Ginger for nausea and vomiting of pregnancy

Adrienne J. Lindblad ACPR PharmD **Sudha Koppula** MD MCISc CCFP

Clinical question

Can ginger treat nausea and vomiting of pregnancy?

Bottom line

In the first trimester ginger might improve nausea and vomiting by about 4 points on a 40-point scale or stop vomiting for 1 in 3 women at 6 days. The largest study suggests no increase in fetal malformations or stillbirths, but smaller studies suggest otherwise.

Evidence

Systematic reviews of RCTs evaluated ginger.[1-7]

- A Cochrane review found statistically significant results[1]:
  -Mean score difference on a 40-point nausea and vomiting scale was 4.19 vs placebo at 1 week (1 RCT, 70 women).
  -Of those taking ginger, 33% were vomiting on day 6 vs 80% of those taking placebo (NNT=3; 1 RCT, 22 women).
  -There were no differences in spontaneous abortion or cesarean section rates (1 RCT, 67 women), or congenital abnormalities (1 RCT, 120 women).
  -There was no difference compared with vitamin B6 (4 RCTs, 625 women), metoclopramide (1 RCT, 68 women), or doxylamine-pyridoxine (1 RCT, 63 women).
  -Limitations included short-term adverse effects being rarely reported, inconsistent outcome measurements, and underpowered studies.[2]
- Cohort safety studies were conducted mostly in women in the first or second trimester:
  -In 68 522 women (1020 used ginger), there was no increase in fetal malformations, stillbirth or neonatal death, or preterm birth.[8]
    —Vaginal bleeding or spotting after 17 weeks significantly increased (7.8% vs 5.8%; $P<.05$). There was no significant heavier "bleeding" (spotting excluded) and no difference in bleeding-related hospitalization.
  -In 375 women, there was no increase in major malformations, stillbirths, or spontaneous abortion, but more small babies were born in the control group (1.6% vs 6.4%).[9]
  -In 441 women, there was no difference in spontaneous abortion, but there was a trend of increased stillbirths (2.7% vs 0.3%) and major malformations (3.3% vs 0.7%).[10]
    —Limitations include small numbers, short exposure (median 2 days), and wide CIs.

Context

- Based on limited clinical evidence, ginger is contraindicated close to labour or in those with a history of miscarriage, vaginal bleeding, or clotting disorders, owing to risk of hemorrhage.
- The total dose is usually approximately 1 g per day, divided to be given twice to 4 times a day.[1]

Implementation

Nonpharmacologic management of nausea in pregnancy includes avoiding nausea-inducing foods and eating small, frequent meals.[1,11] Guidelines suggest pyridoxine or doxylamine-pyridoxine,[11,12] although there is little evidence that doxylamine improves control.[1] Agents such as dimenhydrinate, promethazine, ondansetron, or chlorpromazine might be added,[11,12] while 250 mg of ginger taken orally every 6 hours might be added "at any time."[12] The Cochrane review concluded there was no strong evidence for any intervention.[1] Patients should be told that some ginger supplements contain agents with questionable safety in pregnancy.

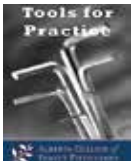
Dr Lindblad is Knowledge Translation and Evidence Coordinator with the Alberta College of Family Physicians in Edmonton. **Dr Koppula** is Associate Professor in the Department of Family Medicine at the University of Alberta in Edmonton.

References

1. Matthews A, Haas DM, O'Mathúna DP, Dowswell T, Doyle M. Interventions for nausea and vomiting in early pregnancy. *Cochrane Database Syst Rev* 2014;(3):CD007575.
2. Festin M. Nausea and vomiting in early pregnancy. *BMJ Clin Evid* 2014;2014:pii:1405.
3. Thomson M, Corbin R, Leung L. Effects of ginger for nausea and vomiting in early pregnancy: a meta-analysis. *J Am Board Fam Med* 2014;27(1):115-22.
4. Ding M, Leach M, Bradley H. The effectiveness and safety of ginger for pregnancy-induced nausea and vomiting: a systematic review. *Women Birth* 2013;26(1):e26-30.
5. Dante G, Pedrielli G, Annessi E, Facchinetti F. Herb remedies during pregnancy: a systematic review of controlled clinical trials. *J Matern Fetal Neonatal Med* 2013;26(3):306-12.
6. Viljoen E, Visser J, Koen N, Musekiwa A. A systematic review and meta-analysis of the effect and safety of ginger in the treatment of pregnancy-associated nausea and vomiting. *Nutr J* 2014;13:20.
7. Borelli F, Capasso R, Aviello G, Pittler MH, Izzo AA. Effectiveness and safety of ginger in the treatment of pregnancy-induced nausea and vomiting. *Obstet Gyencol* 2005;105(4):849-56.
8. Heitmann K, Nordeng H, Holst L. Safety of ginger use in pregnancy: results from a large population-based cohort study. *Eur J Clin Pharmacol* 2013;69(2):269-77.
9. Portnoi G, Chng LA, Karimi-Tabesh L, Koren G, Tan MP, Einarson A. Prospective comparative study of the safety and effectiveness of ginger for the treatment of nausea and vomiting in pregnancy. *Am J Obstet Gynecol* 2003;189(5):1374-7.
10. Choi JS, Han JY, Ahn HK, Lee SW, Koong MK, Velazquez-Armenta EY, et al. Assessment of fetal and neonatal outcomes in the offspring of women who had been treated with dried ginger (*Zingiberis rhizoma siccus*) for a variety of illnesses during pregnancy. *J Obstet Gynaecol* 2015;35(2):125-30.
11. Practice bulletin no. 153: nausea and vomiting of pregnancy. *Obstet Gynecol* 2015;126(3):e12-24.
12. Arsenault MY, Lane CA, MacKinnon CJ, Bartellas E, Cargill YM, Klein MC, et al. The management of nausea and vomiting of pregnancy. *J Obstet Gynaecol Can* 2002;24(10):817-31.

This article is eligible for Mainpro-M1 credits. To earn credits, go to **www.cfp.ca** and click on the Mainpro link.

La traduction en français de cet article se trouve à **www.cfp.ca** dans la table des matières du numéro **de février 2016** à la **page e76.**



Tools for Practice articles in *Canadian Family Physician (CFP)* are adapted from articles published on the Alberta College of Family Physicians (ACFP) website, summarizing medical evidence with a focus on topical issues and practice-modifying information. The ACFP summaries and the series in *CFP* are coordinated by **Dr G. Michael Allan**, and the summaries are co-authored by at least 1 practising family physician and are peer reviewed. Feedback is welcome and can be sent to **toolsforpractice@cfpc.ca**. Archived articles are available on the ACFP website: **www.acfp.ca.**