

Menu Guidelines for Pregnant Women in the 3rd Trimester

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ARTICLE INFO	ABSTRACT
<p>Entered March 02, 2024</p> <p>Revised April 22, 2024</p> <p>Accepted May 25, 2024</p> <p>Published May 28, 2024</p> <hr/> <p>Keywords: Nutrition, Pregnant Women, Trimester 3</p>	<p>The third trimester menu guidelines for pregnant women are designed to provide optimal nutritional guidance to support maternal health and fetal development in the final stages of pregnancy. The third trimester is a critical period during which nutritional needs increase to facilitate rapid fetal growth and prepare for labor. These guidelines emphasize the importance of adequate calorie intake, with a focus on protein, iron, calcium, and folic acid, which are necessary for the development of vital organs and fetal bones. They also include guidance on adequate hydration, healthy weight management, and strategies for addressing common issues such as constipation and heartburn. Food recommendations include a variety of protein sources such as lean meats, fish, eggs, and nuts; green vegetables, fruits, low-fat dairy products, and whole grains. They also highlight the importance of avoiding risky foods such as raw meat, fish with high mercury levels, and unpasteurized dairy products. By following these guidelines, pregnant women can maintain optimal health and minimize the risk of complications leading up to labor.</p>

INTRODUCTION

During pregnancy, there are many aspects that must be considered regarding the health of the mother and fetus. One crucial aspect is maintaining nutritional intake for both the pregnant mother and the fetus. Meeting nutritional needs during pregnancy is crucial, as good nutrition helps ensure optimal maternal health and fetal development. (Saputra & Anggraeni, 2024). Nutrition for pregnant women is food in the form of macronutrients and micronutrients needed by the mother during pregnancy, starting from the first trimester to the third trimester. The quantity and quality must be sufficient from daily food for the growth and development of the fetus being carried. During pregnancy, the mother requires quality food in sufficient quantities.

Adequate nutrition (neither insufficient nor excessive). Maternal and infant mortality rates, as well as the prevalence of low birth weight babies in Indonesia, are closely related to nutritional status during pregnancy. Pregnant women who experience malnutrition or chronic energy deficiency tend to give birth to low birth weight babies, who have a higher risk of death than babies with normal weight.(Allolingi & Winarti, 2024)This problem can be addressed by meeting nutritional needs during pregnancy. Meeting a mother's needs during pregnancy requires a balanced diet, containing all the nutrients the body needs daily, although the amounts vary; some nutrients are needed in small amounts and others in large amounts. The ratio of carbohydrates, protein, and fat in the daily menu should be appropriate to the body's needs.

Nutritional Needs of Pregnant Women

The mother's nutritional needs during pregnancy are higher than the mother's nutritional needs before pregnancy, there is an increase in the need for nutrients in pregnant women, nutrients are important for pregnant women and the development of the fetus itself, nutritional needs will vary in each trimester.(Mulyadi et al., 2024)As pregnancy progresses, the amount of nutrients needed increases. Optimal nutritional intake, tailored to gestational age, is essential for a healthy pregnancy.

In the first trimester, cell growth and organ formation occur, and brain and nerve cell growth largely occur during the first trimester. To support this process, nutritional intake is necessary, especially protein, folic acid, vitamin B12, zinc, and iodine. Additional energy and protein intake in the first trimester is 100 calories and 17 grams of protein, respectively. All of these nutritional needs must be met in preparation for more rapid growth in the following trimesters, as fetal growth is not yet rapid in the first trimester.

During the second and third trimesters, fetal growth is quite rapid, accounting for 90% of the total growth and development during pregnancy. Nutrients needed to support this process include protein, iron, calcium, magnesium, B-complex vitamins, and omega-3 and omega-6 fatty acids. Additional energy intake is approximately 350-500 calories per day, and an additional 17 grams of protein per day is recommended.

Nutritional adequacy during pregnancy can be monitored by weight gain appropriate for gestational age. Several factors that influence nutritional intake and low weight gain during pregnancy include:

1. Nausea and vomiting
2. Burning sensation in the upper abdomen
3. Constipation
4. Consumption of alcoholic foods and beverages, drinks containing caffeine, and energy drinks
5. Unbalanced diet
6. Excessive physical activity.

