# Maternity Nurses 'Advice Regarding Nausea and Vomiting in Pregnancy

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**Abstract:** It is crucial that maternity nurses support women experiencing nausea and vomiting in pregnancy, and help them to 'cope with' as part of pregnancy. Advice given to pregnant women needs to include what is known about the safety and efficacy of various treatments in pregnancy, so they can make informed choices. This study aimed to determine the advice that maternity nurses give to women regarding nausea and vomiting in pregnancy, with a particular interest in how and what vitamin and herbal supplements are prescribed. This study was conducted at two different health organizations in Alexandria Governorate. A randomized sample comprised 92 maternity nurses aged 20-50 years. An interview schedule was applied to collect the needed information. The findings of the study indicate that the advice most commonly given to women experiencing nausea and/or vomiting was to eat frequent small meals and snacks (89.1%). Other common advice was given by more than one-half the maternity nurses is avoidance of fatty/spicy foods. Most maternity nurses recommend one or more herbal supplements in their advice for nausea and vomiting in pregnancy or some form of vitamins; however, many were unaware of potential harmful side effects or what would constitute appropriate doses. These findings suggest that it is likely that herbal medicines and alternative treatments are often included in common advice given for nausea and vomiting in pregnancy; however, there is little evidence to guide practice in this area. So attention should be given for raising the awareness of the maternity nurses about diet advice, herbal supplements and alternative treatments.
[Shadia A.T. Yassin and Iman A. El Khayat **Maternity Nurses 'Advice Regarding Nausea and Vomiting in Pregnancy**]. Journal of American Science 2011; 7(12):1138-1145].(ISSN: 1545-1003). http://www.americanscience.org. 143.

**Key words:** Maternity nurses' advice, nausea and vomiting in pregnancy

## 1. Introduction:

The first and most frequently common reported minor discomfort in early pregnancy are nausea and vomiting (NVP).A few lucky women do not have nausea or vomiting during pregnancy. It starts between the fourth and sixth weeks of pregnancy and reach its peak in severity at approximately eighth to twelfth week [(1)] .

The exact mechanism causing nausea and vomiting in pregnancy is unknown. There is general consensus that the pregnancy hormone human chorionic gonadotropin plays a significant role [(2)] .Other factors that may influence the incidence and severity of nausea and vomiting in pregnancy include gastrointestinal, genetic, vestibular, olfactory, psychosocial and environmental factors and thyroid disturbances. Given that the exact cause is not understood, treatment continues to be aimed at management of symptoms [(3)] .

Nausea and vomiting in pregnancy can have a significant impact on the lives of pregnant women; there may be a significant reduction in quality of life and ability to function at home, work and society. Advice given to them needs to include what is known about the safety and efficacy of various treatments in pregnancy, so they can make informed choices. Dietary and lifestyle changes tend to be the mainstay in the management of nausea and vomiting in pregnancy. Modifications to diet, such as eating carbohydrates, drinking carbonated drinks and rest, have been reported as effective [(4)] .

Pharmacological treatment is usually recommended for more severe cases of nausea and vomiting in pregnancy. The most commonly used antiemetic is a dopamine receptor blocker. Many pregnant women may be hesitant to take medications for nausea and vomiting in pregnancy as there is a perceived risk to the fetus [(5)] .

Complementary and alternative therapy (CAT) including herbal supplements and therapies are becoming popular alternatives for pregnant women. A large proportion of pregnant women take herbs, typically ginger, for nausea and vomiting in pregnancy. Herbal supplements and alternative therapies are often perceived as 'natural' and 'safe'; however, this is not always the case, some herbs are contraindicated in pregnancy [(6)] . Many pregnant women initiate use of herbal supplements and alternative therapies without the advice or guidance of a health-care professional and accurate reporting and documentation of herbal supplement use is often low [(7)] .

Nurses are in a unique position to bridge the gap between conventional biomedical therapies and complementary therapies. The principle goals of pre-

natal care are to monitor both the pregnant woman and the fetus throughout pregnancy, and to identify any factors that could change the outlook for the pregnancy from normal to risky. Prenatal care also focuses on providing accurate information regarding nutritional requirements throughout pregnancy, activity recommendations or restrictions; common complaints that may arise during pregnancy, and hope to manage them, preferably without medications [8].

Ginger and peppermint are a common remedy for morning sickness[6]. Despite the years of the use of these remedies in many cultures, there remains little information regarding its efficacy during pregnancy. Some sources say there is not enough information about the safety of ginger in pregnancy. Another concern is that ginger interferes with blood clotting and may prolong bleeding time [9] .

