

A LITERATURE REVIEW OF PREGNANCY SICKNESS

Dr R Gadsby & Dr A M Barnie-Adshead

D OTHER SIGNIFICANT FACTORS RELATING TO NVP & HG

Contents

- 37. Food cravings.
- 37a. Food aversions.
- 38. Caffeine and NVP.
- 39. Factors that improve NVP.
- 40. Factors that worsen NVP.
- 41. Employment. Time lost from work.
- 42. Adverse effects of severe NVP on the quality of pregnant women's lives.
- 42a. Does NVP require treatment? Early treatment is advisable.

Chapter D

37. FOOD CRAVINGS RELATED TO NVP

- 1. Women with food cravings had significantly more nausea and vomiting during pregnancy. 36 (30%) of those with no symptoms of NVP experienced cravings compared with 158 (42%) of those with NVP who had cravings. (27)
- 2. 420 out of 983 (42.7%) developed food cravings in early pregnancy. The development of cravings was associated with a higher incidence of nausea. (40)
- 3. The proportion of women who reported pronounced cravings ranged from 67% with urban blacks (412 women) to 84% with whites, 256 women. Cravings were more intense in the first trimester. (41)
- 4. Cravings appear to increase during pregnancy. Women with moderate to severe vomiting report more cravings before and during pregnancy. Nausea severity showed no association to cravings, either prior to or during pregnancy. (77)
- 5. Most of the changes in diet, cravings and aversions occurred between the last menstrual period and the 12th week of pregnancy. (21)

Summary

Development of an increased number or more pronounced food cravings associated with increased NVP. (27) (40) (77) Total: Three References

Food craving increased in first trimester of pregnancy. (41) (21)

Total: Two References

37a. **FOOD AVERSIONS RELATED TO NVP**

1. Food aversions appeared to increase during pregnancy, and women who experienced more severe episodes of vomiting reported more food aversions. 129 women in study. (77)
Fewer foods were reported as aversive by pregnant women than as being craved. No association between pregnancy nausea severity and reported aversions was seen. (77)
2. The majority of women (65%) ± 15 experienced at least one aversion during pregnancy. (86)
Many pregnant women have aversions to alcoholic and non-alcoholic (caffeinated) beverages (which include coffee, tea and soda), and strong tasting vegetables, especially during the first trimester. However, the greatest aversions are to meats, fish, poultry and eggs. (86)
Usually the foods were reported aversive because they provoked nausea. 5,432 women experienced food aversions in the study group. (86)
3. Most of the changes in diet, cravings and aversions occurred between the last menstrual period and the 12th week of pregnancy. (21)
4. 15% of women's NVP was made worse after drinking tea or coffee. 363 women in study (Gadsby 1993 not published).
5. Women reporting aversive stimuli (n = 162) had significantly more NVP than those (n = 122) who did not. (141)

Summary

Food aversions associated with NVP. (77) (86) (21) (Gadsby) (141)

Five References

38. **EFFECT OF CAFFEINE ON NAUSEA AND VOMITING OF PREGNANCY**

1. The presence of nausea was associated with a tendency to decrease caffeine consumption. 59% of the nauseated controls decreased their consumption compared with 52% of non-nauseated controls. Similarly, 44% of the nauseated cases (women who had a spontaneous abortion) decreased their caffeine intake, compared to 36% of the non-nauseated cases. 607 women who had a miscarriage and 1,284 controls in study. (43)
2. 15% of women's symptoms of NVP were worse after drinking tea or coffee. 363 women. (Gadsby - not published)
3. Among those affected with aversions in pregnancy, there were dislike or a much reduced consumption of tea or coffee. 1,771 women in study. (41)
4. Smell of coffee pots made NVP worse. (70)
5. The second most aversive food category in pregnant women, particularly in the first trimester, was non-alcoholic beverages which included coffee and tea. (86)
6. 49 women, 28.8% of the 250 women in the study, decreased their intake of coffee in the first half of the pregnancy. About half of all women diminishing coffee consumption specifically cited a response to or provocation of nausea as an explanation. (71)
7. Effective self care actions to reduce NVP cutting down on drinks of cola, tea, coffee, stated by 24% of 37 women. (102)
8. Some women reported they were unable to tolerate coffee because it provoked their symptoms of NVP. 124 women returned completed clinical diaries. (108)
9. Higher caffeine intake was only associated with lower risk of nausea and of nausea and vomiting in pregnancy. It is not possible to deduce from our data the casual nature of this

- association, whether women who drink caffeine do so because they have less nausea, or the higher caffeine intake itself reduces the risk of nausea. (P<0.001). 1,513 women. (45)
10. Avoidance of high caffeine sources is common among pregnant women although this is not necessarily associated with NVP. (96)
 11. Of 162 respondents, 26% (n = 41) stated a drink made NVP worse, of these 75.6% (n = 31), stated the drink was coffee. (141)

Summary

Increased caffeine consumption makes NVP worse.