Energy and nutrient needs vary greatly from pregnancy to pregnancy, depending on the mother's body size and lifestyle. Here are some nutritional requirements for pregnant women based on their gestational age.

Nutritional Needs Table for Pregnant Women in the Third Trimester

Nama Zat Gizi	Fungsi	Bahan Makanan
Vitamin B6	Membantu proses sistem saraf	Kacang-kacangan, hati, gandum
Serat	Memperlancar buang air besar (mengatasi sembelit)	Sayuran dan buah-buahan
Vitamin C	Membantu penyerapan zat besi dan antioksidan	Kol, nanas, pepaya, jambu, jeruk, tomat
Seng (Zn)	Membantu proses metabolisme dan kekebalan tubuh	Kacang-kacangan, hati sapi, telur, daging sapi
Yodium	Mengatur suhu tubuh, membentuk sel darah merah serta fungsi otot dan saraf	Garam dapur, udang segar., ikan laut

Table 1. Nutritional Needs of Pregnant Women

Pregnant women need adequate nutritional intake, which is obtained from a balanced diet consisting of energy, building blocks, and regulating substances. To meet all these needs, a more varied menu is recommended. Pregnant women's nutritional intake comes not only from staple foods but also from supplementary foods. Supplemental feeding (PMT) is intended to improve the nutritional status of pregnant women. PMT can be manufactured or locally sourced.

In 2010, the Indonesian Ministry of Health distributed PMT (Food and Nutrition Supplement) programs in the form of manufactured PMT, prioritized for pregnant women from low-income families, particularly in districts/cities experiencing nutritional vulnerability. However, the reach of these manufactured PMT programs has not yet reached all regions of Indonesia. Therefore, it is hoped that PMT menus derived from local foods with sufficient nutritional content can meet the nutritional needs of pregnant women. The quality of local supplementary foods can be improved by adding animal and vegetable protein sources according to the nutritional needs of pregnancy during the first, second, and third trimesters.

DISCUSSION

Additional Nutritional Needs During Pregnancy

Daily nutritional needs for pregnant women are increased according to gestational age. This is due to fetal development and growth. The following are the additional amounts that must be met during pregnancy:

Trimester 1 Energi : 180 Kkal Protein : 20 gram Lemak : 6 gram KH : 25 gram	Setara dengan	Biskuit 1 buah besar (10 gram) Telur ayam rebus 1 butir (55 gram) susu sapi segar ½ gelas (100 gram)
Trimester 2 dan 3 Energi : 300 Kkal Protein : 20 gram Lemak : 10 gram KH : 40 gram		1 mangkuk bubur kacang hijau -kacang hijau 5 sendok makan (50 gram) -santan ¼ gelas (50 gram) -gula merah 1 sendok makan (13 gram) <p style="text-align: center;">dan</p> Telur ayam rebus 1 butir (55 gram)

Table 2. Additional Nutritional Requirements During Pregnancy

Amount or Portion in 1 Meal

It is a measure or amount of food eaten at each meal.

Kategori¹⁾	Berat	Setara dengan
Nasi/pengganti	200 gram	1 piring
Lauk-pauk hewani (Ayam/daging/ikan)	40 gram	Ikan: 1/3 ekor sedang Ayam: 1 potong sedang daging: 2 potong kecil
Lauk nabati (tempe/tahu/kacang-kacangan)	Tempe : 50 gram Tahu : 100 gram Kacang-kacangan: 25 gram	Tempe:2 potong sedang Tahu: 2 potong sedang Kacang-kacangan: 2 sendok makan
Sayuran	100 gram	1 gelas/ 1 piring/1 mangkok (setelah masak ditiriskan)
Buah-buahan	100 gram	2 ¼ potong sedang

Table 3. Amount or portion in 1 meal

Eating Frequency in a Day

Meal Frequency is the frequency with which a person eats in a day, whether main meals or snacks, as many as 3 main meals and 2 snacks or small portions but often and must be in accordance with the portions below:

Table 4. Frequency of eating in a day

Kategori	Porsi per hari
Nasi/pengganti	4-6 piring
Lauk-pauk hewani (Ayam/daging/ikan)	4-5 porsi
Lauk nabati (tempe/tahu/kacang-kacangan)	2-4 potong sedang
Sayuran	2-3 mangkok
Buah-buahan	3 porsi

Pregnant Women's Menu Guidelines

Nutritional quality and nutrient completeness are influenced by the diversity of food consumed. The more diverse the food consumed, the easier it is to meet nutritional needs, and the easier it is for the body to obtain various substances beneficial to health. Apart from implementing a variety of foods and drinks, it is also necessary to pay attention to food safety, which means that the food or drink must be free from contaminants that are harmful to health. The way to implement this is by consuming five food groups every day: staple foods, side dishes, vegetables, fruits, and drinks. Consuming more than one type of each food group at each meal is even better.