There is little information in the literature describing the advice that maternity nurse impart to women regarding the management of nausea and vomiting in pregnancy and less on what proportion of maternity nurse prescribe the use of herbs for nausea and vomiting in pregnancy, and what this advice entails. So this study aims to determine the types of advice and support that Maternity nurse give to women regarding management of nausea and vomiting during pregnancy, with a particular interest in how and what vitamin and herbal supplements are prescribed.

**Aim of the study**

The aim is to determine the advice that maternity nurse give to women regarding management of nausea and vomiting during pregnancy, with a particular interest in how and what vitamin and herbal supplements are prescribed.

**Study Questions:**

What are the maternity nurses' advices regarding management of nausea and vomiting during pregnancy?

## 2. Material and Methods

**Material**

**Research design:**

This is an exploratory descriptive study that attempts to describe a phenomenon as it exists.

**Setting**

The study was conducted at two hospitals affiliated to two different health organizations in Alexandria Governorate. El-Shatby Maternity Hospital, affiliated to Alexandria University and Dar Ismail Hospital, affiliated to the Ministry of Health and Population. They were selected because they provide maternity care. In addition, their clients are of various socio-economic and culture backgrounds.

**Sample**

All Maternity nurses working at the two hospitals from all wards and emergency department including family planning service who provide antenatal care (N=92) were interviewed to determine their practices regarding advice given for nausea and vomiting in pregnancy.

**Tool of data collection**

A structured interview schedule was designed and utilized to collect the necessary data. Question areas included: socio-demographic information such as age, level of education, Current position and years of experience. It also included training courses received about antenatal care, type of general advice that maternity nurses give to women experiencing nausea and vomiting in pregnancy, recommendation of any vitamins or herbal supplements, name of supplements they recommend, whether they refer women to alternative practitioners and how they obtain knowledge in this area. Questions were asked specifically about the herbs that are commonly prescribed for nausea and vomiting in pregnancy, to elicit more information about how these herbs are prescribed by maternity nurses, and awareness and knowledge of any harmful effects.

The tools were piloted extensively with research colleagues and then with six maternity nurses who were not eligible for inclusion to ensure that all relevant questions on the topic were included, that the questions would elicit as much meaningful information as possible and that they were clear and easily understood. After piloting, the questionnaires were revised and then are piloted until no further changes were necessary. Maternity nurses staff list was sourced from all relevant units and rotating rosters in each area.

**Methods**

The study was executed according to the following Steps:

**1- Approvals**

An official letter clarifying the purpose of the study was obtained from the Faculty of Nursing, University of Alexandria and was directed to the responsible authorities to take their permission to conduct the study after explaining its purpose.

**2- Tool development**

A structured interview schedule was developed by the researcher after extensive review of the relevant and current literature; they were tested for content validity by six juries, who were expert in the field.

**3-Consent**

The purpose of the study was explained to each nurse and oral consent to participate in the study was obtained from them.

**4- Pilot study**

A pilot study was carried out on 5 maternity nurses who were excluded from the actual study. Then modifications of some statements in the tool were done. The purpose of the pilot study was to:

- Test the applicability of the tool
- Estimate the time needed to complete the tool.

The pilot study revealed that the sentences of the tools were clear and relevant, but few words have been modified. Following this pilot study the tools were reconstructed and made ready for use.

**5- Data collection**

Collection of data covered a period of 3 months from 20 January 2008 to 18 April 2008.The time for data collection was from 9 am to 2 pm.

**Statistical Analysis**

Analysis of the data was carried out by the researcher. The collected data was categorized, coded, computerized, tabulated and analyzed using percentage.

## 3. Results

**Table I:** shows the socio-demographic characteristics of the nurses. As regards age , it was observed that more than one third (39.1 %) of the study subjects aged 31 to 40 years ,while slightly less than one-quarter of them (23.9 %) were either 20 to 30 years of age or 41 to 50 years of age. The remaining (13.1%) were more than 50 years.

Regarding to educational level it was noticed that nearly three- fifths (60.9%) of the study subjects were university education, while only 39.1% of them were diploma graduates. In relation to the current position, more than one third (34.8%) of the study subjects were supervisor nurses, while more than one quarter (26.1%) of them were outpatient maternity nurses, 23.9% were emergency maternity nurses and the remaining (15.2%) were family planning maternity nurses. Considering year of experience, it was illustrated that more than one- third (34.8%) of them work from 1 to less than 5 years , 30.4% work more than 15 years, (17.4%) were work from 5 to less than 10 years and only 6.5% work less than one year.