(43) Gadsby (41) (70) (86) (71) (102) (108) (141)

Total: Nine References

Increased caffeine consumption associated with reduced NVP. (45) ▲

Total: One Reference

Caffeine consumption not necessarily related to NVP. (96)

Total: One Reference

▲ P value recorded.

39. NATURAL FACTORS WHICH IMPROVE SYMPTOMS OF NVP

1. Lying down early during an episode of NVP. Stated by 28/44, 63% of women. (23) Eating crackers. 23/44, 52% of women. 78 women in study. (23)
2. From 147 women:
Eating. 52.8% (every two hours, bland carbohydrate foods, rice cakes, crackers, toast, baked potatoes, macaroni).
Recumbent rest. 25%
Nothing. 9.7%
Vomiting. 5.6% (54)
3. 51% of 363 women stated in their prospective diaries that eating improved their symptoms. (Gadsby - not published).
4. 52% of 1,000 women who were nauseated reported that eating improved their symptoms while 33% of these women who vomited said that eating improved their symptoms (40)
5. When they are hungry they want to eat right now! 30 minutes can make the difference between a patient's eating and becoming nauseated.
Minimising odours is key to controlling NVP.
Reassure patients they are not unique or strange.
Food - let women have their cravings. Potato crisps settle the stomach and drive a thirst.
Patients often want cold, tart or sweet drinks, e.g. lemonade. After crisps women can eat a better meal. (70)
6. As soon as they are hungry they should be encouraged to eat frequent small amounts of whichever food appeals to them. Emphasis on intake rather than content. (92)
7. Suggestions of foods which appeal to pregnant women because of taste and texture:
Salty - crisps and pretzel
Tart/sour - pickles, lemonade
Earthy - brown rice, mushroom soup
Bland - mashed potatoes

Soft - bread, noodles
 Sweet - cake, sugary cereal
 Fruity - juices, fruity popsicles
 Wet - juice seltzer
 Dry - crackers
 Crunchy - celery sticks, apples. (72)

8. No attempt should be made to eat according to normal mealtimes. Rather the patient should be encouraged to take whatever food seems acceptable as the desire arises. (74)
9. The majority of women, 571 (94%), had tried one or more comfort measures/medication to try to relieve their symptoms. Women used a change of dietary behaviours, most frequently (63%) - this involved experimenting with and making changes to diet, changes included small frequent meals, eating less fried and fatty meals, minimising time spent in the kitchen, eating bland foods, avoiding odours that trigger nausea and eating a dry biscuit before rising in the morning. Sucking sweets.

Other measures taken to relieve NVP

- | | |
|--|----------|
| Ginger, relaxation, naturopath | 42% |
| Resting | 39% |
| Vitamin B6 | 23% |
| Use of anti-emetics (Maxolon the most widely used) | 26% (81) |
10. Rest, preferably recumbent position, especially after meals. Fresh air. Bland food, water. Silence. Some women reported they were unable to tolerate prenatal vitamin preparations or coffee. Several participants notes nothing helps. 124 women returned clinical diaries. (108)
 11. Eating. 62% reported relief of nausea with eating.
 Resting. Lying or sitting down.
 Eating crackers or toast.
 Small frequent meals.
 38% of the time “nothing worked”. (109)
 19 women in study. Each kept record of nausea for seven days.
 12. Effective self-care actions to reduce morning sickness. Number of subjects reporting “used, helped” (n=37):

Getting more rest	27 = 73%
Eating several small meals per day	24 = 69%
Avoid bad smells	21 = 57%
Avoiding greasy or fried foods	21 = 57%
Avoiding cooking	19 = 51%
Receiving extra attention from partner	19 = 51%
Eating when feeling nauseous	16 = 43%
Keeping myself busy	16 = 43%
Sharing experiences with another mother	13 = 35%
Eating bland foods, e.g. baked potato, hot cereal	13 = 35%
Eating dry toast or crackers before getting up in the morning	11 = 30%
Cutting down on drinks of caffeine (Cola, tea, coffee)	9 = 24%
Having someone tell me that morning sickness is normal and will go away	7 = 19%

