

AN INSIGHT OF ANTENATAL CARE: A REVIEW

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ABSTRACT

Antenatal care is one of the major public health concern worldwide. Its goal is not only provide regular checkups and planning the proper diet and fluid intake of the pregnant lady, but also prevent the birth defects, preterm labour, neural defects and overall health of the pregnant women. Proper exercise, diet and healthy environment is essential for a healthy outcome of the pregnancy. Many women experience some of the common pregnancy symptoms, such as heartburn, vomiting, nausea etc, so the proper management of them is also necessary. In this review paper it is attempted to brief the proper ways of care and basic requirements during pregnancy.

KEYWORDS: Antenatal care, Pregnancy, Unani.**INTRODUCTION**

According to WHO (World Health Organization) "Antenatal care is the clinical assessment of mother and fetus during pregnancy. It traditionally involves a number of routine visits approximately 12-16 for assessment of pregnant women before and during pregnancy".^[1] Pregnancy is a state of carrying foetus inside uterus (womb) by a woman from conception to birth. Baby inside uterus is called foetus. The three months period in pregnancy is termed as trimester and from first day of last menstrual period to 12 weeks is first trimester, then another three months from 13-28 weeks is known as 2nd trimester and 3rd three months from 29-40 weeks is termed as third trimester.^[2] According to Majooosi when the menstrual bleeding stops due to pregnancy, and episodes of nausea and vomiting starts, so at that condition it is recommended to give apple juice flavored with oud.^[3] Regular supervision of a woman during pregnancy is termed as antenatal or also known as prenatal care. It should begin as early as pregnancy is detected till the time of delivery.^[4] Pregnant women require additional supplements of energy to support the growth of the fetus, placenta and associated maternal issues. An increment of 5 percent in basal metabolic rate is observed in the first and second trimester and about 12 percent during the third trimester of pregnancy.^[5] The rate of maternal death during pregnancy is very high. According to World Health Organization in the year 2015, about approximately 303000 females died due to causes related to pregnancy, the number off still born babies were 2.6 million and in the first 28 days of life 2.7 million babies dies. In all over the world only 64% of

female receive antenatal care four or more times in their whole pregnancy.^[1]

Objective of Antenatal Care

- Promote and maintain health of mother and foetus by awaring her about proper nutrition and cleanliness etc.
- If any complication during pregnancy and delivery occurs, so the proper diagnosis and treatment is given to mother and baby.
- Reducing the maternal morbidity and mortality by providing proper care.
- Screening of diseases such as sexually transmitted diseases, AIDS etc.
- Ensure full term pregnancy and healthy outcome.
- To educate mother about care of the baby and maintain baby's hygiene.
- To educate the couple about family planning and measures of family planning^{[6][7]}

Antenatal visits**First seven months** Once a month,**8th month** Twice a month**And after 8th month** Twice a week

If the mother cannot visit according to the ideal schedule in that case minimum three visits are recommended that are

1st visit As soon as the pregnancy detected or at 20 wks**2nd visit** At 32 weeks**3rd visit** 36 weeks^[6]

Blood pressure

Proper monitoring of blood pressure of the pregnant lady is necessary at each visit, the normal systolic blood pressure ranges between 100-120 mm of Hg, 140 mm of hg or more than systolic BP must be viewed with suspicion, and normal diastolic blood pressure ranges between 70-80mm of Hg, 90 mm of Hg and more than that is the matter of concern.^[8]

Prevention from shock

According to Zakariya Razi a known unani physician pregnant woman should avoid shock at 8th month because at this time abortion can be dangerous or can be fatal.^[9]

Diet of Pregnant woman

According to Unani physicians light and easily digestible diet is recommended for pregnant women, milk, rice, vegetables should be taken.^[10]

Fruits and vegetables: Fruits and vegetables are nutrient-dense foods and key sources of a number of essential nutrients, including potassium, magnesium, dietary fiber, folate, and vitamins A and C; fruits and vegetables also contain a variety of other bioactive substances that may play a role in health.

