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FILE: ■Ginger (*Zingiber officinale*)
■Nausea
■Morning Sickness
■Pregnancy

HC 100621 - 225

Date: January 30, 2003

RE: Ginger Syrup Helps Reduce Nausea in Pregnant Women in Pilot Study

Keating A, Chez RA. Ginger syrup as an antiemetic in early pregnancy. *Alternative Therapies in Health and Medicine* Sept/Oct 2002;8:89-91.

New medical study finds safe, effective relief for morning sickness in unique honey ginger tonic [press release]. Brattleboro, VT: PRNewswire; Sept. 24, 2002.

Ginger (*Zingiber officinale*) rhizome has been used traditionally to alleviate nausea and vomiting, and studies of ginger in capsule form have assessed its value as an antiemetic following surgery and anesthesia, during chemotherapy, and for seasickness. The authors found only two previous peer-reviewed studies reported in the English language on the use of ginger in pregnancy. Fischer-Rasmussen et al. (1990) enrolled 27 first trimester pregnant women with persistent nausea and vomiting (hyperemesis gravidarum) in a randomized, double-blind, crossover study. A significant reduction of nausea was found with use of capsules containing 250 mg of ginger 4 times daily, compared with the control group. Vutyavanich et al. (2001) studied the same remedy in 70 women less than 17 weeks pregnant who had nausea and vomiting over 4 days in a double-masked design study and observed similar efficacy.

Nausea and vomiting affect 60 – 80% of women in the first trimester of pregnancy. Called "morning sickness," this emesis can result in malnutrition, weight loss, and ketonemia, as well as adversely affecting the expectant mother's quality of life and normal functioning.

The present authors conducted a double-blind, randomized, placebo-controlled clinical trial of a ginger beverage to control nausea in 26 women suffering from morning sickness in their first trimester of pregnancy. Twenty-three women completed the study, which was conducted over a 6 month period in 1999 with women recruited through the University of South Florida department of obstetrics and a gynecology's private practice office. Each woman participated for a maximum of 2 weeks.

The study beverage, Ginger Honey Tonic®, is manufactured by New Chapter, Inc. (Brattleboro, VT), which provided the study medication and prepared the placebo drink. Each tablespoon of tonic contains 250 mg ginger, including 1 mg pungent compounds from ginger rhizome juice, 1 mg of 20% pungent

compounds and 5% zingiberene obtained via a carbon dioxide supercritical extract of dried ginger rhizome, honey, and water. The placebo drink contained water, honey, and lemon oil. Participants took one tablespoon of tonic (or placebo) in 4 to 8 ounces of hot or cold water 4 times daily. Both groups received information on dietary changes to decrease nausea.

Each participant kept a diary to record drinks ingested and the degree of nausea and vomiting experienced. A numerical scale of 1 through 10 was used to quantify the level of nausea, number of vomiting episodes, and the patient's perspective of her daily functioning as related to her symptoms. Ten of the 13 (77%) subjects who received the ginger tonic had at least a 4-point improvement on the nausea scale by day 9. Only 2 of the ten (20%) subjects remaining in the placebo group by day 9 had the same improvement. None in the ginger group, but 7 (70%) in the placebo group, had a 2-point or less improvement at both 9 and 14 days. Eight of the 12 (67%) women in the ginger group who were vomiting daily at the beginning of the study stopped vomiting by day 6. Only 2 of the 10 (20%) women in the placebo group who were vomiting daily at the beginning of the study stopped by day 6.

The authors point out that nausea and vomiting associated with pregnancy generally resolve spontaneously by the 14th week of gestation, and that assessments of the efficacy of any treatment must take that fact into consideration. Women in this study were between seven and 11 weeks gestation. In addition, the small number of participants made statistical verification of ginger's efficacy impossible. The researchers had difficulty recruiting women for the study as some had an unwillingness to ingest any "foreign substance" during pregnancy, and fear of possible teratogenicity (disturbed growth processes involving the production of a malformed fetus). In contrast, other participants were willing to take part because they perceived ginger as a "natural" substance as opposed to a prescription medication.

Concern about the use of ginger in pregnancy appears unfounded. The author writes that German Commission E monographs state that ginger is contraindicated in pregnancy but do not provide a reference or data to support this opinion. A review of clinical and pharmacological literature found no supporting data at doses of 1 g per day. The *British Herbal Compendium* (1992) lists ginger as a remedy for morning sickness. There is no contraindication for ginger during pregnancy in the *Pharmacopoeia of the People's Republic of China* (1992). The U.S. Pharmacopoeia's monograph on ginger (1998) root says that there is insufficient data and clinical research to support ginger's benefits for nausea and vomiting, but that no harmful effects have been reported.

The authors conclude that 1 g of ginger in syrup or capsules taken daily in divided doses appears to be an effective, safe treatment for nausea in early pregnancy and urge further clinical trials (presumably of larger size with more statistical power) to affirm this benefit.

A press release announcing publication of the study, while omitting many study details, most notably the small number of participants and the necessarily inconclusive results, adds a few facts about New Chapter's product. The "blue-ring ginger" used in Ginger Honey Tonic® is grown organically in Costa Rica, and the spice farm where it is produced "has been recognized as a world model for sustainable organic rainforest agriculture." Paul Schulick, New Chapter's CEO, is the author of *Ginger: Common Spice and Wonder Drug* (Hohm Press, 1996). More information is available at New Chapter's Internet site: <http://www.newchapter.info>.

¾ Mariann Garner-Wizard

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