55 women in study, 37 experienced NVP. (102)

13. Interventions used by women to alleviate NVP.
Most of the five hundred in the study assessed themselves as having moderate to severe NVP. The three most important features for alleviation of symptoms were rest, getting fresh air and taking frequent small snacks. Emotional support from partner, family, friends etc.... and eating food were in the top five items to afford some relief. Only 30% of women took medication, but when taken medication, was the second most helpful item to relieve symptoms. (114)
14. 'I like to get outside to breathe the fresh air'
'I sat on the front door step to get the fresh air'
(personal communications to Barnie-Adshead).
15. Of 162 respondents n=97 (34%) stated nothing helpful.
A total of 110 (39%) did mention a coping strategy.
- | | |
|--|------------|
| Eating small meals | n 66 (60%) |
| Eating certain food | n 66 (60%) |
| Dry biscuits | n 16 (14%) |
| Sweets - mints | n 13 (12%) |
| Ginger biscuits | n 11 (10%) |
| Drinks | n 31 (28%) |
| Water | n 12 (11%) |
| Fizzy drinks | n 7 (6%) |
| Other strategies; | |
| Rest, sleep, relaxation | n 21 (19%) |
| Fresh air, drugs, Gaviscon acupressure (combined category) | n 9 (8%) |

Women reported a variety of strategies to assist NVP relief but those appear to be individualistic in nature. (141)

Summary

- Eating (before nausea starts or when feeling hungry or when feeling nauseous). (23) (54) Gadsby (40) (70) (92) (74) (109) (102) (114) (141)
Eleven References
- Getting more rest. (23) (54) (81) (102) (108) (109) (114) (141)
Eight References
- Frequent small meals. (23) (92) (81) (109) (102) (114) (141)
Seven References
- Lying down positional changes avoided especially after meals or during an episode of nausea. (23) (54) (81) (108) (109)
Five References
- Getting fresh air. (23) (108) (114) (Barnie-Adshead) (141)
Five References
- Minimise odours. (70) (81) (108) (102)
Four References
- Nothing helps. (54) (108) (109) (141)
Four References

8. Let them have their cravings, intake rather than content. (70) (92) (74)
Three References
9. Medication. (81) (141)
Two References
10. Ginger. (81) (141)
Two References
11. Reassure them they are not unique or strange. (70)
One Reference

40. **NATURAL FACTORS MAKING NVP WORSE**

1. Fatty smells, cooking smells and smoke precipitate NVP. 78 women in study.(23)
2. The following items women stated made their symptoms worse. Smell of food, cooking, smell of fatty foods, tea, coffee, being hungry. 363 women in study.
(Gadsby - not published).
3. From 147 women, the following made NVP worse:
Ingesting particular foods and beverages, 34.3%.
Not eating (being hungry), 20.3%.
Physical position or position changes, 16.8%.
Sensory stimulation
Olfactory, 16.1%
Mental or auditory, 5.6%.
Visual, 2.8%.
4. Among those affected with aversions in pregnancy, there were dislikes or much reduced consumption of tea, coffee, meat, fish, fatty or oily foods. 1,771 women in study. (41)
5. Passive smoking is associated with more than a two-fold increased risk of severe vomiting. 201 women with severe vomiting in study. (65)
6. Foods' appearance, texture and smell. - Smells, especially food and cooking smells make NVP worse. Also, the smell of coffee pots or perfume. Swallowing saliva can precipitate NVP. (70)
7. Increased sensitivity to odours. Aromas of cooking food as well as aromas in the workplace may initiate nausea, e.g. perfume, smoke. (92)
8. Hyperolfactory and sensitivity to motion are seen in many patients with hyperemesis. Some women are able to tolerate a meal in bed in the morning but not after rising or moving around. (74)
9. Travel sickness is worse during pregnancy. 92 patients in study. (19)
10. Many pregnant women have aversions to alcoholic and non-alcoholic (coffee and tea) beverages and strong tasting vegetables, especially during the first trimester. However, the greatest aversions are to meat, fish, poultry and eggs. 20 study summaries included information from 5,432 women who had food aversions. Usually the foods were reported aversions because they provoked nausea. (86)
11. NVP often co-existed with hunger, 43% and fatigue, 63%. Women described a sudden onset of intense hunger requiring them to eat immediately. This was followed by nausea and often vomiting. (103)
12. Stimuli for NVP;
Positional changes, e.g. walking.
Odours which are usually inoffensive, e.g. perfumes, deodorants.

