



LITERATURE REVIEW ARTICLE

URL of this article: <http://heanoti.com/index.php/hn/article/view/hn1317>**Vegetarian For Maternal and Child Health**

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E-mail: sumiasih.ninyoman@gmail.com**ABSTRACT**

Maternal and child health is the first priority to be addressed as it is the source of future generations and indicators of progress of a nation. To maintain the health of mothers and children, one important factor is nutrition, one of which is a vegetarian who is often doubted by many people and considered unable to guarantee health. This paper aims to provide information about how vegetarianism is a valuable and supported nutrient if it can be arranged and properly arranged. The method in this research is literature study. All the nutrients obtained from animal sources can also be obtained from vegetable sources, as we know that animals eat plants. Thus, the elements contained in the animal body are the elements present in plants. So, food from vegetable is actually almost the same, as long as it can be arranged well in the menu. Nowadays vegetarians have been scientifically proven in developed countries, so the development of vegetarians is very advanced. Some nutrients such as essential amino acids, vitamin B12, iron (Fe) and other nutrients such as carbohydrates, fats, vitamins, minerals and fiber are not problematic in pregnant women and vegetarian children, because these needs can be met from vegetable. Vegetarian is a nutrient derived from the meatless vegetation that is the result of the murder. But to complement the need for essential proteins need to be supplemented with milk or dairy products like cheese, yogurt and others.

Keywords: Vegetarian, Health, Mother, Child**INTRODUCTION**

Mother and child is a human resource that is expected to be qualified by every nation and country. To get qualified human resources, it takes effort to be prepared and done. One important effort is to provide quality care for mother and child. In the early stages, the party that needs to get attention is the mother who is the product of human resources itself. Pregnancy is expected to take place in perfect health, so that by the time this process goes through, the mother must be prepared from before pregnancy, so that she is ready to accept the pregnancy, so that pregnancy and childbirth can go smoothly and normally. If the mother has passed a smooth and normal childbirth, then the next hope is to get through the puerperium and lactation period well, so the baby can grow and develop with optimal that will continue into the childhood. One that supports quality human resources is nutrition that suits the needs of development, since pre-conception, pregnancy, childbirth, puerper and lactation. Similarly, infants after birth through childhood need to be given the necessary nutrients according to their growth and development.⁽¹⁾

In order to prepare for this nutritional need, each individual has a choice according to taste, body condition, ability, and also in accordance with his belief in the type of food he chooses. In midwifery care, midwives are expected to respect the privacy and choice of clients according to taste, body condition, ability, and also in accordance with his belief in the type of food he chooses. During this time often found complaints from mothers who at the time of checking pregnancy, midwives tend to be less appreciative when pregnant women are a vegetarian, with the argument that vegetarians cause children born to be stupid, less intelligent and less healthy.

There is a false paradigm about food, that animal-based food is far superior, it really is not. All the nutrients obtained from animal sources can also be obtained from vegetable sources, as we have seen that animals eat from plants. Thus, the elements contained in the animals are the elements that are in the plants. So, food from vegetable sources is actually almost the same as food from animal sources, provided that the diversity of the menu can be arranged properly. Vegetarian quality has been scientifically proven in developed countries, so the development of vegetarians is very advanced. Many people are still worried about the vegetarian menu for pregnant women and children, assuming that this menu will cause malnutrition in mothers and children, which in turn will cause infant and child growth disorders, especially those associated with some nutrients such as; essential amino acids,

vitamin B12, iron (Fe). Other nutrients such as carbohydrates, fats, vitamins, minerals and fiber have no problem in pregnant women and vegetarian children, because these needs can be met from vegetable. Fulfilling the needs of essential amino acids can be done by combining several types of vegetable sources. It is true that vegetable protein is called an incomplete protein, because from one source it lacks one or more essential amino acids. Therefore, with a combination of various nuts and seeds, the protein can be complete, because the lack of amino acids from one source can be complemented by another source. For example the tofu and tempeh menu combined with corn or green beans and so forth. Other types of beans such as; red beans, black beans, long beans, curry nuts, and more if combined (two or more types) will get the complete essential amino acid. Similarly with iron and vitamin B 12, it has been widely known through research that these nutrients do not have to be obtained from animal sources. Especially if pregnant women and children consume milk, it is very unreasonable will lack of nutrients because milk contains a complete nutrient.⁽²⁾

There are several reasons for the vegetarian group to not consume food derived from animal sources, especially based on their spiritual beliefs, as quoted from Bhagavad Gita in Chapter Nine, seloka 26, God says as follows:

Patram puspam phalam toyam yo me bhaktya prayacchati

Tad aham bhakti-upahrtam asnami prayatamanah

Meaning; if someone offers leaves, flowers, fruit or water with a devotional love, I will accept it.

