

Herbs for Pregnant Animals – “Yes” or “No”?

There is no certainly shortage of companies peddling products to the public for use during gestation. Claims like these abound: “Support the uterus, prevent miscarriage, soothe the nerves, stimulate the appetite, and increase milk flow.”¹ “[U]sed for decades with good success...When given to lactating bitches the herbal properties pass through the milk and helps the puppies’ immune functions too.”² “Designed to aid the mare during the difficult task of breeding.”³ . However, a sobering investigation of Internet advice on this topic offered by “medical herbalists” concluded: “The advice offered is misleading at best and dangerous at worst.”⁴ The fact that these websites also often carry a disclaimer, urging consumers to check with their veterinarian or “animal herbologist” before using the products, may bring veterinarians into the loop whether they want to be there or not.

Practicing good, evidence-based veterinary medicine and providing factual information for clients is certainly difficult in this scenario. Evidence-based information on the safety and efficacy of herbs for pregnant humans is sparse at best.⁵ Finding species-specific information on this topic is near to impossible,⁶ unless the patient is a rodent. Reports of wild animals self-medicating during pregnancy are intriguing, but anecdotal. For example, researchers from Japan’s Kyoto University noted that the sifaka, a type of lemur, ingests tannin-containing plants in the antepartum period, presumably for its galactagogue properties.⁷ A biologist working for the World Wildlife Fund noted that a pregnant African elephant under study suddenly deviated from her predictable diet and 5 km roaming radius to walk 27 kilometers and ingest an entire tree from the Boraginacea family in one day; she delivered a healthy calf four days later. Kenyan women brew tea from the leaves of this tree to induce labor, suggesting that the elephant deviated from her normal dietary routine to ingest the tree for a similar purpose.⁸ Nevertheless, veterinary patients are usually not wild animals self-selecting medications; instead they are often being given these products whether or not they need them or are innately drawn to them.

¹ Livestock Birth/Mother Formula from Farmstead Health Supply. Obtained on 02/06/03 at www.farmsteadhealth.com/formulas.html .

² Zacharias M. Practical applications of natural therapies. From Cyber-Pet “Natural Therapies for the 21st Century Breeder”. Obtained at www.cyberpet.com/cyberdog/articles/health/practical.htm on 02/06/03.

³ Herbal Pregnancy Mix from Naturally Equine. Obtained on 02/06/03 at www.naturallyequine.com/information/pregmix.htm .

⁴ Ernst E and Schmidt K. Health risks over the Internet: Advice offered by “medical herbalists” to a pregnant woman. *Wiener Medizinische Wochenschrift*. 2002;152:190.

⁵ Conover EA. Over-the-counter products: nonprescription medications, nutraceuticals, and herbal agents. *Clinical Obstetrics and Gynecology*. 2002; 45:89-98.

⁶ Means C. Selected herbal hazards. *Vet Clin North Am Small Anim Pract*. 2002; 32(2):367-382.

⁷ CNN.com – Primates take jungle drug during pregnancy. Jan. 23, 2003.

⁸ Engel C. *Wild Health*. Boston: Houghton Mifflin Company, 2002, pp. 184-185.

Many questions warrant serious consideration. What are the dangers of administering uterine-stimulating herbs in cases of obstructive dystocia? Would clients recognize the need to consult a veterinarian in this instance, or would they give more of the contraindicated herbs? What treatment modifications are necessary to control post-partum hemorrhage for animals on herbs that interfere with blood coagulation? What changes in anesthesia protocols need to take place to account for the potentially additive sedative effects of “calming” herbs? There is concern that maternal consumption of Chinese herbal medicine increases the risk of neonatal jaundice in humans;⁹ is there a way to track negative outcomes like these from herbs in animals?

Human usage of herbs during pregnancy is estimated at over fifty percent in some countries.¹⁰ Forty-six percent of American women who took herbal remedies during pregnancy did so upon the recommendation of their health care provider, though most of the parturients did not consider these herbs to be medications.¹¹ Human patients, veterinary clients, and even some health professionals often assume that natural products are safe and more like nutrients than drugs. Thus, negative effects of herbs may be overlooked or underreported. Under-reporting of negative outcomes may give a misleading impression that herbs administered during gestation are safer than they actually are. Because herbs are unregulated in most countries, adverse effect monitoring is non-existent.¹² Case reports of adverse effects may be published as letters to the editor in journals, which may escape standard search technique retrieval mechanisms. In veterinary medicine, herbal dosages are mostly a matter of educated guesswork. What then, is the most prudent approach for a veterinary health professional to take when advising veterinary clients in this situation? Is there any evidence to support the recommendations? Which herbs have teratogenic or abortifacient properties?