Any noxious odours - everything smells funny.

Spicy food.

Sight of food.

Loud noises.

Diaries. Detailed daily diaries can highlight problems to be avoided or be used beneficially. (108)

13. Factors contributing to nausea;

Fatigue, 45%.

Eating, 18%.

Hunger, 10%.

Odours, 6.9%.

19 women in study, each kept record of nausea for seven days during the first trimester. (109)

14. Major factors which interfere with the ability to use relief measures for NVP.

Work.

Insomnia.

Travel (particularly to work).

Child responsibilities.

Shopping.

Decreased appetite. (109)

19 women in study kept diaries of NVP for seven days in the first trimester.

15. I can smell odours in a room nobody else can smell, with resultant increased NVP.

(personal communication to Bernie-Adshead)

16. I have said to my husband that room smells unpleasant. He replies "I cannot detect any problem". (personal communication to Bernie-Adshead)

17. 50% of respondents to a questionnaire containing the nausea and vomiting instrument (NVPI) and open ended questions relating to perceived aversive and helpful stimuli, could identify something that made nausea worse, stated that olfaction appears to be the primary mechanism involved. (141)

Women with more severe NVP were more likely to state food or cooking odour as adverse stimuli. (141)

Aversive stimuli - a total of 72% of respondents stated a food; 26% a drink and 31% non-food. Of the food category n = 45 (28%) reported fat/fried food; n = 20 (12%) reported oriental, spicy, garlic; 17% fish, meat, eggs and poultry (combined strategy). Drinks included coffee, 19%; tea 11%; non foods included cigarettes 9%; perfumes 7% and cleaning products 5%. (141)

Summary

Increased olfactory sensation. (54) (74) (108) (Bernie-Adshead - twice) (141)

Six References

Examples:-

Fatty or cooking smells

(23) (Gadsby) (54) (41) (70) (92) (74) (108) (109) (141)

Ten References

Beverages, especially tea, coffee - taste or smell of

(Gadsby) (54) (41) (70) (86) (141)

Six References

Cigarette smoke (23) (65) (92) (141)

Four References

Perfume (smell of) (70) (92) (108) (141)

Four References

Other Factors:-

Being hungry (Gadsby) (54) (103) (109)	Four References
Positional change (54) (74) (19) (109)	Five References
Fatigue (109) (103)	Two References
Various foods, e.g. meat, fish (41) (86) (141)	Three References
Oriental, spicy, garlic (141)	One Reference
Swallowing saliva (70)	One Reference
<u>Factors preventing women from resting</u> e.g. avoid loud noises (108)	One Reference
Work	}
Travel, particularly to work	}
Child responsibilities	}
Shopping	} Please see Review Indices 41 and 42
Cooking	}
Cleaning	}

41. EMPLOYMENT IN RELATION TO NVP. TIME LOST FROM WORK

1. Of 206 working women, 65% lost no time from work due to NVP. The remaining 73 (35%) lost 4,528 hours of work. The average loss of time per working woman who required time from work in the study was 62 hours. The average loss of time from work for all working women was 22 hours. Assuming 57% of women work during pregnancy then approximately 8.6 million hours per year of paid employment in England and Wales are lost through pregnancy sickness symptoms. (50)
2. Employment outside the home made no statistical difference to the amount of nausea and vomiting, neither did the type of work carried out. Manual, non-manual or student groups were compared. 75% of 243 employed, complained of NVP. One in four actually needed to take time off work. (27)
3. In 12% of 948 cases, emesis was so pronounced and/or of such duration that it rendered ordinary work impossible. (6)
4. All 147 women admitted to one Obstetrician or two nurse-midwifery practices for pre-natal care in the U.S.A were asked whether or not nausea and vomiting during pregnancy affected their ability to perform daily activities. 120 (83%) replied in the affirmative. 41 (34%) said that symptoms were sufficiently severe that they were obliged to alter their daily schedules in some way.
Four out of five in group one with the severest symptoms stated that they would not plan or welcome another pregnancy. Five out of five in group one were unable to perform their normal house-keeping duties. Three out of five in group one worked outside home. All stopped work for 3/12. (54)
5. Women employed outside the home, manual or service workers experienced more severe nausea symptoms than did clerical or secretarial workers. 100 women in study. (48)
6. In a study of 611 American women who exhibited the more severe symptomatology of NVP, two thirds worked outside the home and lost a mean of 206 hours of paid employment. (88)
7. Over half of women in employment took time off sick from work, with an estimated 808 working days lost among women prior to interview. In these early weeks 14 women (4%) resigned from work, 95 women (28%) made changes in their work schedule, coming in later or leaving earlier, and 221 women (65%) thought they were less attentive at work. 593