Bhagavad Gita Chapter Nine, seloka 27:

Yat karosi yad asnasi yad juhosi dadasi yat

Yat tapasyasi kaunteya tat kurusva mad-arpanam

Meaning; Whatever you do, whatever you eat, whatever you offer or give as a contribution and ascetic and whatever you do-do the activity as an offering to Me. O son of Kunti.

Bhagavad Gita, Chapter Nine, seloka 28:

Subhasubha-phalair evam mokhyase karma-bandhah

Sannyasa-yoga-yuktatma vimukto mam upaisyasi

Meaning; In this way you will be freed from ties to work and profitable and unfavorable outcomes of the work. With thoughts centered on Me in the principle of this release of bonds, you will attain liberation and come to Me.⁽³⁾

There are many more sloka-sloka in the Bhagavad Gita which is a consideration for some who have chosen to live as vegetarians, even if possible for all their descendants as well. It is hoped that in the future there will no longer be any health providers that prevent vegetarians from making choices, and if there is any mistake for clients in choosing food to meet their needs, healthcare providers can guide them.

The period of pregnancy is a time when the nutritional needs grow rapidly because in addition to support the growth of the fetus is also to support changes in the organs of the mother's body such as breast, uterus, blood, placenta, amniotic fluid so that needed nutrition and fluid enough so that no disturbance to the fetus it contains. Diet a prospective mother and nutritional status before pregnancy greatly determine the development of the fetus. Poor nutrition status causes fetal death incidence in the womb, low birth weight, brain damage etc.⁽⁴⁾

METHODS

The method applied in this study is literature review through various literatures that describe, discuss, study and conclude the quality of vegetarianism in relation to maternal and child health.

RESULTS

Vegetarian for Pregnancy

During pregnancy the need for various nutrients is increased ie various vitamins and minerals such as folic acid > 2 fold and 50% more calcium. There are several aspects that need to be considered both during pregnancy and before pregnancy include:

1. Controlling weight

Nutritional status before pregnancy is measured by Body Mass Index (BMI) that is the result of weight distribution (in kilograms) with the square of height (in meters). IMT classification for Asians by WHO (2000) is presented in Table 1.

In the first trimester of pregnancy, weight gain is not very meaningful (generally 2.5 kg). While the rapid increase will occur in the second trimester and third trimester of 0.5 kg per week. If the increase in BB is too slow then the mother needs to eat more and more, especially those that contain lots of carbohydrates. When weight gain is too fast, then sweet or fatty foods can be replaced with fruits, vegetables, crops and beans.⁽⁴⁾

Table 1. Body Mass Index (BMI)

Classification	BMI	Recommended weight gain
Underweight	< 18.5	12 —18 kg
Normoweight	18.5 to 22.9	11 -16 kg
Overweight	> 23	7-11 kg
Preobese	23 to 24.9	<7 kg
Obese I	25 to 29.9	< 7 kg
Obese II	> 29	< 7 kg

2. Eat the right way

The best way to eat is a little but often and interspersed with snacks such as: cereals, fruits, butter, nuts and crackers, raisins and more. The type of food to be eaten should be complete include palawija, nuts, fruits, vegetables and milk and its products. In accordance with the advice of the American College of Obstetricians and Gynecologists (ACOG), if you eat enough protein and complementary foods and avoid foods that are low in nutritional value, then you do not have to worry about calories. The correct type of food is to eat a balanced diet plus milk. Balanced foods are included in the Vegetable Quartet, with more attention to certain types of nutrients such as: Vitamin B12 (from milk, tempeh, seaweed etc), iron (green vegetables, beans, milk and products) and the completeness of the amino acids by consuming at least 2 or more types of nuts. Reduce or not at all smoking, drinking coffee or tea, because it can inhibit the absorption of iron derived from vegetable. Through this way pregnant women will not experience the lack of nutrients needed, this has been proven scientifically and in the field by looking at the facts of pregnant women vegetarian.⁽²⁾

Iron works to form blood hemoglobin because during pregnancy the blood volume increases to 30%, in order to anticipate the blood loss during labor and also for the formation of fetal blood. Eating foods high in vitamin C such as fruits is a very good way to double the absorption of iron.⁽²⁾ Vegetarian lacto-ovo (just eating milk and eggs) can get all the nutrients needed for a healthy pregnancy through diet and supplements. A vegetarian who refuses to consume all animal products, needs to take vitamin B12 and iron supplements, and may also need extra calcium, zinc, and vitamin D. Nutrition guidelines during pregnancy, whether vegetarian or not, are the same. All pregnant women need to consume iron, calcium, folic acid, essential fatty acids such as DHA, zinc, protein and calories swbanyak 200-300 more than before pregnancy.