Research thus far has shed light on a few herbal compounds. Human ingestion of raspberry leaf during pregnancy significantly shortened the second, though not the first, stage of labor.¹³ Echinacea given to humans during fetal organogenesis was not associated with an increased risk for major malformations.¹⁴ Prenatally administered St. Johns’ wort did not negatively affect long-term growth and

⁹ Chan TY. The prevalence, use, and harmful potential of some Chinese herbal medicines in babies and children. *Vet Hum Toxicol.* 1994; 36(3):238-240.

¹⁰ Fok TF et al. Chinese herbs in pregnancy and neonatal jaundice. *Hong Kong J Paediatr.* 1985; 2: 138-144. Cited in Koh H-L and Woo S-O. Chinese Proprietary Medicine in Singapore – Regulatory control of toxic heavy metals and undeclared drugs. *Drug Safety.* 2000; 23(5):351-362.

¹¹ Hepner DL et al. Herbal medicine use in parturients. *Anesth Analg.* 2002;94:690-3.

¹² Ernst E. *BJOG.* Op. cit.

¹³ Simpson M et al. Raspberry leaf in pregnancy: its safety and efficacy in labor. *J Midwifery Womens Health.* 2001;46(2):51-9.

¹⁴ Gallo M et al. Pregnancy outcome following gestational exposure to Echinacea. A prospective controlled study. *Arch Intern Med.* 2000;160:3141-3143.

physical maturation of mouse offspring.¹⁵ Beyond this, however, evidence in favor of herbs is slim, and concerns are mounting. For several commonly used herbs in pregnancy (blue cohosh, black cohosh, castor oil, and evening primrose oil), there is “no compelling evidence of their efficacy in inducing labour”.¹⁶ Herbs can, in fact, be dangerous during this period. A lay publication article for horse owners suggests giving blue cohosh to mares in the week preceding foaling to “help stretch the neck of the uterus and aid in delivery”.¹⁷ However, human maternal consumption of blue cohosh has been associated with profound neonatal congestive heart failure and shock.¹⁸ Herbs that are uterine stimulants require extra caution. These include but are not limited to: mugwort, blue cohosh, tansy, black cohosh, Scotch broom, goldenseal, juniper berry, pennyroyal oil, rue, mistletoe, and chaste berry, and possibly garlic and ginger in high enough quantities.¹⁹

The usual concerns about herb safety in non-gravid individuals multiply when clients give them to their pregnant animals. That is, problems with quality control may damage a developing fetus or end a pregnancy prematurely. Herbs improperly identified by manufacturers and wildcrafters, contamination with toxic heavy metals, purposeful adulteration with pharmaceuticals are all significant issues that merit acknowledgment.²⁰ For example, one study evaluated a group of Chinese herbal medications, and found a total of sixty-six pharmaceuticals that were not listed on the labels.²¹ The most frequent drugs, in order of decreasing frequency, were caffeine, paracetamol (acetaminophen), indomethacin, hydrochlorothiazide, and prednisolone. Other drugs found are promethazine, phenformin (an antidiabetic drug), fluocinonide, and dipyrrone.²² Additional issues plaguing the herb industry include lack of standardization, herb substitution by the manufacturer, incorrect preparation, inappropriate labeling, and microbial contamination.

Some of the complications reported from herb use during pregnancy and parturition involve precipitous labor, tetanic uterine contractions, nausea, and

¹⁵ Rayburn WF et al. Effect of prenatally administered hypericum (St. John’s wort) on growth and physical maturation of mouse offspring. *Am J Obstet Gynecol.* 2001; 184(2):191-195.

¹⁶ Ernst E. Herbal medicinal products during pregnancy: are they safe? *BJOG.* 2002; 109:227-235.