- women with nausea and/or vomiting in study. (81)
8. 78% of women in the study population lost some time from outside employment. Study population, 260 women who contacted the health-line in Canada presented with more severe NVP than the average in the population. (91)
 9. We suggest that an appropriate role for care givers is to encourage frequent periods of rest. It may be important to assist in educating employers of the need for some women to take leaves from work or modify their work schedule while they are experiencing NVP. (108)
 10. Because fatigue seems to exacerbate NVP, women should be encouraged to increase their rest, especially when they are symptomatic. It would seem appropriate for health care providers to adopt a liberal attitude toward providing leaves-of-absence from work. Such policy should ultimately shorten the number of days lost from work. (115)
 11. Among women who have worked, 494 (14%) reported that they had stayed away from work because of NVP. The length of leave was stated by 437 women. The average length of leave was 13 days but the mean was 5 days and two thirds (289) had less than 10 days leave. The total number of days sick leave because of NVP was 5583 days. NVP caused some 28% of all sick leave during pregnancy before week 28. (132)

Summary

Time lost from work due to NVP was significant.

(50) (27) (6) (54) (81) (88) (91) (108) (115) (132)

Total: Ten References

Approximately 30% of working pregnant women need to take time off work due to NVP.

(50) (27) (6) (54) (81)

Total: Five References

42. ADVERSE EFFECTS OF SEVERE NVP ON QUALITY OF PREGNANT WOMEN'S LIVES

1. If you heard that a woman might be left to suffer from nausea and vomiting for at least a couple of months, without any nursing or medical attention, you would be rather perturbed. At the same time if a condition that caused 8.5 million working hours to be lost each year in England and Wales was not addressed, you would be surprised. But this is exactly what happens when women suffer from morning sickness. (87)
2. A study of 611 American women calling a health line for women with current nausea and vomiting of pregnancy (NVP) in Canada between February 1996 and August 1998 at approximately 8 weeks of gestation, and followed up at 20 weeks of gestation, naturally included women who exhibited more severe symptomatology of NVP compared to figures from population-based studies. These women reported due to NVP, 39% felt depressed always or most of the time, 40% said that NVP adversely affected the relationship with their partner and 14% stated they would be less likely to consider having more children due to their experience with NVP. Two thirds of these women worked outside the home and lost a mean of 206 hours of paid employment. These data suggest that lack of an approved treatment can cause women unwarranted and preventable suffering. (88)
3. This report focuses on 3,201 telephone callers to the NVP health-line in Canada who reported having nausea and vomiting of pregnancy (NVP) in a previous pregnancy. Half reported on pregnancies that had occurred over 4 years prior to contact with the NVP health-line. A high prevalence of reported psychosocial problems were attributed by these women to NVP. All of the following were reported more commonly among women with more severe nausea and

vomiting. Feelings of depression always, to most of the time 52%; consideration of termination of pregnancy 18%; an adverse effect on their relationship with their partner 50%; an adverse effect on their partner's daily life 61%; the fear of the likelihood that NVP would harm their fetus 61%. The prevalence (n =108;3.4%) of elective termination of pregnancy due to NVP was relevant despite the fact that 75% of pregnancies were said to be planned. No information was obtained on previous history of depression or the quality of the relationship with women's partners. It is therefore not clear which came first, the NVP or the psychosocial factors. However, even if the psychosocial factors reported predated pregnancy, the fact that they were independently related to use of anti-emetic medication suggests that they should be taken into consideration when managing women with NVP. (89)

There was another notable finding: there was a clinically important prevalence of psychosocial problems even among women with mild nausea and vomiting, for example 21-23% of women reported feeling depressed (due to nausea or vomiting respectively) always or most of the time, and 43% reported an adverse effect on their partner's everyday life. (89)

In deciding whether or not to initiate anti-emetic therapy consideration should be given to the impact that NVP is having on a woman's life. Treatment may be appropriate for less severe nausea and vomiting that does not necessarily cause dehydration and/or malnutrition. (89)

