



## Ethnobotanical Leaflets



### St. John's Wort...A Peculiar Name for an Interesting Plant

By Jennifer Lynn Craig

There is an illness that afflicts about 17.6 million American adults each year. In the U.S., it is the number one reason that someone consults a family physician. It costs the economy more than ulcers, diabetes, arthritis or hypertension. What is this mysterious illness? -- It is depression. Depression has been treated in the past with prescription drugs such as Prozac, Zoloft, and Paxil, but now more and more people are turning to the herbal "remedy" known as St. John's wort (3).

St. John's wort, also known as *Hypericum perforatum*, has grown in popularity in the last several years. Its' popularity originated in Europe where it is prescribed and treated as a drug (5). In Germany, St John's wort extract is prescribed 8 times more often than Prozac for depression (7). In the United States, retail sales of St. Johns wort climbed by almost 3,000% during the past year (5)! This herbal is effective for mild to moderate depression and can also help those who have troubles sleeping (2). Even though St. John's wort seems like the perfect remedy for mild to moderate depression, there can be drug interactions and side effects associated with it.

St. John's Wort comes from a shrubby plant that has also been termed a weed. Its' flowers are yellow and are 5 petaled, 1-2 inches across, and bright yellow with dense tufts of stamens. Its' bloom period is in July. It can be found growing naturally in Kentucky and Tennessee, south to northern Florida, west to eastern Texas (4), and grows quite well in Northern California and Southern Oregon. Ancient Christian mystics named *Hypericum* after St. John the Baptist. "Wort" is an old English word for plant. The flowers were traditionally collected on June 24th, which is St. John's Day. The flowers were soaked in olive oil for several days to produce a blood red anointing oil, which symbolized St. John's blood (7).

The active chemical in St. John's wort is hypericin. Dried extracts from harvested buds, blooms, leaves, and stems contain variable amounts of hypericin (6). It was once thought that this chemical interfered with MAO, which is an enzyme in the brain. The purpose of this enzyme is to destroy amines that make us feel good such as: serotonin, epinephrine, and dopamine. This chemical is what is responsible for the red color (3). This, however has been shown to be wrong recently. It is believed that St. John's wort works by modulating the relationship between the immune system and mood as well as inhibiting serotonin re-uptake similar to the activity of drugs like Prozac (7).

There are other components in St. John's wort that inhibit COMT, which is another enzyme that destroys the same amines listed above. There is also another chemical that seems to suppress interleukin-6 release, affecting mood through neurohormonal pathways (3). In a 1994 study by E.U. Vorbach et al., 135 people suffering from depression were given either St. John's wort extract or imipramine (another antidepressant drug) for a period of six weeks. The St. John's wort produced better improvements, though probably because of the lack of side effects (7).

Though St. John's wort seems like a perfect solution to the problem of depression, there can also be problems ranging from the way it is manufactured to drug interactions. One problem can be that sometimes the capsules do not contain enough of the right ingredients to help, or it can contain unwanted matter. Soil contamination from compounds such as heavy metals, or with other botanical or animal products can also be a problem since the manufacture of St. John's wort is not regulated (5). St. John's wort extract should be deep-burgundy red in color, not brown. It should be opaque. A brown color, could mean that the extract has been oxidized which makes it ineffective (2).

Side effects of St. John's wort can include stomach upset, allergic reactions, dizziness, fatigue, dry mouth, confusion and sensitivity to light (5). It can also cause dermatitis and associated inflammation when people who take it are out in the sun (3). More than likely, people do not know of these effects because the government does not regulate herbal remedies, so they can make claim to anything but curing disease and can get away with not listing side effects (5).

Another major concern with St. John's wort is that it interacts with some drugs, making those drugs ineffective in some cases. St. John's wort activates certain enzymes in the liver that decrease blood levels of some important medications (5). For example, St. John's wort can interact with cyclosporin. Cyclosporin is routinely given after organ transplantation to prevent rejection. St. John's wort decreases the cyclosporin flow through the blood, which can ultimately cause rejection of the organ (4). St. John's wort can also interact with birth control pills. It has been shown that St. John's wort can decrease the effectiveness of "the pill" by 50% (5). Other medications that St. John's wort can have adverse effects on are anti-seizure drugs, antidepressants and chemotherapy (5).

Even with this information, many say St. John's wort is relatively harmless. "The benefits tend to outweigh the risks", Madeline Nash writes (8). So, who should consider this remedy? Someone who is healthy, and on no other medications (5). The amount of time that a person stays on St. John's wort depends on the person.

In conclusion, St. John's wort has the potential to be even more important to the economy than it already is. It grows naturally in several of the United States and is considered a prescription medication in both England and Germany. With regulation, this herbal could become even better to the people of the United States. Since it is not regulated, however, one can never be quite sure that what they are buying at the store is really going to help them. With regulation, this herbal remedy could really help people. Also with regulation, people would know if taking the herbal remedy would interact with other medications

they are on.

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