


A photograph of a pregnant woman's belly, partially covered by a blue semi-transparent overlay. The text is centered on the blue area.

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—  
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# Prenatal Nutrition

Explore the essential macronutrients, micronutrients, and balanced diet that nourish both mother and baby throughout pregnancy.



Maintaining a balanced diet prior to pregnancy is crucial, as nutrient-rich foods will support the woman's nutritional needs and establish reserves vital for the developing baby.

Once a woman becomes pregnant, her needs shift quickly to accommodate the growing baby. Cultivating healthy habits before pregnancy can significantly contribute to a successful and healthy gestation period.

Nutrition plays a crucial role in the development of every body system, including the nervous system (comprising the brain and spinal cord), the immune system, and vital physiological processes such as metabolism.

**Prior to pregnancy, maintaining a high-quality diet that includes sufficient macronutrients (carbohydrates, protein, and fat) as well as micronutrients (vitamins and minerals) is essential.**



## PROTEIN

10-25%

[calories from protein]

- Protein is classified as a macronutrient, indicating that our bodies require it in larger amounts compared to other nutrients.
- It serves as a fundamental building block for various components in our bodies, including muscles, skin, blood, and other cells. Additionally, proteins form essential body chemicals such as enzymes and hormones, crucial for normal bodily functions.
- Sources of protein from animal foods consist of chicken, fish, meat, eggs, and dairy products, including yogurt.
- Plant-based sources of protein include beans, soybeans, nuts, and seeds.

### Food Sources



fish & seafood



eggs



beans & legumes



chicken



- Eating a variety of foods with protein provides more nutrients. Protein is also important because it helps keep us full
- Women interested in following a vegetarian or vegan diet should speak to a doctor or registered dietitian to make sure the diet is balanced and contains essential vitamins and minerals.

