



FRUITS AND VEGETABLES CONTRAINDICATED IN PREGNANCY: MYTHS OR REALITY

Sana Sarfaraz¹, Bushra Rubab², Wajeeha Fatima², Saima Ramzan², Mahira Iqbal²

¹Department of Pharmacology, Faculty of Pharmacy, Jinnah University for Women, Karachi, Karachi-74600, Pakistan.

²Department of Pharmacy, Jinnah University for Women, Karachi, Karachi-74600, Pakistan.

Article Received on
21 July 2015,

Revised on 10 Aug 2015,
Accepted on 30 Aug 2015,

***Correspondence for
Author**

Dr. Sana Sarfaraz

Department of
Pharmacology, Faculty of
Pharmacy, Jinnah
University for Women,
Karachi, Karachi-74600,
Pakistan.

ABSTRACT

Gestation or Pregnancy is an important part of female populations reproductive cycle all over the world. It normally consists of three trimesters and care should be taken during each trimester for safe delivery of the offspring into the world. The objective of the study was to evaluate awareness regarding contraindication of specific fruits and vegetables during pregnancy, whether they were myths or was there any reality in it, is it associated with particular trimester, did the doctors believe such myths and were the patients counselled to avoid food based on myths. It is a cross sectional survey based study in which 250 women belonging to different backgrounds were questioned regarding their beliefs about the myths. From our results we concluded that majority of women were aware of the myths and avoided specific

fruit or vegetable about which they had heard myths. The doctors did not counsel patients to avoid any fruit or vegetable unless there was a comorbid disease associated with pregnancy. Women also avoided some fruits and vegetables due to symptom of nausea and vomiting.

KEYWORDS: Pregnancy, Trimester, Miscarriage, Contraindicated.

INTRODUCTION

A successful conception makes a route for implantation where the embryo finds a home for 9 months in the womb and female is said to be pregnant. Pregnancy is commonly divided into three trimesters, in which special care should be taken during first trimester because the chances of miscarriages are very high.^[1] Miscarriage is also known as spontaneous abortion in which the natural death of fetus occurs before it is able to survive independently.^[2]

In pregnancy, eating and drinking are extremely important because it affects the development of fetus directly. A proper nutrition becomes the need of a pregnant woman and fruits and vegetables play a vital role in daily diet.^[3]

The key components of a health-promoting lifestyle during pregnancy include appropriate weight gain; consumption of a variety of foods in accordance with the Food Guide Pyramid; appropriate and timely vitamin and mineral supplementation; avoidance of alcohol, tobacco, and other harmful substances; and safe food-handling. The total energy needs during pregnancy range between 2,500 to 2,700 kcal a day for most women. Women should consume a variety of foods according to the Dietary Guidelines.^[4]

According to the March of Dimes, more than 80% of miscarriages occur within the first three months of pregnancy and if occur after 20 weeks of gestation are known as late miscarriages, however they rarely occur.^[5] Fruits and vegetables are important component of our dietary intake daily. Since they are natural products, it is assumed that they only produce beneficial effect and no harm can occur due to their intake.^[6] It has been observed that some fruits and vegetables consumed in everyday life can cause high risk of miscarriage.^[7]

Many traditional cultures apply a hot-cold classification to foods and believe that some foods or ingredients are to be avoided and others encouraged during pregnancy to prevent imbalances and protect the fetus.^[8]

Papaya, pineapple, mango, groundnut, gram, millet, brinjal, ladyfinger, sesame seeds, flax seeds, saffron, fenugreek and jiggery are classified in sour foods and hot foods and should be avoided during first trimester of pregnancy. Recent studies indicate that large quantities of these foods consumed caused uterine contractions.^[9]

Cold foods (e.g. watermelon, mung bean, and banana) are associated with miscarriage or bleeding because such foods will induce poor blood circulation in the uterus.^[10, 11] and “wet-hot foods” (e.g., shrimp, mango, lychee, longan, and pineapple) will produce a poisonous toxin which will manifest itself as allergic reactions or skin eruptions in the baby.^[12, 13] Moreover, some symbolic foods are avoided because they will affect the baby’s character or appearance: Excessive mutton use can cause epilepsy because the disease is sheep-like (*faat yeung*); and dark foods (fermented soybeans, chocolate, coffee, and Coca Cola) are thought to give a baby a dark complexion.^[14]