Pregnant women should focus on fruits and vegetables, particularly during the second and third trimesters.^[11]

Intake of protein rich diet: Pregnant women should include good protein sources at every meal to support the baby's growth, Protein-rich foods include meat, poultry, fish, eggs, beans, tofu, cheese, milk, nuts and seeds.^{[12][13][14]}

Whole grains: Whole grains are one of the important source of energy for pregnant women, they also rich in fiber, iron and vitamin B. Oatmeal, whole wheat pasta, bread and brown rice are the good source of carbohydrates in daily life.^[15]

Milk and milk products: At least 3-4 servings of milk and milk products daily are very necessary for pregnant female. These foods such as yoghurt, curd etc. are good sources of calcium, protein and vitamin D and milk is good source of protein, fat and minerals.^{[16][17]}

Foods to limit**Caffeine**

There is some safe level of caffeine, intake of which is not harmful to the pregnant lady, according to data about safe consumption of caffeine, it is taking 300 mg/d or greater can be unsafe and taking lesser than that can be safer and not having any adverse effect on pregnancy and on foetus. Overall female can consume 1 to 2 cups of coffee per day.^[18]

Foods to avoid

Hot and Spicy Food: Avoid hot and spicy food. According to unani physicians avoid olive, kibr and tarmas like food, diuretics like chana, and alcohol should also be avoided.^[10]

Alcohol: Avoid alcohol during pregnancy, because according to CDC there is no safe level of alcohol which a woman can consume during pregnancy. Many fetal alcohol spectrum disorders are occur due to heavy alcohol intake during pregnancy.^{[19][20]}

Fish which contains high levels of methyl mercury

Methyl mercury is a toxic element. The academy of nutrition and dietetics seafood like shark, swordfish, orange roughly, are having high level of mercury in their body they can be harmful to the developing brain of fetus. These food can contain methyl mercury which is very harmful and can affect the kidneys and brain of developing fetus.^[21]

Unpasteurized food: Pasteurization involves heating a product to a high temperature to kill harmful bacteria. Pregnant women are high risk from food poisoning such as listeriosis and toxoplasmosis, It is a parasitic infection. Many pregnancy related problems such as death of a fetus, stillbirth, and other fatal illnesses of baby can be caused by listeria bacteria. Pregnant females have more prone for infecting from a couple of food poisoning that is listeriosis, caused by the *Listeria* bacteria, and toxoplasmosis, an infection caused by a parasite. So, it is recommended not to use unpasteurized food during pregnancy.

List of common food which can be harmful

1. Milk and milk products which are unpasteurized.
2. Hot dogs, luncheon meats and cold cuts unless heated to steaming hot before eating to kill any bacteria.
3. Salads such as ham salad, chicken salad etc.
4. Unpasteurized juice or cider.
5. Meat which is refrigerated and unpasteurized.^{[22][23]}

Raw meat: Toxoplasma infection which can be responsible for blindness and mental disability in baby's life, can be transmitted from mother to baby while consumption of raw meat. Toxoplasmosis is preventable and can be prevent by avoiding certain food

1. Rare, raw or undercooked meats and poultry. Uncooked, undercooked or raw meat.
2. Undercooked poultry.
3. Raw fish, such as sushi, sashimi.
4. Raw and undercooked shellfish, such as clams, mussels, oysters and scallops.^[24]

Food poisoning

Other than toxoplasmosis and lesteriosis some other types of food poisoning can occur due to different types of food so it is better to take extra precaution while

selecting the food to eat during pregnancy, food poisoning which caused by E.coli bacteria and Salmonella are the examples of these types. It is recommended to avoid following food,

1. Raw or undercooked eggs
2. Not properly cooked eggs.
3. Ice cream which is made at home.
4. Raw or parboiled sprouts like clover.^{[25][24]}

Teratogenic food

Vitamin A-containing supplements, liver, and liver products are not recommended because a high retinol intake may increase the risk of malformation and miscarriage. Beta-carotene does not have this effect and may be consumed during pregnancy.^[26]

Role of nutrients during pregnancy

Folic acid

It occurs in food in free folates and bound folates form. A very important vitamin during pregnancy, especially in the early period and even before conception. A good consumption of folate is directly proportional to the neonate being born without any abnormalities, thus, all who are planning for the baby and all over the first 3 months of pregnancy, should eat food sources rich in folate. Eat plenty of folate-rich foods such as spinach, lettuce, cabbage, green beans, cauliflower and fortified cereals. The requirement in healthy adults is 100mcg per day and in pregnancy its requirement increases and it is 40mcg/day.^{[27][28]}

Iron

It is very important nutritive element for the body, there are two forms of iron hem-iron and non hem iron. Pregnant woman need iron to form the red blood cells for you and your baby. Iron helps to carry oxygen in her blood from the lungs to the tissues. Baby's brain and body need iron and oxygen to grow. Too little iron leads to anemia.

Requirement of iron

In first half-0.8 mg/day

In second half-3.5 mg/day^{[29][28]}

Calcium: Calcium is important for the healthy bones and teeth of both mother and baby. The best sources of calcium are milk, dairy products and some cereals. Try to choose low fat milk, kefir cheese and yogurt, they provide more calcium than full fat varieties.