The table also shows that the major source of their advice given to pregnant women regarding nausea and vomiting was physician or colleagues and training courses (65.2% and 46.7%) respectively followed by relatives or friends (10.9%), while books or magazines and mass media constituted (9.8% and 5.4%) of the source of knowledge respectively. Few of the nurses (36.9% and 10.9%) had participated in training courses related to antenatal care in the last 2 years,

**Table II** Maternity nurses were asked to elicit what type of advice they give to women experiencing nausea and vomiting in pregnancy (excluding any supplements). The answers varied but the main common responses included suggesting: frequent small meals and snacking (89.1%); avoiding fatty/spicy foods (52.2%); eating before rising in the morning, e.g. dry biscuits/toast (50%); keeping hydrated (47.8%) and explaining the cause and effects of nausea and vomiting in pregnancy (28.3%).

**Table III:** The majority of maternity nurses (80.4%) recommended ginger for nausea and vomiting in pregnancy followed by vitamin B6 (73.5%) and peppermint (71.7%). Less commonly prescribed was chamomile (30.4%) it was recommended for its calming/relaxing effects. More than two-third (66.2%) of those who recommended ginger did not specify the exact dose and frequency of each supplement recommended, or they specified dose without frequency and vice versa. The same was found for peppermint and chamomile. Peppermint was likely to be prescribed without offering women guidance as to what may be effective or safe 63.3% and chamomile was prescribed unspecified the dose and frequency by 78.6% .Vitamin B6 was the only supplement where maternity nurses' reports showed some consistency of advice; 77.5% specified the form of supplement.

**Table IV**: For each supplement, maternity nurses were asked if they were aware of any harmful side effects, and if so, to describe them. For the commonly recommended supplements, most maternity nurses considered that they were unaware of any harmful side effects: ginger 91.9%; vitamin B6 86.8%; peppermint 92.4%; and chamomile 92.6%.

As shown in **Table V:** a variety of complementary therapies had been practiced by maternity nurse without referral of pregnant women to alternative practitioners. 68.2% of emergency maternity nurse and 65.6% of supervisor nurse and 64.3% of family planning nurse and 62.5% outpatient maternity nurse consider CAT as useful and safe and not necessarily a predictor of referral by them to any particular alternative therapy or therapist.

## 4. Discussion

This study documented the types of advice that maternity nurses are imparting to pregnant women with 'nausea and vomiting". Most nurses in the study give simple dietary advice and counseling about lifestyle changes as part of their general advice to reduce nausea and vomiting in pregnancy. Most advices entailed more than one suggestion, indicating that no single remedy alone is thought by maternity nurse to be effective in managing nausea and vomiting in pregnancy. Although maternity nurse recommended frequent small meals/snacks, only half suggested avoiding fatty/spicy foods and odors or to eat before rising in the morning and to drink fluids/keep hydrated.

**Table (1): Distribution of the study subjects according to their socio-demographic characteristic**

| Socio-demographic characteristics | N0(92) | % |
|---|---|---|
| **Age (years)** | | |
| • 20-30 | 22 | 23.9 |
| • 31 -40 | 36 | 39.1 |
| • 41-50 | 22 | 23.9 |
| • > 50 | 12 | 13.1 |
| **Level of education** | | |
| • University. | 56 | 60.9 |
| • Diploma. | 36 | 39.1 |
| **Current position** | | |
| • Supervisor nurse | 32 | 34.8 |
| • Outpatient Maternity nurse | 24 | 26.1 |
| • Emergency Maternity nurse. | 22 | 23.9 |
| • Family planning Maternity nurse. | 14 | 15.2 |
| **Year of experience** | | |
| • < 1 | 6 | 6.5 |
| • 1 - < 5 | 32 | 34.8 |
| • 5 - < 10 | 16 | 17.4 |
| • 10 - < 15 | 10 | 10.9 |
| • > 15 | 28 | 30.4 |
| **Source of general advice given regarding nausea and vomiting*** | | |
| • Physician or colleagues | 60 | 65.2 |
| • Training course | 43 | 46.7 |
| • Relatives or friends | 10 | 10.9 |
| • Books or magazines | 9 | 9.8 |
| • Mass media | 5 | 5.4 |
| **No. of training courses about antenatal care in last 2 years** | | |
| • None | 48 | 52.2 |
| • Once | 34 | 36.9 |
| • Twice | 10 | 10.9 |

*More than one answer is allowed.

