein-containing foods and dietary supplements. (Take with water or juice instead.) Although L-Tryptophan and 5-HTP are close relatives, people may respond somewhat differently to them. Thus, if encountering unwanted side effects or lack of effect from one, you may want to try the other.

The suggested dosage for 5-HTP is wide, ranging from 50 and 500 mg daily. It can be used together with other anti-depressants, in which case an effective dose could be quite low. The best approach is to start at the low end of the range and increase as needed. Like 5-HTP, L-Tryptophan has been used in combination with other anti-depressants, and has also been employed with lithium for bipolar disorder. 5-HTP may also decrease symptoms of fibromyalgia and migraine headaches.

Fish Oil (brand stocked by NYBC: **DHA Max** [Jarrow]) You may be familiar with the use of fish oil to regulate levels of blood fats and thereby support cardiovascular health. Recently, however, there have been studies showing that fish oil can be beneficial in treating depression and bipolar disorder. It's also of note that it can be taken with other anti-depressants. Doses found effective in treating depression are quite high, 3 to 9 grams per day.

Recommended for further reading: Christian R. Dolder's chapter on "Depression," in *Natural Products: A Case-Based Approach for Health Care Professionals*, ed. Karen Shapiro, published by the American Pharmacists Association (Washington, DC: 2006).

See also the New York Buyers' Club (NYBC) website, www.newyorkbuyersclub.org, for additional details on these dietary supplements and their use. NYBC is a membership co-op operating as a non-profit, 501(c)3 organization, with the goal of disseminating knowledge about dietary supplements and making them affordable to its members.