4. In England and Wales from 1979 to 1992 a range of 25-59 legal abortions were performed annually for ICD code 643 'excessive vomiting of pregnancy' (personal communication, Abortion Statistics IPSC London UK, November 1995). This corresponds to 6.0 such abortions (median 3.7-9.5) per 100,000 pregnancies and 97% (range 60-100%) of all terminations for maternal indications. (100)
5. Over the study period, February 1996 - March 1997, pregnancies complicated by NVP were retrospectively reported to the NVP health line in Canada, 108 terminations of pregnancy due to NVP, 413 cases in which termination due to NVP had only been considered, and 2,609 pregnancies in which no termination due to NVP had been considered were reported. Women who terminated pregnancy were significantly younger and more likely to have reported NVP in an unplanned pregnancy and to be multiparous. Nausea was usually severe in all groups and worse in the group of women who terminated than in those women who never considered termination ($P < 0.0001$) with a similar finding for vomiting. The following factors were independently associated with actual termination of pregnancy attributed to NVP: unplanned pregnancy ($P = 0.0001$); multiparity ($P = 0.03$) and feelings of depression ($P = 0.001$). However, adverse effects of NVP on women's relationship with their partner and on their partner's daily lives were also significantly related to consideration of termination of pregnancy. The assessment of women with NVP should include an evaluation of both physical and psychosocial health. (90)
6. From February to August 1997, 260 women formed the study population of women suffering from nausea and vomiting of pregnancy who telephoned a health-line in Canada when they were less than 20 weeks pregnant. Women who contact the health line presented with more severe nausea and vomiting than the average population. (91)
60% of these women reported some degree of depression because of NVP and 50% were concerned that their NVP would impact negatively on the health of their child. Moreover, 12% of patients considered termination of pregnancy because of the severity of their NVP. This possibility reflects the severe nature of the disease in this population. In terms of lifestyle changes, 78% reported some time lost from outside employment. Almost half of the women felt that NVP adversely affected the relationship with their partner and over half of the women felt that NVP had an adverse effect of their partner's day to day life. (91)
A large educational effort based on evidence-based management is needed among health

professionals and patients to optimise management and eradicate misinformation about NVP. (91)

7. Each year, a significant number of women are admitted to hospital for hyperemesis gravidarum and many require such interventions as total parental nutrition. Early recognition and management therefore have a significant effect on the quality of life during pregnancy, as well as a financial impact on the health care system. Management of this problem is multi-faceted. It includes early recognition, dietary and lifestyle advice as well as pharmaceutical and alternative forms of therapeutic interventions. (92)

Conclusion. Nausea and vomiting are frequent symptoms in pregnant women which can affect their quality of life significantly. It is recommended that all health practitioners should question women early in their pregnancies about the presence of these symptoms and offer intervention with advice about diet, lifestyle adjustment and medical treatment. (92)

8. Twenty-seven women who were experiencing different degrees of nausea and vomiting were selected from 147 pregnant women and asked to participate in semi-structured telephone interviews. All participants reported changes in family, social or occupational functioning as a result of these symptoms. Nausea and vomiting can impose substantial lifestyle limitations on pregnant women that can have short and long-term consequences for them and their families. (54)

9. Another cost of severe nausea and vomiting of pregnancy is the effect on the quality of life of the pregnant woman and her family. Quality of life may be considered to have the following dimensions: i) physical functioning, e.g. work, household activities; ii) social functioning e.g. disruption of normal social activities; iii) psychological functioning, e.g. anxiety and depression; iv) disease and treatment related symptoms, here severe nausea. All of these are drastically affected by nausea of the severity that leads to hospitalisation. (93)

10. 593 women with nausea and/or vomiting presented at a mean gestational age of 8.5 weeks. The majority of these women reported that nausea and vomiting affected their ability to carry out day to day activities, with the greatest interference reported to household activities, 89%. Cooking, shopping, washing and cleaning activities were also restricted. 483 women, 81% took longer to get things done in general and 389 women, 65%, carried out the bare minimum of activities during the early weeks of pregnancy. Amongst 269 women, 70% thought they were less effective parents. Women interacted less well with their children, made greater use of crèches and placed greater reliance on existing childcare arrangements, with close relatives assisting. (81)

Women's sense of loss of well-being and health status during these early months was considerable and emphasises the misery many experience. There is a need for health professionals to disseminate information on effective treatment measures and for employers, family and friends to provide emotional and practical help to ease the burden of NVP many experience during the early weeks of pregnancy. (81)