Whole grains, leafy green and yellow vegetables, and fruit should be consumed daily to meet nutrient needs and provide enough fiber. Meat, poultry, seafood, legumes, and nuts are important sources of protein, as are zinc, iron, and magnesium.^[15] Magnesium deficiency causes hypertension and low birth weight in animals. In humans deficiency of thiamin and other B vitamins has also been reported to cause low birth weight.^[16]

The question of whether or not these traditional practices protect women's health during pregnancy has yet to be answered. Evidence suggests the possibility that following traditional practices during pregnancy has both therapeutic and harmful consequences.^[17, 18]

The objective of present study was to evaluate awareness regarding myths associated with use of specific fruits and vegetables during pregnancy, whether women believed them, whether doctors were aware of such myths and counselled patients to avoid certain foods and during which trimester miscarriages were common and dietary counselling important according to women.

MATERIALS AND METHOD

It is a cross sectional survey based study with the objective of obtaining information from female population from different areas and backgrounds in Karachi regarding their beliefs in myths related to use of fruits and vegetables during pregnancy.

The study was conducted for 3 months and 250 females belonging to age group 18-50 years were questioned. Data was collected from the participants by directly contacting with them and the answers were recorded as open ended.

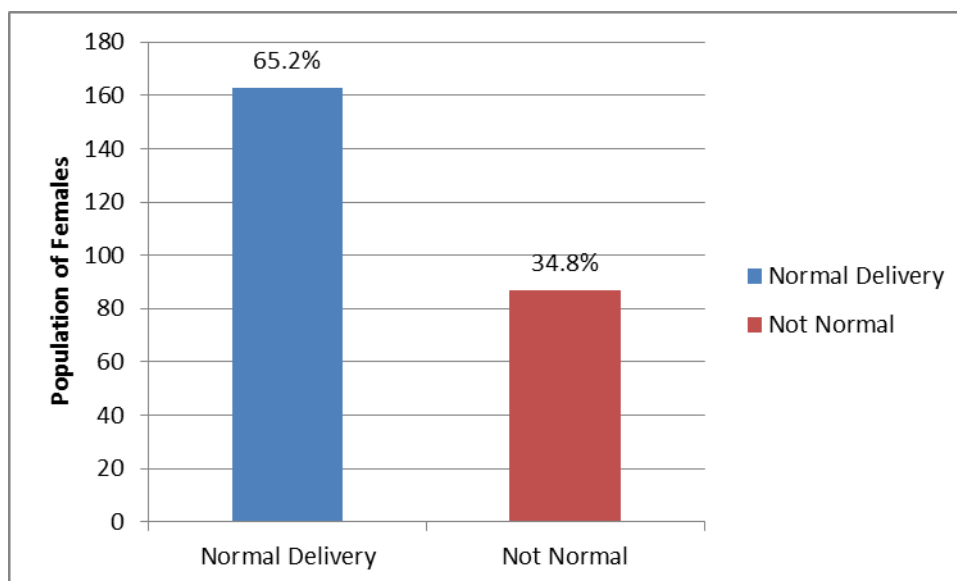
RESULTS

The data was analyzed using SPSS version 19. The tests applied were binomial test and P-value of 0.05 (5%) or less would be considered as statistically significant.

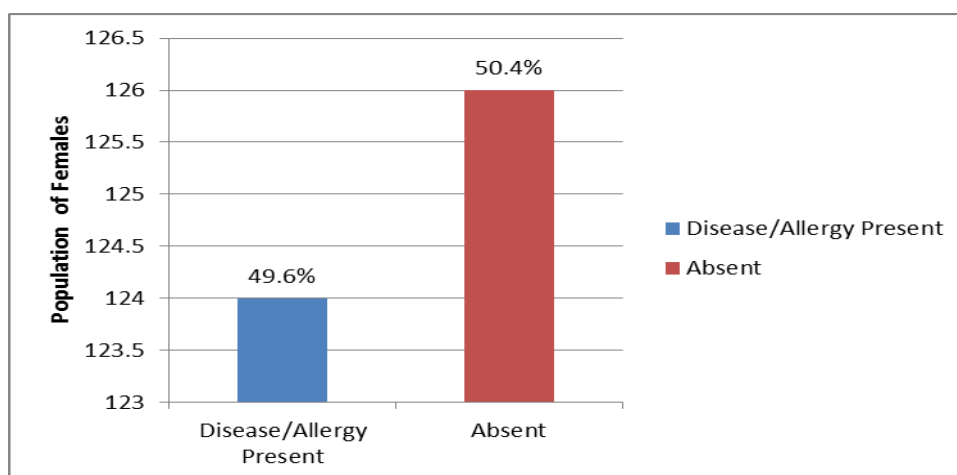
Table 1.

