

A healthy way through pregnancy

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Pregnancy is a time where nutritional requirements are increased due to the demands for the growing baby. A healthy diet and lifestyle are particularly important for a healthy pregnancy as they affect both mother's and baby's health. Dietary advice for pregnant women is similar to that for the general population, but there are some important details to know.

Healthful eating before and during pregnancy

A healthful diet is important both in preparation for pregnancy and during pregnancy. This is because low nutrient levels can affect a baby's health from the very start of pregnancy.¹⁻⁴ Pregnancies can happen even when not planned, so it is particularly important that women who may become pregnant eat well. Evidence suggests that the mother's nutritional status before and during pregnancy can affect a child's health not just in the short-term but even later in life, something referred to as nutritional programming.⁵

Pregnant women, just like the general population, are advised to eat a balanced diet (with some extra attention):¹⁻⁴

- Plenty of cereal-based products, preferably wholegrain, and other starchy foods
- Plenty of fruits and vegetables, at least five servings a day (wash thoroughly or peel)
- Several servings of dairy a day (avoid raw products, avoid mould-ripened cheeses), preferentially reduced-fat
- Moderate amounts of lean meat, eggs, fish and other protein sources (avoid raw products); regularly choose healthy sources of fats such as plant oils, nuts and fatty fish such as salmon, mackerel and fresh tuna
- Limit the amount of added sugar and salt

When trying for a baby, men should also consider making changes to their diet and lifestyle as these can affect their fertility. Eating a healthy varied diet, reducing alcohol consumption and aiming for a healthy weight can improve quality of sperm and the chance of conceiving.⁴

Energy balance

Ideally women should aim for a healthy body weight before conception and avoid excess weight gain during pregnancy.^{2,4} Excessive weight gain during pregnancy can be a result of the perception that women have to "eat for two". In reality, on average a moderately active woman requires 2,000 kcal/day, when pregnant she requires only an additional:

- 70 kcal/day during the first trimester
- 260 kcal/day during the second trimester

- 500 kcal/day during the third trimester.⁶

Additional nutrient requirements to support foetal development

While a balanced diet sufficiently provides most essential nutrients, some nutrients are particularly important for a baby and many women may not get enough of these through their diet.^{1-4,7} A sufficient supply of folic acid one month before conception and continued throughout the first trimester significantly reduces the risk of neural tube defects.^{1,8} Many countries recommend that pregnant women and those who may become pregnant eat folate-rich foods and take folic acid supplements (400 µg/day).¹⁻⁴

Other nutrient supplements may be recommended if the woman is at particular risk of insufficiency.¹⁻⁴ Before getting pregnant it may be a good idea to have a blood test to check nutritional status, and to seek advice from a healthcare professional on whether supplements are needed, particularly for vitamin D, iron and iodine. To meet higher calcium demands, pregnant women are sometimes advised to consume three servings of dairy a day.¹⁻³ While an adequate intake of vitamin A is also important, pregnant women should avoid eating liver and supplements with preformed vitamin A (retinol), as too much can harm the baby.¹⁻⁴

Pregnant women should increase their intake of DHA (docosahexaenoic acid), an omega-3 fatty acid that it is essential for normal brain development. This is because the body's ability to produce DHA is limited. Sufficient supply of DHA is especially important during the last trimester of pregnancy, when a baby's brain develops fastest and a baby begins to store DHA for the time after birth.⁹ The European Food Safety Authority (EFSA) advises pregnant and breastfeeding women to consume 100-200 mg preformed DHA (supplement) per day, in addition to the 1-2 servings of seafood (particularly fatty fish) per week that is recommended for the general population.¹⁰ Some countries recommend avoiding large fish such as shark, marlin and swordfish as they can be high in pollutants such as mercury.¹¹

Vegetarians and vegans must pay further attention to ensure they get enough nutrients which are normally eaten in animal products (high quality protein, long chain omega-3 fatty acids, iron, zinc, calcium and vitamins D and B12).

