

# Nausea and Vomiting of Pregnancy

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**Morning or evening nausea and vomiting, occurring during the first trimester of pregnancy**

Many physical and psychological reasons have been suggested to explain the high incidence of nausea and vomiting during pregnancy (morning sickness). It has been estimated that fifty percent of women complain of these symptoms at some time during pregnancy. Considering the many hormonal and metabolic changes that occur during pregnancy, the existence of these symptoms is not surprising. However, emotional factors also play a role in the perception and severity of the nausea and vomiting.

## Therapeutic Considerations

The most popular treatment for nausea and vomiting during pregnancy is vitamin B6. This vitamin is extremely important in breaking down and eliminating the increased level of pregnancy-related hormones. In the medical literature prior to the 1990s, support for the use of vitamin B6 in treating the nausea and vomiting of pregnancy consisted primarily of several poorly designed studies in the 1940s.<sup>1,2</sup> In fact, in 1979 the American Medical Association Council on Drugs went so far as to say that "there was no solid evidence that vitamin B6 is effective against nausea." However, two very well-designed double-blind studies in the 1990s appear to

provide the necessary support for this popular (and seemingly effective) recommendation to pregnant women. In the first study, fifty-nine women were randomly assigned to receive either 25 mg of vitamin B6 every eight hours or a placebo. After seventy-two hours, only eight of thirty-one B6-treated patients had nausea, compared to fifteen of twenty-eight in the placebo group.<sup>3</sup>

In the more recent double-blind study, 342 pregnant women (less than seventeen weeks pregnant) were randomized to receive either 30 mg or vitamin B6 or a placebo.<sup>4</sup> Patients graded the severity of their nausea and recorded the number of vomiting episodes over the previous twenty-four hours before treatment, and again during five consecutive days of treatment. Compared to the placebo group, there was a statistically significant reduction in nausea scores and vomiting episodes. Based on the results of this study, vitamin B6 was recommended as a first-line treatment for nausea and vomiting of pregnancy. However, although a positive effect was reported in the trial, the results were not all that impressive. More than one-third of the patients still experience vomiting and significant nausea with B6 supplementation. Perhaps a larger dosage would have been more effective. Or perhaps ginger (discussed later in this chapter) is a better

recommendation, alone or in combination with vitamin B6.

### **Vitamins K and C**

Vitamins K and C, when used together, have shown considerable clinical efficacy; ninety-one percent of patients in one study showed complete remission within seventy-two hours.<sup>5</sup> The mechanism for this effect is unknown, and both vitamins administered alone showed little effect.

### **Ginger**

Ginger (*Zingiber officinale*) has a long tradition of being very useful in alleviating symptoms of gastrointestinal distress, including the nausea and vomiting typical of pregnancy. Although the mechanism of action has yet to be elucidated, current thought is that this is due more to ginger's effects on the gastrointestinal tract than to any effects of the brain.<sup>6</sup>

Ginger's antiemetic action has been studied in the most severe form of pregnancy-related nausea and vomiting, known as *hyperemesis gravidum*. This condition usually requires hospitalization. In a double-blind trial, ginger root powder at a dose of 250 mg four times per day brought about a significant reduction in both the severity of the nausea and the number of attacks of vomiting in nineteen of twenty-seven women in early pregnancy (less than twenty weeks).<sup>7</sup> These clinical results, along with the safety of ginger, the relatively small dose of ginger required, and the problems associated with antiemetic drugs in pregnancy (e.g. severe birth defects) support the use of ginger to treat nausea and vomiting in pregnancy. This recommendation is becoming accepted even in orthodox obstetrical practices; ginger (as well as vitamin B6) is now often recommended as an effective treatment of early nausea and vomiting of pregnancy in many medical publications.

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## **QUICK REVIEW**

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- Vitamin B6 is very important in breaking down and eliminating the increased level of hormones during pregnancy.
- Vitamin B6 is very effective in most cases of nausea and vomiting of pregnancy.
- Ginger has a long tradition of being very useful in alleviating symptoms of gastrointestinal distress, including the

- nausea and vomiting typical of pregnancy.
- Clinical studies have shown ginger to be effective even in the most severe form of nausea and vomiting of pregnancy.
- Many experts consider mild symptoms of nausea and vomiting of pregnancy as a good sign of a healthy pregnancy.

### Psychological Aspects

There appears to be general agreement among experts that mild symptoms of nausea and vomiting during the first trimester have a strong psychological basis (linked to hormone changes during pregnancy) and are predictive of positive pregnancy adjustment and outcome. In other words, many experts consider mild symptoms of nausea and vomiting of pregnancy as a good sign of a healthy pregnancy. More serious or longer-lasting symptoms are thought more likely to have a psychological component.<sup>8</sup>

A study of eighty-six pregnant

women showed a significant increase in both nausea and vomiting during the first trimester among women who reported more unplanned, undesired pregnancies and negative relationships with their own mothers. Those whose problems continued into the third trimester were also significantly more negative in their assessments of their relationships with their mothers.<sup>9</sup>

We encourage pregnant women who have severe nausea and vomiting, or whose symptoms extend beyond the first trimester, to explore possible psychological factors. That is not to say that it is "all in the head," but rather to treat the whole person (body and mind.)

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## TREATMENT SUMMARY

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### Diet

Eat dry toast immediately after rising, and small, frequent meals throughout the day.

### Nutritional Supplements

- Vitamin B6: 25 mg two to three times per day
- Vitamin C: 250mg two to three times per day
- Vitamin K: 5 mg per day

### Botanical Medicines

There remain many questions concerning the best form of ginger and the proper dosage. Most research studies have utilized 1 gram of dry powdered ginger root – a relatively small dose. For example, ginger is

commonly consumed in India at a daily dose of 8 to 10 grams. Furthermore, although most studies have used powdered ginger root, fresh (or possibly freeze-dried) ginger root or extracts concentrated for gingerol at an equivalent dosage may yield even better results.

In the treatment of nausea and vomiting of pregnancy, a dosage of 1 to 2 grams of dry powdered ginger, possibly taken as a tea, may be effective. For ginger extracts standardized to contain 20% gingerol and shogaol, an equivalent dosage would be 100-200 mg.

### Counseling

Women who are having an unplanned or undesired pregnancy, or who have a poor relationship with their own mother, should consult a qualified counselor for assistance in resolving these conflicts.

### Acupressure

Acupressure refers to applying pressure to acupuncture points. It may help relieve the nausea and vomiting of pregnancy. In one study, sixteen pregnant women with morning sickness were divided into two groups. Group 1 used acupressure wristbands for five days, followed by five days without therapy. Women in Group 2 had no therapy for five days, followed by five days' use of wristbands. The extent of

nausea was assessed at baseline, day five, and day ten. Use of acupressure wristbands (elastic wristbands with hardened plastic balls applied to acupuncture sites on the wrist) relieved morning sickness for twelve of sixteen subjects. Acupressure therapy also resulted in statistically significant reductions in anxiety, depression, behavioral dysfunction, and nausea.<sup>10</sup> These acupuncture wristbands are available at most drug stores.

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