ORGANIZATION OF TERATOLOGY INFORMATION SERVICES

For more information regarding OTIS or a Teratology Information Service in your area, call OTIS Information at (866) 626-6847 or visit us online at: www.OTISpregnancy.org.

St. John's Wort (*Hypericum perforatum*) and Pregnancy

The information below will help you determine if your prenatal exposure to St. John's Wort represents an increased fetal risk. With every pregnancy, all women have a 3 to 5 percent chance to have a baby with a birth defect.

What is St. John's Wort?

St. John's Wort is an herbal medication obtained from the flowering tops of the perennial plant *Hypericum perforatum*. St. John's Wort has many components including anthracene derivatives, flavonoids, xanthones, caffeic acid derivatives, tannins, and volatile oils. Composition is altered by the harvesting, drying process, and storage of plant material. The herbal medication is taken orally or applied topically depending on the reason for use.

The composition and amount of active ingredients may also vary widely. In the United States St. John's Wort is characterized as a "dietary supplement". Unlike a prescription medication, it is not regulated by the Federal Drug Administration and does not have set standards for preparation, safety, or degree of effectiveness.

What is St. John's Wort used for?

St. John's Wort is most commonly used to treat mild or moderate depression. However, it has also been used to treat other conditions such as sleep disorders, viral infections, cancer, burns and wounds, and insect bites. St. John's Wort has been used for many years in Europe, but has only recently been marketed in the United States.

What are the side effects associated with St. John's Wort?

The most common adverse reaction in adults is sun sensitivity (phototoxicity). Other side effects include allergic hypersensitivity, constipation, dizziness, dry mouth, restlessness, gastrointestinal distress, and sleep disturbances. St. John's Wort can also interact with many drugs including narcotics, oral contraceptives, prescribed medications for depression, cold and flu medications, and alcohol.

I am taking St. John's Wort, but I would like to stop taking it before becoming pregnant. How long does St. John's Wort stay in your body?

St. John's Wort is a long acting agent, with a 'half life' of 26.5 hours (half-life refers to how long it takes your body to metabolize half of the dose of the medication). It is likely that levels of St. John's Wort would be low after one week, but there are no studies regarding this. A safe approach would be to discontinue the medication one month before attempting to get pregnant. As always, it would be important to speak with your health care provider regarding the benefits of taking this medication for your specific situation, and any possible concerns with not taking it.

Can taking St. John's Wort make it more difficult for me to become pregnant?

There are no studies regarding the impact of St. John's Wort on female fertility. One study found that high concentrations of St. John's Wort added directly to semen decreased sperm movement and viability. The authors of this study suggested that St. John's Wort might have an ability to harm sperm. Currently it is unknown if taking this agent may decrease fertility.

Can taking St. John's Wort during my pregnancy cause birth defects?

There are no published human studies regarding use of St. John's Wort during pregnancy. There are two case reports involving use by pregnant women, but only one of the reports includes outcome data on the infant. In

that case the woman started taking St. John's Wort in the first trimester and took it for the duration of the pregnancy, and she had an apparently healthy infant at term. Animal studies in mice found decreased birth weight in male offspring, but no other problems with long-term growth or physical development.

The limited data limits our ability to draw conclusions about whether there is an increased risk for birth defects or other problems associated with use of St. John's Wort during pregnancy.

Can taking St. John's Wort during my pregnancy cause other kinds of problems?

St. John's Wort causes increased uterine muscle tone in laboratory animals, and thus could potentially cause uterine contractions. There are no studies regarding St. John's Wort and miscarriage or pregnancy loss. Similarly, there are no studies regarding exposure to St. John's Wort and withdrawal symptoms or effects on the baby's behavior or development. Therefore, any possible associated risks are unknown. St. John's Wort may interfere with the effectiveness of a pregnant woman's prescription medications or general anesthesia. The tannic acid present in St. John's Wort may inhibit absorption of iron, an important mineral for pregnant women and their fetuses.

Should I stop taking St. John's Wort during my pregnancy?

In order to receive the most thorough care during pregnancy, you should contact your health care provider before making any changes in medication or stopping use any time during pregnancy. However, it is clear that much more research is needed regarding the impact of St. John's Wort on the fetus. In some situations where a woman is significantly depressed, her health care provider may chose to prescribe an antidepressant that has been better studied in pregnant women.

Can I take St. John's Wort while breastfeeding?

There is limited information regarding the transfer of St. John's Wort into human milk and the impact of a mother's use of this herbal medication on her breast-fed infant. One study, involving 30 women who took St. John's Wort and breastfed, found a higher frequency of infant side effects (lethargy, colic, and drowsiness) when compared to a group of infants whose mothers were not taking the medication.

St. John's Wort is a long-acting medication, and thus any amount ingested by the infant would be expected to remain for a long time. Until more is known about St. John's Wort, many women are choosing to avoid it if they are breastfeeding. If you are significantly depressed, you may wish to speak with your health care provider regarding prescription antidepressants that have been better studied in breastfeeding women.

ORGANIZATION OF TERATOLOGY INFORMATION SERVICES

References:

Barrett, B., Kiefer, D., & Rabago, D. (1999). Assessing the risks and benefits of herbal medicine: An overview of scientific evidence. Altern Ther Health Med, 5, (4), 40-9.

Christensen, H.D., Rayburn, W.F., Coleman & F.H., Gonzalex, C.L. (1999). Effect of antenatal hypericum (St. John's Wort) on growth and physical development of mice offspring (abstract). Teratology, 59, (6), 411.

Fetrow, C.W. & Avila, J.R. (1999). Professional's Handbook of Complementary and Alternative Medicines. Springhouse, PA: Springhouse Corporation.

Hale, T. (1999). Medications and Mother's Milk. Amarillo, TX: Pharmasoft Medical Publishing.

Lee, A., Minhas, R., & Ito, S. (2000). Safety of St. John's Wort during Breast-feeding. Clin Pharmoco Ther, 67 (2), 130 (abstract P11-64).

Miller, L.G. (1998). Herbal medicinals: selected clinical considerations focusing on known or potential drug-herb interactions. Arch Intern Med 158, (20), 2200-11.

Newall, C.A., Anderson, L.A., & Phillipson, J.D. (1996). Herbal Medicines: A Guide for Health-care Professionals.

Ondrizek, R.R., Chan, P.J., Patton, W.C., & King, A. (1999). Inhibition of human sperm motility by specific herbs used in alternative medicine. J Assist Reprod Genet, 16, (2), 87-91.

PDR for Herbal Medicines (1st ed.). (1998). Montvale, NJ: Medical Economics Company.

Shiplochliev, T. (1981). Extracts from a group of medicinal plants enhancing uterine tonus. Vet Med Nauki, 18, 94-8.

Vitiello, B. (1999). Hypericum perforatum extracts as potential antidepressants. J Pharm Pharmacol, 51, (5), 513-517.