

Assessment of National Status of Pregnant women with Vegetarian and Non-Vegetarian Dietary Intake

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Abstract

The present study was carried out to determine nutrition level of vegetarian and non vegetarian pregnant women for this purpose a sample of total 50 subjects was selected from Haridwar, Muzaffarnagar and Bhiwani. Out of total 50 subjects 25 were vegetarian and 25 were non vegetarian pregnant women. After their selection information regarding their education, area of residence, type of family, dietary recall and anthropometric status was recorded a dietary survey for three consecutive days using 24 recall method was conducted to assess their nutrient intake.

On comparison of nutrient intake with their corresponding RDA, it shows that energy, protein, fat and iron intake of non vegetarian pregnant women. This may be due to the better bioavailability of these nutrients in animal foods.

Calcium intake of vegetarian subjects was excellent and that of non vegetarian subjects was also good.

Both vegetarian and non-vegetarian pregnant ladies were educated about well balanced diet and its importance.

Key Word – Nutritional status, Diet, Pregnant woman

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Introduction

Pregnancy is associated with physiological changes that increased plasma volume and red blood cells and decreased concentrations of circulating nutrients binding proteins and micro nutrients.

Pregnancy is an important time for the development of the fetus. Adequate energy intake during the pregnancy along with micronutrients has been shown to decrease the probability of low birth weight (LBW) infant. LBW has been shown to be associated with infant mortality respiratory disorder and developmental metabolic problems in future. Inadequate intake of specific nutrients in pregnancy have been reported to a poor maternal nutrients status resulting in a variety of poor maternal and infant outcomes. For instance, iron status in pregnancy by the demands of the fetus, temporary changes in blood volume and body mass, alteration in absorptive capability and on the bioavailability of iron in a largely vegetarian diet.

Maternal factors have associated with intrauterine growth which together with infant nutrition has further been associated with reduced capacity in adult life including reduced status, lower physical work capacity, impaired cognitive function and education attainment for the fetus while for the women there is an increased risk of low birth weight in the next generation.

Adequate nutrition before and during pregnancy has greater potential for a long term health impact than it does at any other time. Maternal health is a complex influenced by various genetic, social and economic factors infections and environmental conditions many of which may affect the fetal growth physiological adaptations results in improved utilizations of nutrient either through increased absorption decreased excretion or alteration in metabolism.

Nutritional requirements during pregnancy

Energy

Energy needs during pregnancy increase because of the additional energy required for the growth and physical activity of the placenta, the normal increase in maternal body size; the additional work involved in carrying the weight of the foetus and extra maternal tissues, the slow but steady rise in basal metabolic rate during pregnancy.

Protein-

ICMR prescribed for a pregnant women 65 gm/day. After adjusting for the dietary protein quality of NPUI5, the intake during the later half of the pregnancy

recommended by nutrition expert committee is 15 gm/day.

Fat-

In the diets of adults in India about 20% energy may be derived from fats. All levels calorie intake, invisible fat furnishes about 9% energy and visible fat 10%. This would come to 10-20 gm of fat per day depending upon the level of calories consumed.

Calcium-

ICMR calcium requirement of adult women is 400 mg/day Requirement increases during pregnancy to 1000 mg/day.

Iron-

Normal iron requirements of an adult women is 30 mg/day. ICMR requirement during pregnancy are 38 mg/day.

Objectives of the study-

- (1) To study the energy intake of vegetarian and non-vegetarian pregnant women.
- (2) To study the protein intake of vegetarian and non-vegetarian pregnant women.
- (3) To study the comparison of nutrient intake with their corresponding RDA of vegetarian and non-vegetarian pregnant women.

Related Reviews-

Gueri, Julsum and Sorhaindo studied that a reference table of weight for height by week of pregnancy has been devised on theoretical grounds based on the premises that the average increment of weight during pregnancy is 20% of the prepregnant weight and that almost all the increment takes place linearly during the 2ND and 3rd trimesters of pregnancy. The table was tested with retrospective clinic and hospital data. The result shows a good correlation between the weight for height at different stages of pregnancy as a percentage of reference table and the birth weight of the offspring. This reference table can be a useful tool to assess the nutritional status of pregnant women and within limits to “predict” the chances of delivering a low birth weight infant.