Food preparation and cooking advice during pregnancy

It is particularly important to practice safe food preparation and good hygiene to avoid foodborne illness, as some bacteria and parasites can pose a risk to the unborn baby.¹⁻⁴ Pregnant women should avoid eating any raw meat and fish (including smoked but uncooked, e.g. smoked salmon), and raw eggs (e.g. in mousse, meringue, homemade mayonnaise). These types of foods should always be well cooked before consumption as heat destroys potentially harmful bacteria and parasites.¹⁻⁴ Also, make sure that raw meat is stored and handled separately from any ready to eat foods such as salads, to prevent the transfer of harmful bacteria.⁴ Meat products that are made from raw meat such as cured ham or salami, or "patés", which can also contain harmful bacteria, should be avoided. On the contrary cold cooked meats like turkey, cooked ham and chicken are safe to eat.¹⁻⁴ Any salads, fruits or vegetables that are consumed raw, should be thoroughly washed or peeled before consumption.²⁻⁴ Raw milk and milk products, as well as mould ripened cheeses (e.g. camembert, brie) should be avoided (some countries recommend avoiding all soft

cheese).^{1-3,12} Always wash hands with soap before and after handling food, and keep kitchen surfaces and utensils clean by washing them with soapy water, especially after handling raw products.⁴ Also check the fridge temperature, which should be 5°C or below.^{1,4}

Drinks

Staying hydrated is also important and pregnant women should increase fluid intake by around 300 ml per day.^{1,4,13}

Caffeine doesn't have to be avoided but should be limited during pregnancy.¹⁻⁴ Up to 200 mg caffeine per day, which equates to 2-4 mugs of tea or 2 cups of coffee, can be safely consumed by pregnant women.^{3,14}

Most countries encourage pregnant women to abstain from alcohol consumption throughout pregnancy as there is no known safe level and even small amounts may harm the baby.¹⁵

Morning sickness and food cravings

Many pregnant women experience nausea and vomiting during the first trimester. Although the exact causes remain unknown, it is thought that changes in hormones play a role.⁴ Symptoms are often worse after a longer period of fasting, such as in the morning.¹ Eating multiple small meals instead of a few large meals may help to alleviate symptoms, and it is best to avoid skipping meals.^{1,4} Getting plenty of rest, avoiding foods or smells that trigger symptoms, and fresh ginger or ginger tea may also help reduce symptoms.⁴ In case of severe morning sickness, it is best to seek advice from a healthcare professional.^{1,4}

Some women also experience food cravings and aversions, but little is known about the causes of these.⁴ It is ok to indulge a craving, with moderation, as part of a healthy balanced diet.⁴

Exercise during pregnancy

Being physically active during pregnancy has many benefits, including a lower risk of gestational diabetes and preeclampsia (high blood pressure), better fitness during pregnancy, and possibly shorter labour.^{1,4} Pregnant women are encouraged to be active daily and should choose activities of moderate intensity such as walking, jogging, or swimming.^{1,2,4} Activities with a high risk of falling and contact sports are not recommended.^{2,4} It is important to avoid getting too out of breath and in case of any unusual symptoms, it is best to seek advice from a healthcare professional.⁴

Conclusion

A healthy diet and a sufficient supply of essential nutrients are crucial not only during but already before pregnancy to support the baby's healthy development. Good hygiene and extra care when preparing food, are essential to reduce the risk of food-borne illness. Aiming for a healthy weight before pregnancy and during pregnancy, as well as being active and staying hydrated are further ways to support both mother's

and baby's health, and reduce the risk of complications. Maintaining the good dietary and lifestyle habits after pregnancy is also important for optimal breastfeeding, for overall health and wellbeing.

Women planning for a baby are recommended to speak to a healthcare professional, who can provide tailored advice on how best to prepare for pregnancy.

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