

## St. John's Wort and Depression

St. John's wort is a plant with yellow flowers that has been used for centuries for health purposes, such as for depression and anxiety. This fact sheet answers some frequently asked questions about St. John's wort and depression, and summarizes what the science says about its effectiveness and the research being done.

### Key Points

- Studies suggest that St. John's wort is of minimal benefit in treating major depression. A study cofunded by the National Center for Complementary and Alternative Medicine (NCCAM) found that St. John's wort was no more effective than placebo in treating major depression of moderate severity. There is some scientific evidence that St. John's wort is useful for milder forms of depression.
- St. John's wort interacts with certain drugs, and these interactions can limit the effectiveness of some prescription medicines.
- St. John's wort is not a proven therapy for depression. If depression is not adequately treated, it can become severe and, in some cases, may be associated with suicide. Consult a health care provider if you or someone you care about may be experiencing depression.
- Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

### About St. John's Wort

St. John's wort (*Hypericum perforatum*) is a long-living plant with yellow flowers whose medicinal uses were first recorded in ancient Greece. It contains many chemical compounds. Some are believed to be the active ingredients that produce the herb's effects, including the compounds hypericin and hyperforin.

How these compounds actually work is not yet fully understood, but several theories have been suggested. Preliminary studies suggest that St. John's wort might work by preventing nerve cells in the brain from reabsorbing the chemical messenger serotonin, or by reducing levels of a protein involved in the body's immune system functioning.

St. John's wort has been used over the centuries for mental conditions, nerve pain, and a wide variety of other health conditions. Today, St. John's wort is used for anxiety, mild to moderate depression, and sleep disorders.

In Europe, St. John's wort is widely prescribed for depression. In the United States, there is public interest in St. John's wort as a treatment for depression, but it is not a prescription medicine; it is, however, one of the most commonly used herbal supplements.

In the United States, St. John's wort products are sold as:

- Capsules and tablets
- Teas—the dried herb is added to boiling water and steeped
- Liquid extracts—specific types of chemicals are removed from the herb, leaving the desired chemicals in a concentrated form.

## About Depression

Depression is a medical condition that affects nearly 21 million American adults each year, according to the National Institute of Mental Health. Mood, thoughts, physical health, and behavior all may be affected. Symptoms of depression commonly include:

- Persistent sad, anxious, or “empty” feelings
- Feelings of hopelessness and/or pessimism
- Feelings of guilt, worthlessness, and/or helplessness
- Restlessness or irritability
- Loss of interest or pleasure in activities that the person once enjoyed
- Fatigue and decreased energy
- Difficulty concentrating, remembering details, and/or making decisions
- Insomnia, early-morning wakefulness, or excessive sleeping
- Overeating, or appetite loss
- Thoughts of suicide, suicide attempts
- Persistent aches or pains, headaches, cramps, or digestive problems that do not ease with treatment.

Depression comes in several forms and its symptoms and severity can vary from person to person. For example:

- In **major depression** (also called major depressive disorder), people experience symptoms that interfere with their ability to work, study, sleep, eat, and take pleasure in activities they once enjoyed. Symptoms last for at least 2 weeks but frequently last for several months or longer.
- In **dysthymia** (also called dysthymic disorder), a less severe, but more chronic form of depression, people experience symptoms that are not as disabling but keep them from functioning well or feeling good. Symptoms last at least 2 years. Many people with dysthymia also have episodes of major depression.

- In **bipolar disorder** (also called manic-depressive illness), people have periods of depressive symptoms that alternate or may co-exist with periods of mania. Symptoms of mania include abnormally high levels of excitement and energy, racing thoughts, and behavior that is impulsive and inappropriate.

In addition, milder forms of depression exist that fall into the category of minor depression. In **minor depression**, people experience the same symptoms as major depression, but they are fewer in number and are less disabling. Symptoms last at least 6 months but less than 2 years continuously.

Depression can be treated effectively with conventional medicine, including antidepressants and certain types of psychotherapy.

### **What the Science Says About St. John's Wort for Depression**

Scientific evidence regarding the effectiveness of St. John's wort for depression is inconsistent. An analysis of the results of 37 clinical trials concluded that St. John's wort may have only minimal beneficial effects on major depression. However, the analysis also found that St. John's wort may benefit people with minor depression; these benefits may be similar to those from standard antidepressants. Overall, St. John's wort appeared to produce fewer side effects than some standard antidepressants.