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Normal pregnancy	Group 1	yes	163	.65	.50	.000
	Group 2	no	87	.35		
	Total		250	1.00		
Pregnancy associated with	Group 1	yes	124	.50	.50	.950

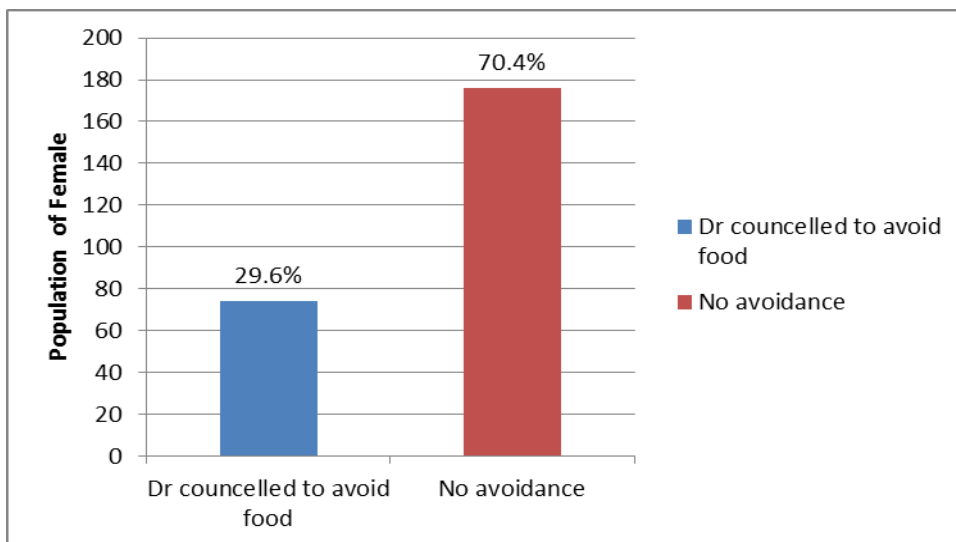
disease/ allergy.	Group 2	no	126	.50		
	Total		250	1.00		
Dr counselled to avoid food	Group 1	yes	74	.30	.50	.000
	Group 2	no	176	.70		
	Total		250	1.00		
Women avoided food due to myths	Group 1	yes	154	.62	.50	.000
	Group 2	no	96	.38		
	Total		250	1.00		
Avoidance of food due to nausea and vomitting	Group 1	Yes	157	.63	.50	.000
	Group 2	No	93	.37		
	Total		250	1.00		
Aware about myths regarding fruits and vegetables contraindicated during pregnancy	Group 1	no	93	.37	.50	.000
	Group 2	yes	157	.63		
	Total		250	1.00		



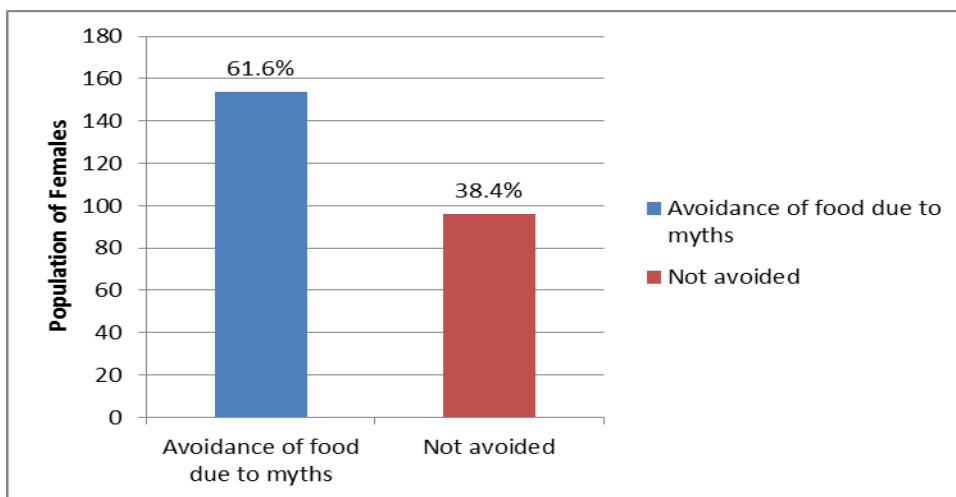
Graph 1: Type of Pregnancy Faced by Female Population in Karachi.



