

# Dietary recommendations for pregnant women

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## Executive summary

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Health Council of the Netherlands



The Minister of Health, Welfare and Sport has asked the Health Council of the Netherlands to evaluate the existing dietary recommendations for pregnant women in the light of the latest scientific knowledge. The Council has set up the Committee for Dietary Recommendations for Pregnant Women for this purpose.

The advisory report underlies the Netherlands Nutrition Centre's public information on nutrition for pregnant women, which also takes account of the dietary reference values for pregnant women. Pregnant women can use this public information: it gives the comprehensive picture. This advisory report can serve as a reference work, as it describes the scientific basis for the recommendations. This can also be valuable for professionals who provide nutritional advice to pregnant women. The committee based its recommendations on scientific research into the influence of dietary factors during pregnancy on health outcomes during and after pregnancy,

whether for the mother or the child. The recommendations concern a healthy diet and food safety.

### **A healthy, varied diet is essential**

During pregnancy, eating a high-quality diet requires extra attention, which is why the recommendation to eat healthy, varied food is essential. A varied diet is linked to the intake of a wide array of nutrients and prevents overexposure to specific harmful substance. Many guidelines from the *Dutch dietary guidelines* published by the Health Council in 2015 also apply to pregnant women. They do need to be updated or fine-tuned in several areas, however, such as for fish, bread, dairy, coffee, tea and alcohol. In addition, there are several specific recommendations for pregnant women.

Pregnant women who consume little or no animal products have an increased risk of not getting enough fish (fish fatty acids), calcium, iron, vitamin B12 and iodine. Whether or not pregnant women need supplements with these nutrients and, if so, which supplements they should take depends on their food choices.

The committee considers that fasting or dieting while pregnant is unwise, as doing so makes it impossible to eat a healthy, complete diet.

Finally, hygiene measures and limiting exposure to certain harmful substances are especially important during pregnancy.

The committee believes that in the first trimester, preferably during the first obstetrical consultation, attention should be given to healthy eating habits.

### **Start early with folic acid and take vitamin D**

The current recommendation to take folic acid tablets before conception and in early



pregnancy remains unchanged. Following this recommendation will reduce the risk of spina bifida and is associated with lower risks of preterm birth, low birth weight for gestational age and possibly cleft lip and palate in the child. The committee also recommends taking a vitamin D supplement throughout pregnancy. Taking vitamin D supplements appears to lower the risk of gestational diabetes, low birth weight for gestational age and asthmatic symptoms in the child.

The committee stresses that compliance with both supplement recommendations is still too uncommon and that special attention should be paid to improving this in implementing the recommendations.

### **The importance of good hygiene**

*Listeria* or *Toxoplasma* infections can have serious consequences during pregnancy, such as premature birth or miscarriage. It is therefore especially important to pay extra attention to hygiene during this time. There is a lot of information and a lot of advice on this topic,

which may give the impression that pregnant women should avoid a large number of foods. The committee has shown that this is not always necessary. Pregnant women can consume products responsibly, but exercise extra caution with certain products, making sure to wash or cook them fully.

### **Do not consume alcohol, limit caffeine and watch out for other harmful substances**

Several substances have negative effects during pregnancy. It is recommended to avoid alcohol completely during this time, as there is no safe intake level. It is also recommended to limit the intake of caffeine. Because of the risks associated with a high intake of vitamin A, the committee recommends avoiding liver, limiting the consumption of liver products and being careful with supplements that are not specifically intended for pregnant women, as they may contain too much vitamin A. Lead intake is also a health risk, especially for pregnant women and young children. This is an area of concern for people living in homes with lead plumbing or

new plumbing and taps. Women who eat a lot of soy products or who take supplements with phyto-oestrogens should take care not to over-consume isoflavones. Another recommendation concerns the risk posed by products containing liquorice root, including liquorice and tea, as well as tea or supplements made from certain plants or herbs. In addition, care should be taken to avoid that foods are coloured too brown or black when cooking it, as this can produce harmful substances.

### **Eat plenty of calcium-rich, iodine-rich and iron-rich products and fish**

Sufficient calcium intake is important throughout pregnancy, but there is scientific evidence that, specifically during the second half of pregnancy, calcium reduces the risks of high blood pressure, preeclampsia and preterm birth. Furthermore, women need to consume more iodine throughout pregnancy for fetal growth and the development of the nervous system. It is also recommended that pregnant women eat fish twice a week, including one serving of fatty



fish and one serving of lean fish. This is more than what is recommended for the general population, due to the beneficial effects of fish and fish fatty acids on preventing preterm birth. It is important, however, to eat the right kind of fish, as some species contain more harmful substances than others. Sufficient intake of iron-rich products is also important, as iron deficiency can lead to anaemia, which is undesirable. As part of pregnancy care, women undergo several blood tests throughout their pregnancy in order to detect and treat iron deficiency.