¹⁷ Anonymous. Herbs for health: Good-sense herbs for breeding, gestation, and foaling. *Natural Horse Magazin Online.* 1999; 1(2). Obtained on 02/06/03 at www.naturalhorse.com/archive/volume1/Issue2/article_2.php.

¹⁸ Jones TK and Lawson BM. Profound neonatal congestive heart failure caused by maternal consumption of blue cohosh herbal medication. *J Pediatr.* 1998; 132:550-552.

¹⁹ Conover EA, op. cit.

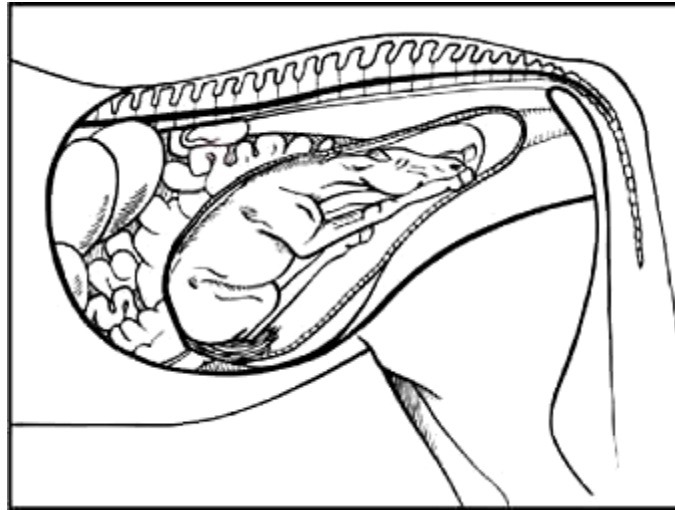
²⁰ Tait PA et al. Severe congenital lead poisoning in a preterm infant due to a herbal remedy. *MJA.* 2002; 177:193-195.

²¹ Huang WF et al. Adulteration by synthetic therapeutic substances of traditional Chinese medicines in Taiwan. *J Clin Pharmacol.* 1997; 37:344-350. Cited in Koh and Woo, op. cit.

²² Koh and Woo op cit.

vomiting.²³ Herbs that are tolerable in the adult may be dangerous for reproductive health and a developing fetus. For example, the Chinese herbal medication, lei gong teng, or *Tripterygium Wilfordii* Hook F (TWHF) possesses anti-inflammatory and immunosuppressive properties and is thought to be useful for rheumatoid arthritis.²⁴ However, lei gong teng (“Thundergod vine”) has caused or been associated with reversible ovarian failure²⁵, embryotoxicity²⁶, and meningoencephalocele²⁷.

In light of the poorly defined risks of herbal medicine products in pregnancy, veterinarians need to employ extreme caution when making recommendations for their clients. As Ernst suggests, “Until definitive data emerge, the best advice is to consider *all* herbal medicine products contraindicated during pregnancy/lactation and to inform our patient accordingly.”²⁸



²³ McFarlin BL et al. A national survey of herbal preparation use by nurse-midwives for labor stimulation. *J Nurse Midwifery*. 1999; 44:205-216. Cited in Hepner DL et al. Herbal medicine use in parturients. *Anesth Analg*. 2002; 94:690-693.

²⁴ Chen BJ. Triptolide, a novel immunosuppressive and anti-inflammatory agent purified from a Chinese herb *Tripterygium Wilfordii* Hook F. *Leukemia and Lymphoma*. 2001; 42(3):253-265.

²⁵ Edmonds SEF and Montgomery JC. Reversible ovarian failure induced by a Chinese herbal medicine: lei gong teng. *BJOG: an International Journal of Obstetrics and Gynaecology*. 2003; 110:77-78.

²⁶ Chan WY and Ng TB. Adverse effect of *Tripterygium wilfordii* extract on mouse embryonic development. *Contraception*. 1995; 51(1):65-71.

²⁷ Takei A et al. Meningoencephalocele associated with *Tripterygium wilfordii* treatment. *Pediatr Neurosurg*. 1997; 27(1):45-48.

²⁸ Ernst E. Review: Herbal medicinal products during pregnancy: are they safe? *BCOG: an International Journal of Obstetrics and Gynaecology*. 2002; 109:227-235.