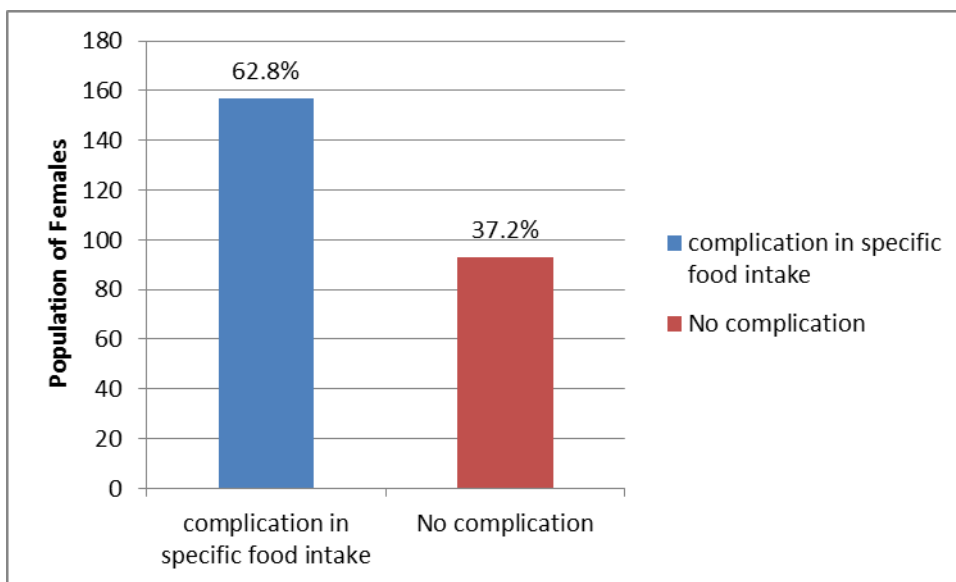
Graph 2: Pregnancy associated with comorbidities and Allergies.



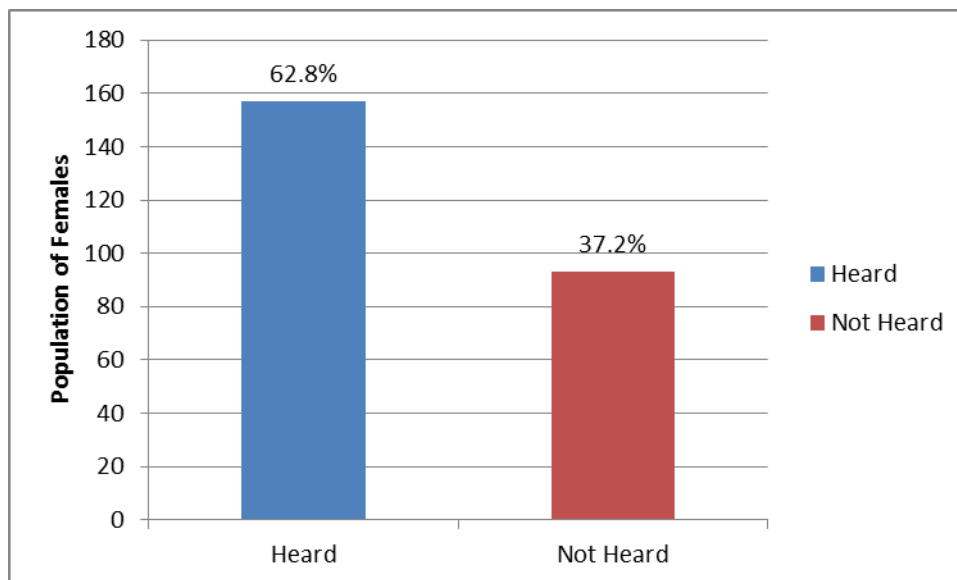
Graph 3: Avoidance of Specific Fruits/ Vegetables due to Doctor’s Counselling.