Salima, Mounira & Nadija (2011) investigate the food habits of pregnant women in prenatal period to assess their nutritional status to determine their socio-economics and practice of food taboos. Result showed that 40% of pregnant women suffering from several diseases such as anemia, hypertension, diabetes and inflammatory disease. 17.70% of women surveyed were taking medication, 33.85% were supplemented, including 1.54% by feeding and 32.31% from drugs, 78.46%

were overweight. Only 21.54% of women had a satisfactory weight status.

The conclusion of the study was dietary advice must be tailored must be based on weight and body mass before pregnancy and spontaneous food intake of each women.

Methodology-

The present study was conducted on “Assessment of Nutritional status of pregnant women with vegetarian and non-vegetarian dietary intake”. The study was conducted in selected areas of Haridwar. A sample of 50 pregnant women., 25 vegetarian and 25 non-vegetarian were randomly selected for the study. Survey method was used for the present study, a questionnaire cum interview schedule was developed to collect the information. 24 hour dietary recall method was used to collect information regarding dietary intake and nutrients intake. The study was conducted on a representation group of 50 vegetarian and non-vegetarian women.

Anthropometric parameters-

Weight- The body weight was taken to the nearest of 0.5 kg using platform balance. The respondents were not wearing any heavy garments due to climate and were asked to remove their slippers before weighing.

Height-

The measurement of height (cm) was taken. The subject was asked to stand correct against the wall with her heels, buttock and shoulder touching the tape with feet parallel and placed together with the arms hanging at the sides in a natural manners.

Diet Survey-

It was conducted by 24 hours recall method for consecutive three days.

Result and Discussion-

The present study was conducted on 50 vegetarian and non-vegetarian pregnant women.

Table-1

Distribution of the subjects according to their energy (K Cal) intake.

S.No.	Energy (K Cal) intake	Vegetarian		Non-Vegetarain	
		Frequency	%	Frequency	%
1.	Below RDA	11	44	7	28
2.	Up to RDA (2725)	-	-	5	20
3.	Above RDA	14	56	13	52
	Total	25	100	25	100

From this table we conclude that out of the total subjects of vegetarian pregnant woman 44% of subjects energy intake was less than their RDA and rest of the subjects energy intake i.e. 56% more than their RDA.

On the other hand the non-vegetarian pregnant woman 28% of subjects energy intake was less than their R.D.A. 20% subjects energy intake was upto their RDA and rest of the subjects i.e, 52 had energy intake more than their RDA.

Table-2
Distribution of subjects according to their Protein (gm) intake

S.No.	Protein (gm) intake	Vegetarian (in percentage)	Non-vegetarian (in percentage)
1.	Below RDA	24	20
2.	Upto RDA (65)	20	12
3.	Above RDA	56	68
	Total	100%	100%

From this table we conclude that 24% of the total vegetarian pregnant women had less, protein intake, than their RDA, 20% had protein intake. Upto their RDA and rest of the subjects i.e. 56% protein intake was more than their RDA.

On the other hand 20% of total non-vegetarian woman had protein intake below their RDA, 12% had protein intake equal to their RDA, and the remaining 68% non-vegetarian women protein intake was more than their RDA.

Table-3
Distribution of subjects according to their HB (Hemoglobin)

S.No.	HB	Vegetarian (in percentage)	Non-vegetarian (in percentage)
1.	Less than	68	24
2.	Equal to 12	24	32
3.	More than 12	8	44
	Total	100%	100%

This table shows that 68% of vegetarian and 24% of non vegetarian women had hemoglobin less than 12 mm hg, 24% vegetarian and 32% non vegetarian women had hemoglobin equal to 12 mmhg and rest of the subjects 8% of vegetarian and 44% of non-vegetarian women had hemoglobin above 12 mmhg.

Conclusion-

We have reached on this conclusion that non-vegetarian women had better energy intake as compared to vegetarian women and also non-vegetarian women had better protein intake than vegetarian women. Non vegetarian women had good

hemoglobin level. Hence this can be said that non vegetarian women had better Hb Level because animal protein is better than plant protein which is rich in essential amino acid. Protein play an important role in HB formalin.

Refrences-

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