In principle, pregnant women can get enough calcium, iodine and fish fatty acids through their diet alone. Supplements are recommended only for women who structurally fail to meet the reference intake values for these nutrients. For women who consume little or no dairy, it is more difficult to get enough calcium. For women who eat little or no bread or who eat bread without

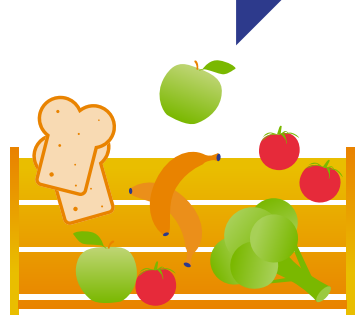
‘bakery salt’<sup>a</sup>, consuming enough iodine may be more difficult. For these groups, it is especially important to monitor calcium and iodine intake during pregnancy. If supplementation with several vitamins and minerals is required, it may be practical to take a combination supplement.

<sup>a</sup> In the Netherlands, bakery salt is a specific salt containing 50 tot 65 milligrams of iodine per kilogram salt, which is applied in bread, biscuits, cakes and pastries.



# Overview of the dietary recommendations for pregnant women

## Eat a healthy and varied diet



### Calcium

Eat enough calcium-rich products to reach at least the dietary reference value of calcium. If the intake is consistently too low, take a supplement containing 1,000 milligrams of calcium a day, starting from the 20th week of pregnancy.



### Food-borne infections

Avoid food-borne infections with the bacteria *Listeria monocytogenes* and with the parasite *Toxoplasma gondii* by observing extra hygiene rules, in addition to the general rules to prevent food-borne infections.



Careful



### Caffeine

Do not take more than **200 milligrams of caffeine** per day.



Careful



### Alcohol

Avoid alcohol



No



### Folic acid

Take a supplement containing **400 micrograms of folic acid a day**, starting from at least four weeks prior to conception up to the 10th week of pregnancy



Yes



### Lead

In buildings with leaded plumbing, use bottled water instead of tap water. In case of new plumbing and/or taps, follow the instructions for using tap water for the first three months.



Careful



### Vitamin A (Liver products)

Avoid liver, limit consumption of liver products and watch the dosage of supplements not specifically intended for pregnant women.



Careful

### Vitamin D

Take a supplement containing **10 micrograms of vitamin D** per day



Yes



### Iodine

Eat enough iodine-rich products to meet the dietary reference value of **200 micrograms of iodine per day**. If you struggle to consistently get enough iodine, take a supplement. Do not take more than 200 micrograms of iodine a day.



Yes



### Harmful substances

Points of attention (during and before/after pregnancy):

- Eat a varied diet and avoid having products turn too brown or black when cooking them.
- Limit the consumption of tea made from aniseed, tarragon, fennel, basil, allspice, nutmeg, cinnamon, sassafras, dong quai, mace and pepper. Do not take pills, capsules or other highly concentrated products intended for consumption made from these plants or herbs or their essential oils.
- Normal use of kitchen herbs is not a problem.
- Do not eat calabash chalk because of its high levels of lead and dioxin.



Careful



### Soya

Avoid excessive intake of isoflavones from soya products and do not take supplements containing these phytoestrogens.



Careful

### Iron

Eat enough iron-rich products

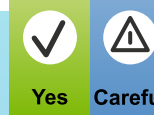


Yes



### Fish

Eat fish twice a week, including one serving of fatty fish and one serving of lean fish, picking fish species that do not contain excessively high levels of harmful substances. For women who cannot or do not want to eat this amount of fish: take a fish-fatty-acids supplement containing 250 to 450 milligrams of DHA per day.



Yes

Careful



### Liquorice root

Limit the intake of products containing liquorice root (liquorice, tea) if you have normal blood pressure and avoid them if you have high blood pressure.



Careful



Figure 1

The Health Council of the Netherlands, established in 1902, is an independent scientific advisory body. Its remit is “to advise the government and Parliament on the current level of knowledge with respect to public health issues and health (services) research...” (Section 22, Health Act).

The Health Council receives most requests for advice from the Ministers of Health, Welfare and Sport, Infrastructure and Water Management, Social Affairs and Employment, and Agriculture, Nature and Food Quality. The Council can publish advisory reports on its own initiative. It usually does this in order to ask attention for developments or trends that are thought to be relevant to government policy.

Most Health Council reports are prepared by multidisciplinary committees of Dutch or, sometimes, foreign experts, appointed in a personal capacity. The reports are available to the public.

This publication can be downloaded from [www.healthcouncil.nl](http://www.healthcouncil.nl).

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