**Table (2): Distribution of the study subjects according to their common advices given to pregnant women experiencing nausea and vomiting (excluding any supplements).**

| Common advice given to women experiencing nausea and vomiting | NO (92) | % |
|---|---|---|
| • Frequent small meals/snacking | 82 | 89.1 |
| • Avoid fatty/spicy foods and odors | 48 | 52.2 |
| • Eat before rising dry biscuits/toast | 46 | 50.0 |
| • Fluids/keep hydrated | 44 | 47.8 |
| • Explain cause and effects of nausea and vomiting, e.g. hormonal | 26 | 28.3 |
| • Rest/relaxation | 18 | 19.6 |
| • Carbonated fluids, e.g. soda water, lemonade | 18 | 19.6 |
| • Carbohydrate snacks, e.g. crackers, toast, nuts | 18 | 19.6 |
| • Eat what you feel like/can tolerate | 14 | 15.2 |
| • Seek medical advice if excessive | 12 | 13.0 |

* More than one answer is allowed.

**Table (3): Distribution of the study subjects regarding their common supplements recommended for nausea and vomiting in pregnancy including recommended form, dose and frequency.**

| Common supplements recommended | N0 (92) | % | Most common form | Most commonly prescribed dose & frequency |
|---|---|---|---|---|
| Ginger | 74 | 80.4 | Tea | Great variation in dosages (49/74 ; 66.2% unspecified) |
| Vitamin B6 | 68 | 73.5 | Tablet | 25 mg daily or as directed (53/68; 77.5%) |
| Peppermint | 66 | 71.7 | Tea | Unspecified (46/66; 63.2%) |
| Chamomile | 28 | 30.4 | Tea | Unspecified (22/28; 78.6%) |

*More than one answer is allowed

**Table (4): Distribution of the study subjects regarding their awareness of any harmful side effects**

| Awareness of any harmful side effects | N o | % |
|---|---|---|
| Ginger (n=74) | | |
| -Aware | 6 | 8.1 |
| -unaware | 68 | 91.9 |
| Vitamin B6 (n=68) | | |
| -Aware | 9 | 13.2 |
| -unaware | 59 | 86.8 |
| Peppermint (n=66) | | |
| -Aware | 5 | 7.6 |
| -unaware | 61 | 92.4 |
| Chamomile (n=28) | | |
| -Aware | 2 | 7.4 |
| -unaware | 26 | 92.6 |

**Table (5): Distribution of the study subjects regarding their referral of women to alternative practitioners**

| Referral of women to alternative practitioners | N o (92) | % |
|---|---|---|
| Emergency Maternity nurse | | |
| -yes | 7 | 31.8 |
| -No | 15 | 68.2 |
| Supervisor nurse | | |
| -yes | 11 | 34.4 |
| -No | 21 | 65.6 |
| Family planning maternity nurse | | |
| -yes | 5 | 35.7 |
| -No | 9 | 64.3 |
| Outpatient Maternity nurse. | | |
| -yes | 9 | 37.5 |
| -No | 15 | 62.5 |

Generally, the dietary advice given by the maternity nurse in this study to women experiencing nausea and vomiting in pregnancy is similar to that commonly found in the literature of **Lacroix** and **Eason**[4], and **Quinlan** and **Hill**[10]. On the other hand it appears to be a lack of evidence to support the typical dietary and lifestyle advice by **Jewell** and **Young**,[1] **Davis**,[2]; **Hollyer *et al***. [5] Despite self-

reports from pregnant women suggesting that certain food odors may stimulate nausea and vomiting by **O'Brien** and **Naber**[11], and **Goodwin**[12]. A study by **Swallow *et al.*,** found no adaptive olfactory changes in pregnant women [13] . Two studies have found that protein meals may be more beneficial for nausea than carbohydrates and fats[11,14]. **Jednak *et al.*,** found that liquid as opposed to solid meals decreased gastric dysrhythmias associated with nausea [14].

This study found that most maternity nurses recommend one or more herbal supplements in their advice for nausea and vomiting in pregnancy. Ginger and peppermint were often included in general advice for nausea and vomiting in pregnancy. The common inclusion of ginger and peppermint may demonstrate the widespread acceptance of these herbs as safe and viable treatments for nausea and vomiting in pregnancy. Ginger is a well known herbal remedy for the prevention and the treatment of various forms of nausea, including motion sickness, NVP, and post surgical nausea [15- 17].

Ginger is a spice used during pregnancy in many cultures over thousands of years without reports of anomalies, it would appear safe but many women are worried and want to follow professional recommendations. Ginger capsules that contain dried form of ginger are comfortable on the stomach more than the potent fresh root. The dose of ginger, that has been tested, is 1 gram each capsule contains 250 mg capsules powdered ginger taken four times a day [18].