One of the studies included in the analysis was cofunded by NCCAM and two other components of the National Institutes of Health (NIH)—the National Institute of Mental Health and the Office of Dietary Supplements. This study found that St. John's wort was no more effective than placebo in treating major depression of moderate severity. However, the antidepressant sertraline, used in one arm of the study, also showed little difference from placebo.

### **Side Effects and Risks**

The most common side effects of St. John's wort include dry mouth, dizziness, diarrhea, nausea, increased sensitivity to sunlight, and fatigue.

Research has shown that taking St. John's wort can limit the effectiveness of some prescription medicines, including:

- Antidepressant medicines
- Birth control pills
- Cyclosporine, a medicine that helps prevent the body from rejecting transplanted organs
- Digoxin, a medicine used to strengthen heart muscle contractions
- Indinavir and other medicines used to control HIV infection
- Irinotecan and other anticancer medicines
- Warfarin and related medicines used to thin the blood (known as anticoagulants).

When combined with certain antidepressants, St. John's wort also may increase side effects such as nausea, anxiety, headache, and confusion.

## Herbal Products: Issues To Consider

Herbal products such as St. John's wort are classified as dietary supplements by the U.S. Food and Drug Administration (FDA). The FDA's requirements for testing and obtaining approval to sell dietary supplements are different from its requirements for drugs. Unlike drugs, herbal products can be sold without requiring studies on dosage, safety, or effectiveness.

The strength and quality of herbal products are often unpredictable. Products can differ in content not only from brand to brand, but from batch to batch. Information on labels may be misleading or inaccurate.

In addition, "natural" does not necessarily mean "safe." Many natural substances can have harmful effects—especially if they are taken in large quantities or if they interact with other supplements or with prescription medicines.

Tell your health care providers about any complementary and alternative practices you use. Give them a full picture of what you do to manage your health. This will help ensure coordinated and safe care.

## NCCAM Research on St. John's Wort

Recent projects supported by NCCAM include studies of the:

- Safety and effectiveness of St. John's wort for the treatment of minor depression
- Safety of St. John's wort for the treatment of social anxiety disorder
- Effectiveness of St. John's wort for the treatment of obsessive-compulsive disorder
- Effects of St. John's wort on how well birth control pills work
- Possible adverse interactions of St. John's wort and narcotic pain medicines
- Safety and effectiveness of St. John's wort for attention deficit hyperactivity disorder.

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## **For More Information**

### **NCCAM Clearinghouse**

The NCCAM Clearinghouse provides information on CAM and NCCAM, including publications and searches of Federal databases of scientific and medical literature. The Clearinghouse does not provide medical advice, treatment recommendations, or referrals to practitioners.

Toll-free in the U.S.: 1-888-644-6226

TTY (for deaf and hard-of-hearing callers): 1-866-464-3615

Web site: [nccam.nih.gov](http://nccam.nih.gov)

E-mail: [info@nccam.nih.gov](mailto:info@nccam.nih.gov)

### **National Institute of Mental Health (NIMH)**

NIMH is committed to reducing the burden of mental illness through research on mental disorders and the underlying basic science of brain and behavior. NIMH provides publications on depression and other illnesses.

Toll-free in the U.S.: 1-866-615-6464

Web site: [www.nimh.nih.gov](http://www.nimh.nih.gov)

E-mail: [nimhinfo@nih.gov](mailto:nimhinfo@nih.gov)

### **Office of Dietary Supplements (ODS), NIH**

ODS seeks to strengthen knowledge and understanding of dietary supplements by evaluating scientific information, supporting research, sharing research results, and educating the public. Its resources include publications and the International Bibliographic Information on Dietary Supplements database.

Web site: [www.ods.od.nih.gov](http://www.ods.od.nih.gov)

E-mail: [ods@nih.gov](mailto:ods@nih.gov)

## **PubMed®**

A service of the National Library of Medicine (NLM), PubMed contains publication information and (in most cases) brief summaries of articles from scientific and medical journals. CAM on PubMed, developed jointly by NCCAM and NLM, is a subset of the PubMed system and focuses on the topic of CAM.

Web site: [www.ncbi.nlm.nih.gov/sites/entrez](http://www.ncbi.nlm.nih.gov/sites/entrez)  
CAM on PubMed: [nccam.nih.gov/camonpubmed/](http://nccam.nih.gov/camonpubmed/)

## **ClinicalTrials.gov**

ClinicalTrials.gov is a database of information on federally and privately supported clinical trials (research studies in people) for a wide range of diseases and conditions. It is sponsored by the National Institutes of Health and the U.S. Food and Drug Administration.

Web site: [www.clinicaltrials.gov](http://www.clinicaltrials.gov)

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