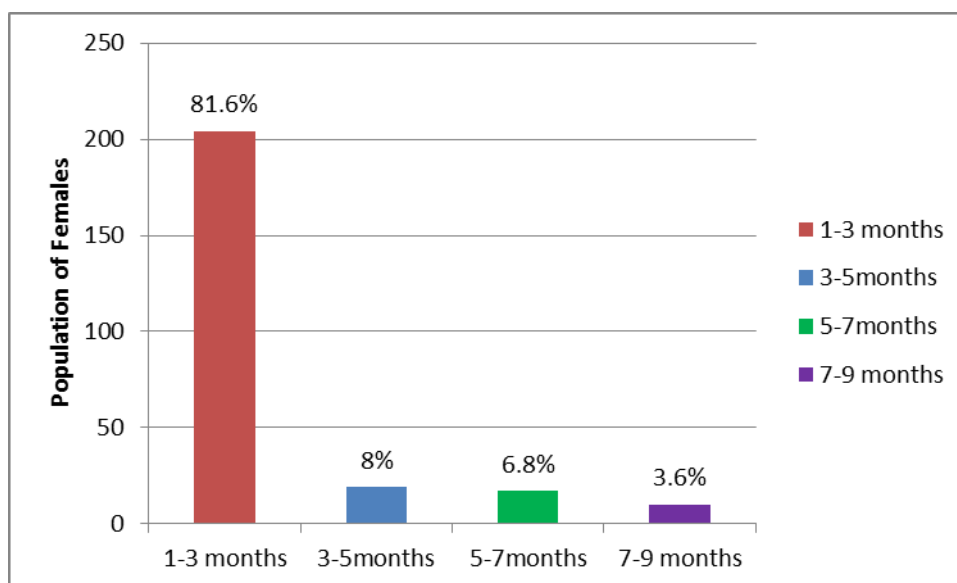
Graph 4: Self Avoidance of Fruits/ Vegetables due to myths.



Graph 5: Problem faced by pregnant women in taking specific food.



Graph 6: Awareness regarding myths about specific Fruits/ Vegetables Contraindicated in Pregnancy.



Graph 7: Trimester in which Risk of Miscarriages common

DISCUSSION

Gravida is a scientific term used for pregnancy. Prenatal care is very essential for proper development and growth of the fetus.^[19] Graph 1 shows that majority of the females questioned faced normal pregnancy and delivery and table 1 supports our data showing $p < 0.001$ i.e highly significant result. Graph 2 shows insignificant result because half of the women were suffering from comorbid conditions during pregnancy while the other half did not face any problems. Table 1 shows insignificant result for this as well.

Graph 3 shows that majority of females were not counselled by doctors to avoid any food during pregnancy and Table 1 also shows highly significant results for this. However some patients were counselled to avoid specific food due to co morbid condition associated with pregnancy.

Literature studies have shown that if a pregnant woman is diabetic, she is advised by her doctor to cut down sugars and consume a balanced diet including fiber in form of fruits, vegetables and whole grains.^[20] If not manage there is risk of miscarriage, fetal obesity and neurological deficits may occur.^[21] Similarly if pregnant women are hypertensive they are counselled to reduce salt intake and monitor fatty food consumption too.^[22]

Graph 4 shows that majority of women who had heard the myths believed in them and avoided specific fruits and vegetables during specific trimesters because of it, our results were further validated from table 1 which shows $p < 0.001$. Literature studies have suggested that certain fruits and vegetables can increase uterine contraction and if consumed during first three months lead to miscarriage and if consumed excessively in last trimesters lead to preterm delivery. Licorice root contains glycyrrhizin which increases prostaglandin involved in contraction of uterus.^[23]

Graph 5 shows that majority of women avoided specific food not only due to myths but also because of symptoms that occur during pregnancy that is nausea and vomiting, Table 1 shows highly significant result for this. Literature studies have shown that during first trimester the most common symptoms that pregnant women can face are morning sickness, increased urinary frequency, heart burn,^[24] back pain,^[25] and tiredness.^[26]

Graph 6 shows that majority of the female population was aware of the myths regarding fruits and vegetables that are contraindicated during pregnancy and believed it too. Graph 7 shows that majority of women believed that miscarriages were common during first trimester of pregnancy and extreme caution and proper diet should be advised at this time.

