



St. John's Wort

(Time-Release)

Stock #653-1 (60 tablets)

In 1996, the prestigious *British Medical Journal* published results of a systematic review of 23 randomized, controlled trials using St. John's wort, involving over 1,750 outpatients with mild to moderately-severe depressive disorders. The review confirmed that St. John's wort is equally effective as standard antidepressant drugs, but has far fewer side effects.^{1,2}

It is important to note that although research has proven the clinical effectiveness of St. John's wort as equal to conventional antidepressants, there is a significant advantage to using the herb simply due to its lack of side effects. A large-scale study, involving 3,250 patients ranging in age from 20 to 90 years, showed that only 2.4% experienced any side effects, namely gastrointestinal irritation, allergic reaction, tiredness and restlessness. The frequency and severity of these side effects were regarded as clinically insignificant, particularly in comparison to the numerous adverse effects associated with tricyclics and

other antidepressants such as anxiety, loss of appetite, constipation, diarrhea, dizziness, drowsiness, dry mouth, headache, insomnia, male sexual dysfunction, nausea, nervousness, stomach discomfort, increased sweating, tremor and weakness, to name a few. Furthermore, the *British Medical Journal* reports that an overall average of 30.1 deaths occurred (during 1987-92) per million prescriptions written for antidepressants (34.14 deaths for tricyclic drugs alone). In stark contrast, there have been no reported deaths from St. John's wort use. In fact, according to an article published in the *American Journal of Natural Medicine*, German doctors prescribed 66 million daily doses of St. John's wort extract in 1994, and today, prescribe St. John's wort 20 times more often than Prozac.²⁻⁵

Extensive research has been conducted in an effort to ascertain how St. John's wort works. Originally, the herb was believed to function as an antidepressant by means of hypericin's (an active constituent in the herb) inhibition of monoamine oxidase (MAO), resulting in an increase of serotonin and other neurotransmitters. However, more recent research has proven otherwise. Current theory now suggests that St. John's wort prevents the re-uptake of serotonin in much the same way as prescription antidepressants like fluoxetine (Prozac), paroxetine (Paxil), and sertraline (Zoloft). This school of thought has been supported by German research, which confirmed a 50% inhibition of serotonin uptake by postsynaptic receptors using a standardized St. John's wort extract. However, the mode of action to explain St. John's wort's clinical effectiveness still remains unclear.^{2,6}

In addition, studies initially indicated that hypericin was the active constituent responsible for St. John's wort's antidepressant action. However, researchers have since turned to another substance discovered in St. John's wort, called hyperforin, which may play an even greater role in the herb's mood-enhancing effects. Findings show that higher levels of hyperforin result in more effective antidepressant activity. A randomized, double-blind, placebo-controlled study was conducted with 147 participants suffering from mild to moderate depression (according to DSM-IV criteria). At the end of the 6-week trial, those taking St. John's wort with the highest level of hyperforin (900mg of St. John's wort daily, concentrated to 5% hyperforin) reported the most positive results—70% indicated their symptoms of depression were much or very much improved. In comparison, only 55% of those taking the less-concentrated dose (900mg, concentrated to 0.5% hyperforin), and 48% taking a placebo, reported improvement.⁷⁻⁹

Furthermore, in another randomized, double-blind, placebo-controlled trial, two St. John's wort extracts, standardized to contain the same hypericin contents but different hyperforin contents (5% and 0.5% respectively), were compared. After 8 days of supplementation among 54 participants, those receiving the higher-concentrated hyperforin dose displayed the greatest changes in delta, theta and alpha-1 brain-wave activity. Changes in these frequency bands (brain-waves) are associated with neurotransmitter activity and a subsequent change in mood: delta (acetylcholine), theta (noradrenaline), alpha (serotonin). Since researchers theorize that St. John's wort causes an improvement in positive emotions by enhancing "normal" levels of various neurotransmitters such as dopamine, noradrenaline and serotonin, it is not surprising that recent evidence suggests that hyperforin may be responsible for such mood-elevating effects by inhibiting the re-uptake of these neurotransmitters.^{8,10}

Finally, research suggests that St. John's wort may also benefit those suffering from insomnia and fibromyalgia. Unlike standard antidepressants (particularly tricyclics and MAO inhibitors), which often interfere with and reduce sleep quality, St. John's wort has been shown to enhance deep sleep and improve sleep quality without acting as a sedative (i.e. studies show no change in the onset of sleep or total sleep duration). Also, since there is a correlation between the pain of fibromyalgia and sleep quality, St. John's wort may be helpful in reducing pain and associated fatigue by helping sufferers achieve a deeper, more restful sleep. Furthermore, since the primary cause of pain of fibromyalgia is related to low levels of serotonin (chronic low serotonin levels seem to greatly increase the sensation of pain), St. John's wort's ability to enhance serotonin levels by inhibiting serotonin re-uptake may prove

beneficial.^{2,11,12}

Each tablet of NSP's Time-Release St. John's Wort provides 450mg of St. John's wort herb, standardized to contain 3% hyperforin and 0.2% hypericin.

References:

- 1 Linde, K., et. al. "St. John's wort for depression—an overview and meta-analysis of randomized clinical trials." *British Medical Journal*; 1996, 313(7052): 253-258.
- 2 Murray, M. "Common questions about St. John's wort extract." *American Journal of Natural Medicine*; 1997, 4(7): 14-19.
- 3 Woelk, H., et. al. "Benefits and risks of the hypericum extract LI 160: drug monitoring study with 3,250 patients." *Journal of Geriatric Psychiatry and Neurology*; 1994, 7(Suppl. 1): 34-38.
- 4 Mindell PhD, E & Hopkins MA, V. Prescription Alternatives. New Canaan, CT: Keats, 1998.
- 5 Henry, J.A., et. al. "Relative mortality from overdose of antidepressants." *British Medical Journal*; 1995, 310(6974): 221-224.
- 6 Perovic, S. & Muller, WE. "Pharmacological profile of hypericum extract. Effect on serotonin uptake by postsynaptic receptors." *Arzneimittelforschung*; 1995, 45(11): 1145-1148.
- 7 Rosenthal MD, N. *St. John's Wort: The Herbal Way to Feeling Good*. NY, NY: HarperCollins, 1998.
- 8 Berman, J. "Compound may hold key to the power of St. John's wort, studies show." *Herbs For Health*; 1999, 3(6): 76.
- 9 Laakmann, G., et. al. "St. John's wort in mild to moderate depression: the relevance of hyperforin for the clinical efficacy." *Pharmacopsychiatry*; 1998, 31(Suppl. 1): 54-59.
- 10 Schellenberg, R., et. al. "Pharmacodynamic effects of two different hypericum extracts in healthy volunteers measured by quantitative EEG." *Pharmacopsychiatry*; 1998, 31(Suppl. 1): 44-53.
- 11 Schulz, H. and Jobert, M. "Effects of hypericum extract on the sleep EEG in older volunteers." *Journal of Geriatric Psychiatry and Neurology*; 1994, 7(Suppl. 1): 39-43.
- 12 Affleck, G., et. al. "Sequential daily relations of sleep, pain intensity, and attention to pain among women with fibromyalgia." *Pain*; 1996, 68(2-3): 363-368.