According to Elizabeth Ward, a nutritionist from the American Dietetic Association, in Parenting, pregnancy, 2013 babies born to vegetarian mothers can have babies as healthy as other babies of non-vegetarian mothers, the most important in this case is food and nutrition prepared and filled well because nutritional needs will increase compared to when not pregnant. Fikawati, et al. reported that the mean pretreatment BMI was 20.2 kg / m (\pm 3.2 kg / m), pregnancy gain of 15.5 kg (\pm 6.4 kg) and birth weight of 3212 g (\pm 417.7 g). Immediate BMI and pregnant weight gain are significantly correlated with birth weight of vegetarian infants. There is no association between prenatal IMT and pregnant weight gain. Based on a multivariate analysis it was found that variables related to birth weight were pretreat IMT, protein intake, vitamin B12, Fe, Zn, and sex. It is recommended that vegetarian mothers can obtain information on the importance of prenatal nutritional status, optimal pregnancy weight gain, and maintain adequate intake of protein, vitamin B12, Fe and Zn during pregnancy.

Vegetarian for Infants and Children

Many parents ask about whether it is time, if at the age of the child, they are given a vegetarian menu? What age should be vegetarian? Much of the debate emerged in the medical and nutritional circles that later in 1991 was answered completely by an organization of renowned physicians and nutritionists who are concerned about public health issues, especially in the West, the PCRM (Physician Committee for Responsible Medicine) supported by ADA (American Dietetic Association) which advocates changing the diet of people in the United States toward vegetarianism. Even the ADA issued a statement that supports the vegetarian diet and mentioned that the vegetarian diet is very good and safe to practice in all age groups (from infant to old). This diet will meet all nutritional needs when properly planned. So that the vegetarian menu for babies and children need not be feared, because all the nutritional needs can be met with foods derived from vegetable sources, as long as it is planned properly. Scientific research states that this is not problematic, even healthier. Vegetarian children are less likely to suffer from gastrointestinal disorders and worm infections. Likewise the influence of growth and hormonal conditions. The vegetarian menu for growing children should consider the following:

1. Water is especially important in infancy because it is a nutrient that is the medium for other nutrients.

2. Energy, the average energy required during infancy is 110 cal / kg / day and is used for: basal metabolisms, feeding and food specific dynamic activities, excreta disposal, physical activity and growth. A good calorie distribution is 15% of protein, 35% of fat and 50% of carbohydrates.
3. Proteins, for vegetable origin usually need a good combination because they are not all contained completely: beans that lack the amino acid sulfur methionine and cystine while cereals lack lysine. Protein is important to build a new network. But milk provides a fairly complete protein and does not need a combination.
4. Fat, essential fat is present in everyday diet, although not in too many quantities and most importantly, two essential fats that need to be supplied from food, namely linoleic and linolenic acid which is very well obtained from vegetable oil and need in a balanced composition. It is advisable to use soybean oil. In addition linolenic acid can also be obtained from breast milk can be used by infants to form DHA which is important for the formation of the eyes and brain. Omega-3 is a nutrient that needs to be met. Nutrition plays a vital role in the process of growing brain cells to stock the intelligence of babies who are born. Essential fatty acids can not be formed in the body and must be supplied directly from food, vegetarian menu such as soy milk, seaweed is a good source of fatty acids.
5. Iron, need to start with iron-fortified foods such as cereal between 4-6 months. Green vegetables are a good source of iron.
6. Vitamin D, the recommended requirement is 400 IU daily for all ages. For breastfed babies is recommended 200 IU supplements a day and if you get complementary feeding of milk then it is necessary again. To get more vit. D needs to be helped with the sun in the morning.

Beware of obese children because of the research concluded that obese children in preschool, as many as 25% of those obese will continue into adulthood and will cause many health problems. Not all children can receive a vegetarian menu properly, causing concern for their parents will lack of nutrients for growth. There are several ways to increase your child's passion for non-meat foods such as:

1. Get used early on introduced vegetable food first.
2. Add vegetables to foods that children love.
3. If the reason is the difficulty of chewing can be given in the form of juice.
4. Involve the child in selecting and processing food.
5. Make a catchy vegetable shape like a funny picture.
6. Keep offering the same food to him because sometimes less well known then the child is less likely to eat it.
7. Avoid wherever possible provide food 'junk food' such as packaged foods whose nutritional value is less good.
8. Familiarize introducing nutritious snacks such as various processed nuts, fruit and so on.
9. Often tells the story of a funny animal as a human friend.

CONCLUSION

The health condition of vegetarian mother and child is not far away with non-vegetarians. It should be noted that vegetarian menu variations are maintained to vary and complement each other's foodstuffs. It is recommended that the Health Department embrace vegetarians in order to ensure that LBW incidence rates do not increase in vegetarian and provide a replacement food solution for vegetarians. It is expected that the providers of maternal and child health services provide opportunities to choose the type of food especially for vegetarian for mother and child. vegetarians are advised to improve the quality and quantity of nutritional consumption required.

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