Here are guidelines for compiling a menu for pregnant women:

1. Eat twice as much as usual, not only in terms of portion size, but more emphasis is placed on the quality of the nutrients contained in the food consumed.
2. Food can be given 4-6 times, at meal times tailored to the mother's ability. Don't force yourself to finish the food if you feel nauseous, dizzy, or want to vomit.
3. Limit consumption of high-fat and stimulating foods such as cabbage, gassy foods such as jackfruit, pineapple and durian, and alcoholic foods such as tape.
4. Try to consume food in a balanced composition with a composition that includes 2 plates of rice @ 259 g, 90 g of meat or fish, an egg, 60 g of nuts, 3 portions of zayur @ 100 g, 2 portions of fruit @ 100 g, a glass of milk or yogurt or a slice of cheese as a substitute and 1 tablespoon of oil or fat.
5. Try to consume food in a balanced composition, with the following composition:
6. Give your baby fluids half an hour after eating. Drink plenty of water, fruit juices such as orange juice, tomato juice, carrot juice, and boiled green beans to replace lost fluids, as pregnant women sweat more and urinate more frequently due to the pressure on the bladder

by the growing fetus. It's important to avoid caffeinated beverages such as coffee, chocolate, and soft drinks, which can trigger hypertension.

7. Avoid consuming processed foods that contain preservatives and colorings, as these can be harmful to fetal health and development, often linked to birth defects and birth defects. Be wary of labels on packaging containing ingredients like amaranth, potassium nitrite, and other ingredients.

sodium nitrite, sodium nitrate, formalin, borax, cyanide, rhodamin B, etc.

8. Avoid high-calorie foods that contain lots of sugar and fat but are low in nutrients, fast food, snacks, chocolate, because they will cause nausea and vomiting.
9. Avoid consuming seafood and meat that has not been properly processed because there is a high risk of being contaminated with harmful germs and bacteria. To avoid this, cook it thoroughly and wash food to maintain cleanliness, especially fruit and vegetables, thoroughly before consumption.

Food material	Trimester 1	Trimester 2 and 3
Rice / exchange	3 ¼ cups	3 ½ pieces
Meat / exchange	2 ½ pieces	2 ½ pieces
Tempeh / exchanger	5 pieces	5 pieces
Vegetable	3 glasses	3 glasses
Fruit	2 pieces	2 pieces
Oil	2 tbsp	2 tbsp
Mung beans	2 ½ tbsp	2 ½ tbsp
Milk	2 ½ tbsp	2 ½ tbsp
Soybean flour	-	4 tbsp
Sugar	1 tbsp	
Nutritional Value	Trimester 1	Trimester 2 and 3
Energy	2095.8 cal	2154.5 cal
Protein	79.5 grams	82.5 grams
Fat	57 grams	65 grams
Carbohydrate	273.8 grams	275 grams
Vitamin C	70 mg	70 mg
Iron	31 mg	31 mg

Table 5. Guidelines for Pregnant Women's Daily Meal Menu Preparation

CONCLUSION

The third trimester menu guidelines for pregnant women provide comprehensive guidance to ensure optimal nutritional intake during the final stages of pregnancy. Focusing on increasing calories and essential nutrients such as protein, iron, calcium, and folic acid, these guidelines aim to support the rapid growth and development of the fetus and prepare the mother's body for labor. Eating a variety of nutritious foods, maintaining good hydration, and managing a healthy weight

are key to overcoming the nutritional challenges of the third trimester. Furthermore, avoiding risky foods and adhering to these recommendations can help reduce the risk of pregnancy complications. Therefore, these guidelines play a vital role in maintaining the health of both mother and baby, as well as supporting a smooth delivery and postpartum recovery.

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