11. The majority of women still suffer some form of nausea or vomiting in early pregnancy and although not a life threatening condition, it often remains a cause of much discomfort and concern to the pregnant patient and her family. Numerous treatments have been tried. Even if considered safe, they may be rejected by informed women who are aware of catastrophes caused by drugs in pregnancy. (27)

12. NVP produced additional worries about the effect on the baby. Women asked, how does this effect the baby? or, does this mean there is anything wrong with the baby? and expressed concern that some harm would come from the violent vomiting and perceived lack of adequate nutrition. 27 women in study. (103)

13. Whether or not neurosis may be the cause of vomiting (in Hyperemesis Gravidarum) we are

convinced that the health and even the life of the patient depends upon one's ability to control the symptoms. (Written in 1938). (14)

14. A review of stressors identified by women with nausea and vomiting of pregnancy reinforces the challenges imposed by the pressure of severe nausea and vomiting at a time that should be filled with anticipation and assumption of the mother-to-be role. These stressors seen in their entirety illustrate why these women are so in need of nursing care:-
- Lack of understanding and support from others.
 - Inability to take vitamins or eat healthily.
 - Taking medications perceived risky.
 - Missing out on the fun of being pregnant.
 - Loss of "normal" pregnancy.
 - Loss of work days or quitting work.
 - Putting life "on hold".
 - Longing to eat and drink normally.
 - Money expended on care and support.
 - Lack of energy, fatigue.
 - Irritability and lack of enjoyment of life.
 - Memory loss or inability to think clearly.
 - Burden of care and time on others.
 - Lack of socialisation and isolation.
 - Inability to prepare for birth and arrival of baby.
 - Inability to care for family and home.
 - Fear of painful treatments.
 - Wanting pregnancy over or to end the misery.
 - Others' perception that hyperemesis is only in her mind.
 - Reluctance of doctors to treat because of cost of liability.
 - Weight loss or inadequate weight gain for gestational age of baby.
 - Fluctuating emotions due to hormones and illness.
 - Sense of inadequacy and failure at being unable to cope and function.
 - Fear of pain or difficult birth.
 - Fear of morbidity or death.
 - Difficulty bonding with infant.
 - Lack of energy and socialisation with other children.
 - Lack of excitement about infant's arrival.
- (From www.hyperemesis.org). (143)

15. Department of health official abortion statistics 1992-2006 excessive vomiting in pregnancy relating to abortion.

YEAR	TOTAL	YEAR	TOTAL
1992	= 25	1999	= 25
1993	= 28	2000	= 15
1994	= 24	2001	= 16
1995	= 37	2002	= <10
1996	= 23	2003	= <10
1997	= 15	2004	= <10
1998	= 31	2005	= <10

Totals under 10 are suppressed for reasons of confidentiality in line with Office for National Statistics Guidance 2005.

Summary

Adverse effects of severe NVP on quality of pregnant womens' lives.

(14) (87) (88) (89) (100) (90) (91) (92) (54) (93) (27) (81) (103) (143) (Department of Health Official Abortion Statistics) Total: Fifteen References

Areas of women's lives effected

- Felt depressed most of the time. (88) = 39%; (89) = 52%; (91) = 60%
- Adversely effected the relationship with their partner. (88) = 40%; (89) = 50%; (91) = 45%
- Had an adverse effect on their partner's daily life. (89) = 61%; (91) = 55%
- Less effective parent. (81) = 70%
- Worried that NVP would impact negatively on the health of their child. (91) = 50%
- Women less likely to have more children. (88) = 14%
- Consideration of termination of pregnancy due to NVP. (89) = 18%; (91) = 12%
- Elective termination of pregnancy due to excessive vomiting in pregnancy. (89) = 3.4%; (90) = 25-59 terminations annually, 1979-92. 1992 - 2001 = 15-37 terminations. 2002 - 2006 = <10 terminations annually due to excessive vomiting in pregnancy in England.

Even mild NVP's effect on pregnant women's quality of life

- Feeling depressed most of the time. (89) = 21-23%
- Adverse effect on partner's everyday life. (89) = 43%

42a. **DOES NVP REQUIRE TREATMENT?**

PREFERABLY EARLY TREATMENT OF NVP ADVISABLE

1. Patients in the trial had symptoms of relatively acute onset which were mainly of moderate severity. The treatment of nausea and vomiting most commonly started one or two weeks after the first symptoms commenced. 28 women in study. (17)
2. This report focused on 3,201 telephone callers to the NVP helpline in Canada who reported having nausea and vomiting in a previous pregnancy. There was a clinically important prevalence of psychosocial problems even among women with mild nausea and vomiting, for example 21-23% of women reported feeling depressed (due to nausea or vomiting respectively) always or most of the time, and 43% reported an adverse effect on their partner's everyday life. In deciding whether or not to initiate anti-emetic treatment therapy, consideration should be given to the impact that NVP is having on a woman's life. Treatment may be appropriate for less severe nausea and vomiting that does not necessarily cause dehydration and/or malnutrition. (89)
3. All know that effectively treating symptoms of NVP in early pregnancy can make a woman

less sick and decrease the time it takes to recover.