CONCLUSION

From our study we came to conclude that specific fruits and vegetables are contraindicated during specific months of pregnancy because they can induce uterine contraction, bleeding and preterm labour. The doctors should counsel the pregnant females regarding excessive use of any food and if possible advice them to visit dietician. We came to conclude that certain

fruits and vegetables can cause miscarriages so it is not an old women's tales or myths but the beliefs have some reality supported by scientific evidence.

REFERENCES

1. Abman, Steven H. Fetal and neonatal physiology (4th ed.). Philadelphia: Elsevier/Saunders, 2011; 46–47.
2. The Johns Hopkins Manual of Gynecology and Obstetrics (4. Ed) Lippincott Williams & Wilkins, 2012; 438–439.
3. Staying healthy and safe. The National Women's Health Information Center. Retrieved, 2015/07/22.
4. Nutrition and Your Health. 5th ed. US Departments of Agriculture and Health and Human Services, Washington, DC, 2000; (Home and Garden Bulletin No. 232.).
5. Kecia Gaither. The March of Dimes Medem National Institutes of Health. American Pregnancy Organization, 2014.
6. Benzie IF, Choi SW. Antioxidants in food: content, measurement, significance, action, cautions, caveats, and research needs. *Adv Food Nutr Res*, 2014; 71: 1-53.
7. Lien Nguyen, 42 Foods that cause miscarriage in early pregnancy. Retrieved, 2015/08/20.
8. Kittler, P.G. and Sucher, K.P. Food and Culture in America. West/Wadsworth Publishing Company, Belmont, CA, 1998.
9. Hoare J et al .The National Diet and Nutrition Survey: adults aged 19 to 64 years.2014(5). Summary Report. HMSO, London.
10. West Acupuncture in pregnancy and childbirth (2nd ed.) Churchill Livingstone, London 2008.
11. The Food Guide Pyramid. US Department of Agriculture Center for Nutrition Policy and Promotion, Washington, DC, 1996; (Home and Garden Bulletin No. 252.).
12. Martin, D. Food restrictions in pregnancy among Hong Kong mothers. In D. Y. H. Wu, & C. B. Tan (Eds.) *Changing Chinese food ways in Asia*. 2001. Hong Kong The Chinese University Press.
13. Schott, A. *Henley Culture, religion and childbearing in multiracial society: A handbook for health professionals* Butterworth Heinemann, 1996, Oxford, United Kingdom
14. www.healthline.com retrieved, 2015/08/19.
15. C.S. Yuan, E.J. Bieber, B.A. Bauer (Eds.), *Textbook of complementary and alternative medicine* (2nd ed.), Informa Healthcare, London, UK, 2006; 211–224.
16. Food and Nutrition Board.10th ed. National Academy Press, Washington, DC, 1989.

17. Manyande, C. Grabowska Factors affecting the success of moxibustion in the management of a breech presentation as a preliminary treatment of external cephalic version *Midwifery*, 2009; 25: 774–780.
18. Ayaz S, Efe SY. Potentially harmful traditional practices during pregnancy and postpartum. *Eur J Contracept Reprod Health Care*, 2008; 13(3): 282-8.
19. www.merriam-webster.com/dictionary/gravida Retrieved, 2015/08/20.
20. Nomura Y, Marks DJ, Grossman B, Yoon M, Loudon H, Stone J, Halperin JM. "Exposure to Gestational Diabetes Mellitus and Low Socioeconomic Status: Effects on Neurocognitive Development and Risk of Attention-Deficit/Hyperactivity Disorder in Offspring". *Archives of Pediatrics & Adolescent Medicine*, 2012; 166: 337.
21. Calkins, Kara; Sherin Devaskar. "Fetal Origins of Adult Disease". *Curr Probl Pediatr Adolesc Health Care*, 2015; 158–176.
22. <http://www.nhlbi.nih.gov/health/resources/heart/hbp-pregnancy>.
23. Timo E. Strandberg, Sture Andersson, Anna-Liisa Järvenp Paul M. McKeigue Preterm Birth and Licorice Consumption during Pregnancy *American journal of epidemiology*, 2014; 156(9): 803-805.
24. Nicole D. White Lifestyle and Complementary Medicine for Common Gastrointestinal Disorders in Pregnancy. *American journal of lifestyle medicine*, 2014; 8(2): 97-99.
25. "What are some common signs of pregnancy?". <http://www.nichd.nih.gov/>. Retrieved, 2015/07/25.
26. www.mayoclinic.org/...pregnant/in.../symptoms...pregnancy. retrieved, 2015/08/23.