## High-Protein Snacks



**yogurt**



**hemp hearts**



**hard-boiled eggs**



**edamame**



**protein-rich smoothie**



**cottage cheese**



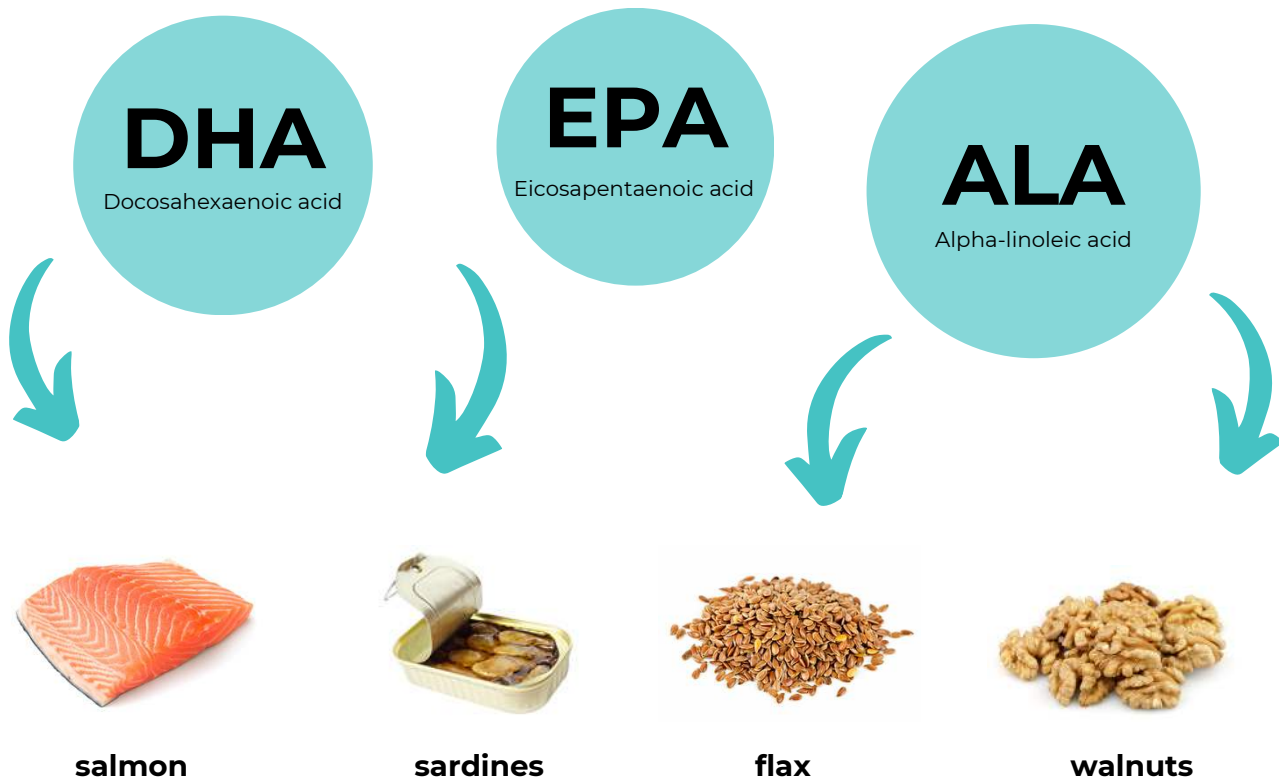
**peanut butter**

# Omega-3 Fatty Acids

Omega-3 fatty acids are a type of polyunsaturated fat essential for both overall health and a healthy pregnancy. Since the body cannot produce them, they must be obtained through food.

- Omega-3s are crucial building blocks for cell membranes and are vital for brain, eye, and heart health. During pregnancy, they play an especially important role in supporting fetal brain and eye development.
- Omega-3s may also help reduce the risk of preterm birth, support healthy blood pressure, and protect against heart disease for both mother and baby.
- Additionally, they have anti-inflammatory properties and may aid in regulating mood, which can be beneficial in managing stress and reducing the risk of postpartum depression

## 3 Types of Omega-3 Fatty Acids



## What's the difference between folate and folic acid?

**Folate** is a water-soluble B-vitamin.

**Folic acid**, the synthetic version of folate, is often found in supplements due to its higher bioavailability. This means that the body can absorb it more effectively compared to the folate naturally present in whole foods.

### Fast Facts

- Folate is essential for the production of DNA, which is the genetic blueprint of cells, making it vital for cell division.
- You can find folate in foods such as lentils, green leafy vegetables, and oranges.
- Certain foods are enriched with folic acid, which is added even if it isn't naturally present. Examples of these fortified items include cereals and some grains.



lentils



leafy greens



oranges

### Did you know?

Folate plays a crucial role in fetal development early in pregnancy, before many women have realized they are pregnant!



# IRON

- Iron plays a crucial role in hemoglobin, which carries oxygen to the cells throughout the body. Additionally, it is a vital part of proteins and enzymes necessary for proper bodily functions.
- The iron found in animal sources is more bioavailable, meaning it can be absorbed more efficiently compared to the iron present in plant-based foods.

## food sources



meat



Nuts and Seeds



kale and leafy greens



Legumes



Tofu and Tempeh

*Tip: To improve absorption of iron in plant foods, add vitamin C!*



# 18mg

RDA for women of childbearing age.

Iron deficiency affects over 30% of pregnant women in developed countries and up to 50% of pregnant women worldwide.

- Iron is essential in a prenatal diet for several significant reasons:
  - The demand for iron increases during pregnancy.
  - If a mother lacks adequate iron stores during the prenatal period, it is unlikely that both she and her developing baby will meet their iron needs solely through food, especially in late pregnancy.
  - Full-term infants born with sufficient iron stores can maintain their iron levels for up to six months after birth. However, if the mother is deficient in iron during pregnancy, it can negatively impact the baby's iron status.
- For mothers, experiencing iron deficiency while pregnant is linked to a weakened immune system and a heightened risk of cardiovascular disease later in life.
- For babies, iron deficiency can lead to a greater likelihood of preterm birth, low birth weight, and issues with development and cognitive function.
- *The recommended dietary allowance (RDA) for iron **during pregnancy is 27 mg per day.***
  - Since iron supplements can lead to constipation for some individuals, it is crucial to consult with a healthcare professional about your dietary iron intake before starting any supplements.





# CALCIUM

- Calcium is essential for supporting bone health, as well as ensuring proper muscle and nerve function. It is particularly important in prenatal nutrition due to its contribution to the development of a growing baby's teeth, bones, heart, nervous system, and muscles.
- For women in their childbearing years, the recommended daily allowance (RDA) for calcium varies between 1,000 and 1,300 mg, depending on age.
- Calcium intake during pregnancy is closely linked to birth weight, risk of preterm labor, and blood pressure regulation.
- Inadequate calcium can impact both the mother and baby. For the mother, low calcium intake increases the risk of high blood pressure (hypertension), weakened bones (osteopenia), and muscle issues. For the baby, it can lead to delayed growth, low birth weight, and poor bone development.
- Pregnant women are recommended to consume 1,000 to 1,300 mg of calcium daily, depending on age.
- Calcium is particularly important in the third trimester when the baby's bones are developing rapidly.
- Most women can meet this need through diet, though supplements may be necessary for those who don't consume enough calcium-rich foods.