(Key Speech by T Goodwin. Hyperemesis.org.uk. Updated March 2006).

4. The value of drug treatment, if any, is at the stage of intractable vomiting when any of the stated anti-emetics, e.g. anti-histamines or phenothiazines, may be used to counter the feeling of nausea. If one can control the symptoms at this stage then it is likely that a large number of women can be prevented from developing excessive vomiting which, if prolonged, leads to hyperemesis gravidarum. (101)
5. Nausea and vomiting are frequent symptoms in pregnant women, which can effect their quality of life significantly. It is recommended that all health practitioners should question women early in their pregnancies about the presence of these symptoms and offer intervention with advice about diet, lifestyle adjustment and medical treatment. (92)
6. There is no clear-cut division between morning sickness and what is excessive vomiting of pregnancy. It is only a matter of degree and both conditions should be treated. Probably the only value of drug therapy is at the stage of morning sickness when anti-emetics or mild sedatives may counter the feeling of nausea, and prevent the woman from developing excessive vomiting and entering the vicious cycle of dehydration, starvation and electrolyte imbalance. (75)
7. Benefits and recommendations. Nausea and vomiting of pregnancy (NVP) has a profound effect on women's health and quality of life during pregnancy as well as a financial impact on the health care systems, and its early recognition and management are recommended. Cost including hospitalisation, additional office visits and time lost from work may be reduced if NVP is treated early. (115)
8. It is important to recognise and treat those patients early who suffer from the extreme form of hyperemesis gravidarum to avoid adverse outcomes in both mother and baby. (126)
9. On June 9th, 1983, Bendectin tablets widely used throughout the world to treat nausea and vomiting during pregnancy, were voluntarily removed from the market by the manufacturer, Merrill Dow. At the time the company faced 327 pending US product liability suits - eventually all lawsuits which came to court were dismissed. The company estimated that the drug was used in 33 million pregnancies by 1983. A generic version, Diclectin, which contains Doxylamine (an anti-histamine with anti-nauseant properties) and Pyridoxine (Vit B6), has been available in Canada since 1983 with gradually increasing sales. Sales reached about 23% of the previous annual sales of Bendectin in Canada and USA by 1989. Bendectin was shown to be effective by default, as lack of use of the drug resulted in a measurable increase in rates of hospitalisation for the symptoms of excessive vomiting during pregnancy, which it was designed to control. (93)
10. We are convinced that the health and even the life of the patient suffering from hyperemesis gravidarum depend upon one's ability to control the symptoms. (Written in 1938). (14)
11. A study of 611 American women who exhibited the more severe symptomatology of nausea and vomiting of pregnancy reported that due to NVP, 39% felt depressed always or most of the time, 40% said that NVP adversely affected the relationship with their partner, and 14% stated that they would be less likely to consider having more children due to their experience with NVP. Two thirds of these women worked outside the home and lost a mean of 206 hours of paid employment. These data suggest that lack of an approved treatment can cause women unwanted and preventable suffering. (88)
12. If you heard that a woman might be left to suffer from nausea and vomiting for at least a couple of months, without any nursing or medical attention, you would be rather perturbed. At the same time if a condition that caused 8.5 million working hours to be lost in England and Wales each year was not addressed, you would be surprised. But this is exactly what

happens when women suffer from morning sickness. (87)

13. There is no reason to believe that alleviating the symptoms of normal NVP (e.g. excluding hyperemesis gravidarum) will improve the outcome of the pregnancy. Indeed doing so could have the opposite effect if it interferes with the expulsion of potentially dangerous foods, or with learning to avoid them. (86)

Summary

NVP needs treatment. (14) (17) (75) (87) (88) (89) (92) (93) (101) (115) (126) (Goodwin)

Total: Twelve References

Preferably early treatment of NVP advisable.
(17) (75) (89) (92) (101) (115) (126) (Goodwin)

Total: Eight References

NVP should not be treated. (86)

Total: One Reference