**Ensiyeh** who studied the effect of ginger on nausea and vomiting during pregnancy reported that ginger is very effective on relieving nausea during pregnancy [19]. In spite of the side effects associated with ginger are rare, however, it is not recommended for persons with sensitive stomach, as they do not always tolerate this plant well. It remains contraindicated for persons with gallstones[20]. In pregnancy, large dose may inhibit thromboxane synthetase, impairing development of the male fetal brain[19]. Caution is also advised in patients with inflammatory skin diseases, high fever, bleeding condition, or ulcers [20]. However, the safety and efficacy of most herbs for use in pregnancy is still unknown and recommending them to pregnant women is dangerous.

A great proportion of maternity nurse in this study recommended peppermint and chamomile. There is little evidence to support their safe or effective use in pregnancy, with no clinical trials to date. In the non-pregnant population, one clinical trial found peppermint to be effective for relief of post-operative nausea and vomiting [21]. The Comprehensive Natural Medicine Database used by the pharmacy department did cautions against using peppermint in pregnancy, particularly peppermint oil. It also states that chamomile is likely to be unsafe when used orally in medicinal amounts, as it is considered an abortifacient [22] . In this survey, awareness of potential harmful effects of the herbs was poor; few of maternity nurses considered that there may be harmful side effects from the main supplements recommended. In this study 7.4 % of those recommending chamomile reported that they were aware of potential harmful effects, despite it being a potential abortifacient when taken in medicinal amounts.

There was great variance in how herbs were recommended by maternity nurse i.e. exact form, dose and frequency. It is not known if the lack of detail given by nurse when recommending herbs means that they do not suggest doses to women or they did not provide the information in the survey. These findings imply a need for maternity nurse to update their knowledge of treatments for nausea and vomiting in pregnancy, and for increased awareness of the safety and efficacy (or otherwise) of herbal supplements and alternative treatments. Any advice given to pregnant women needs to include what is known about safety and efficacy of treatments or supplements in pregnancy so informed choices can be made. Specific detail needs to be given on how to use any treatments safely, according to current evidence.

This study finding indicate that many of the maternity nurses that give advice to CAT have not received any formal training on alternative therapies or have little understanding of the pharmacological nature of alternative therapies and their possible risks to pregnant women .They perceive alternative complementary therapy as useful and safe and not necessarily to referral pregnant women to any particular alternative therapy or therapist. Regarding the major sources of information through which midwives learn about CAT it was found that physician or nurse's colleagues. The same result was reported by **Hastings** and **Terada** [23] found that over 90% of the nurse-midwives participating in their study believed that CAT therapies belong to nurse-midwifery practice, and about 25% of participants considered themselves CAT therapy providers. **Wiebelitz *et al.*,** found that 88% of the midwives they surveyed in his study considered training of CAT is inadequate [24].

The nurses' role is considered very important, especially in motivating women regarding self-awareness and self-care aspects that became the main issue of education today. They should have some basic information about diet advice, herbal or medical plants and some advices on what they can give to the mother before, during and after using all methods to help them to overcome their complaint.

Herbal medicines and alternative treatments are often included in common advice given for nausea and vomiting of pregnancy; however, there is little evidence to guide practice in this area. Advice given

to pregnant women needs to include what is known about the safety and efficacy, route of administration, dose and dosage form and its possible side effects of various treatments in pregnancy, so they can make informed choices. There is a need for increased awareness of the issues around the safety and efficacy (or otherwise) of herbal supplements and alternative treatments when prescribed or used during pregnancy, and midwives need to be aware of the evidence for any treatment or supplement they suggest to women.

**Conclusion**

The findings of the study indicate that the advice most commonly given to women experiencing nausea and/or vomiting was to eat frequent small meals and snacks (89.1%) avoidance of fatty/spicy foods (52.2%). Most maternity nurses included some form of vitamins or herbal supplement in their advice for nausea and vomiting in pregnancy .Half of them did not received any training program in the use of CAT .Also many nurses were unaware of potential harmful side effects or what would constitute appropriate doses. They perceive alternative complementary therapy as useful and safe and not necessarily to referral to any particular therapist.

**Recommendations**

Based on the findings of this study, attention should be given for raising the awareness of the maternity nurse about the safety and efficacy of herbal supplements and alternative treatments when prescribed or used during pregnancy. Non- pharmacological management of NVP should be included in the curricula of basic nursing education and continuing education in variable educational setting.

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12/1/2011