**milk and milk alternatives**



**greens**



**Sardines**



**Tofu**



**Nuts and Seeds**



**Legumes**



# Foods to Limit or Avoid

**Listeria, a bacterium found in soil, water, and some animals, causes listeriosis, a foodborne illness that can be harmful and potentially fatal.**

- Pregnant women are more at risk to get listeriosis than the general population and some women do not exhibit any symptoms.
- If the infection reaches a growing baby, listeriosis can cause miscarriage, stillbirth, preterm labor, or blood and brain infections that may cause long-term health problems in a baby.
- To prevent listeriosis, avoid eating unpasteurized milk, cheese, and other unpasteurized dairy products. Avoid refrigerated pâté and meat spreads, refrigerated smoked seafood, and unwashed fruits and vegetables.
- To prevent listeriosis, ensure that hot dogs and luncheon meats are cooked until steaming hot just before serving.

## Follow food safety guidelines



**Wash your hands frequently**

**Rinse all produce under running water**

**Keep raw food and cooked food separate during food preparation and serving**



# Foods to Limit or Avoid

**A well-planned prenatal diet should focus on high-quality foods.**

- Nutrient-rich options encompass vegetables, fruits, lean proteins, whole grains, nuts, legumes, seeds, and low-fat dairy products, all of which provide essential nutrition, including healthy fats.
- Tea and coffee can be included in a prenatal diet, but it is advisable to limit caffeine intake to under 200 milligrams per day during pregnancy. The caffeine content varies based on the type of beverage.
- Foods high in added sugars, refined grains, and saturated fats should be minimized in a prenatal diet. Examples of such foods include candy, soda, energy drinks, snack items, butter, red meat, and full-fat dairy products.
- Consuming excess calories from nutrient-poor foods can lead to weight gain, as calorie intake is a key factor in weight management.
- Maintaining a healthy weight before pregnancy is crucial, as recommended weight gain targets during pregnancy are based on pre-pregnancy weight.

## Prenatal Weight

Achieving a healthy weight during the prenatal stage, as advised by your doctor, is crucial for supporting appropriate weight gain during pregnancy.

- The amount of weight gained during pregnancy can indicate potential complications; excessive calorie intake is linked to risks like miscarriage and diabetes.
- Additionally, the weight gained during this period can influence the future health risks of the child, including the likelihood of obesity.
- Caloric needs only increase after the second trimester begins and can vary based on several factors, such as activity level and pre-pregnancy Body Mass Index (BMI).
- Factors like physical activity, quality of sleep, and stress management also impact weight.
- Adopting healthy lifestyle practices before pregnancy will contribute to achieving a healthy weight gain during this time.

## Can I eat fish?

Fish serves as an excellent source of protein, and many fish species are rich in omega-3 fatty acids, which are crucial for fetal development. However, certain types of fish contain high levels of mercury, which can be harmful to both the mother and the developing baby.

- In a prenatal diet, aim for 2-3 servings of fish per week. The best options include salmon, sardines, scallops, shrimp, tilapia, canned light tuna, cod, haddock, and hake.
- If opting for fish that is higher in mercury, limit yourself to one serving per week. Species to be cautious of include albacore tuna, yellowfin tuna, and halibut.
- Steer clear of fish with the highest mercury content, such as swordfish, tilefish, and bigeye tuna.

Bigeye tuna  
Tilefish  
Swordfish  
Orange roughy  
King mackerel

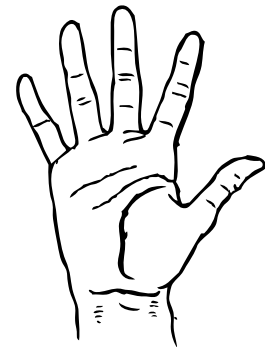
**Avoid**

Albacore Tuna  
Yellowfin Tuna  
Halibut  
Striped bass  
Chilean sea bass

**1x/week**

Salmon  
Sardines  
Shrimp  
Tilapia  
Light Tuna

**2-3x/week**



One serving of fish  
is about the size of  
the palm of your  
hand.