Daily requirement of calcium in pregnancy-1000 mg/d^{[30][28]}

Intake of fluids during pregnancy

During pregnancy drink more and more water at least 6-8 glasses of water per day should be taken, sugar free juices and milk products should be taken in adequate quantity. Tea and coffee interfere with iron absorption so it is better to limit the intake of these two, try to avoid the drinks which contain so much sweet in it.^{[31][32]}

Smoking during pregnancy

Smoking is very injurious to pregnant lady as well as for unborn baby, nutritional deficiencies, and fetal growth problems and preterm delivery can also occur.^[33]

Common problems and their management during pregnancy

Morning sickness -About 70% of women suffer from sickness, usually in early pregnancy - around week 9-10. In the second trimester in most of the females usually symptoms gone or become much milder. Some tips to relieve the symptoms of morning sickness are follows

1. Avoid smells and foods that make sickness worse
2. Eat small but frequent meals (with about 2 hour intervals)
3. Consume nutritious food like vegetables, salads etc.
4. Eat less fatty and sugary foods
5. Use antiemetic drugs before symptoms of morning sickness.^{[34][35][36]}

Constipation

35-40% of pregnant women suffer from constipation during pregnancy.

How to deal with the problem:

- Drink plenty of fluid such as plain water (6-8 cups a day)
- Increase intake of foods rich in fiber (whole meal bread, brown rice, wholegrain cereals, fresh and dried vegetables and fruits, especially prunes and figs) Remember, iron supplements can sometimes cause or aggravate the symptoms of constipation.
- If taking iron supplements and notice that the symptoms of constipation progress, consult your doctor.^[37]

Management of constipation in pregnancy

- In case of constipation light laxative are recommended. 4-6 spoons of milk of magnesia or two spoons of isapgol with water at bed time is given.
- Sharbat which have light smell is recommended in low doses
- Refrain from having heavy food during pregnancy.^[38]

Heartburn

It is also known as retrosternal burn which can occur at any time of pregnancy but in the last trimester it can be more severe. Also a common problem - about 30-50% of pregnant women suffer from heartburn.

Common remedies of heartburn

1. Temporarily relief can be achieved by dairy products.
2. Avoid chocolate
3. Limit intake of fatty foods
4. Do not consume alcohol

5. Having mint can cause relaxation of the muscles of oesophagus which can result into heartburn, so avoid taking mint specially before sleep.
6. Avoid acidic and spicy foods that may irritate mucosa like hot pepper, tomato etc.
7. Eat small frequent meals, do not eat large meals before bedtime
8. Sleep well propped up, not lying flat Remember to consult your doctor before taking antacid medications. Some antacids can bind iron in foods and make iron unavailable for you to absorb.^[39]

Personal Hygiene and Cleanliness during pregnancy Teeth

1. Daily cleaning of teeth is necessary for pregnant women.
2. Any pain or swelling in the gums should be treated immediately. Local anesthesia can be given if required.^[38]

Cloths

Pregnant woman should change her clothes daily and use loose fitted clothes.^[38]

Bath

Daily Bath with Luke warm or cold water according to weather is recommended by *Unani* physicians. At term pregnancy spend daily one hour in hammam or take sits bath.^[38]

Massage: At term pregnancy massage on stomach and back with oil is recommended.^{[10][40]}

Fasd: Every type of fasd is contraindicated in pregnancy.^[38]

Travelling

1. Pregnant women can travel in second trimester but in the condition if there will not any weakness.
2. Avoid any long and air journey in first and third trimester.
3. Avoid air travelling.^[41]

Aghraze Nafsani

Avoid stress and tension.

1. Anger and sadness are also harmful.
2. Sometimes sudden fear can cause miscarriage.^[38]

Prevention from diseases

Prevention from Chicken pox, Measles, Jaundice, cholera etc. is recommended.

Prevention from Radiation-

Exposure to radiation is harmful to the foetus. X rays should be avoided during pregnancy.^{[6][42]}

Delivery: At the time of delivery it is better to sit and expand her legs, after the lie comfortably on back for some time then stand and then climb up and come down on stairs, shout loudly and try to sneeze.^[10]

CONCLUSION

This research review's purpose is to help the reader understand about the proper ways of antenatal care. Pregnancy pathway and antenatal care is based on person's individual needs. Majority of risks in pregnancy can be prevented by proper antenatal visits, diet, counseling and avoidance of harmful things during pregnancy.

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