



Diet and pregnancy

Information for women of child-bearing age

Thinking ahead

- *preparation can begin early*

Women can prepare **for** pregnancy **before** becoming pregnant by:

- eating a diverse range of nutritious foods
- taking folic acid supplements, preferably for at least one month prior to conception.
- aiming at reaching or maintaining ideal weight
- quitting smoking
- exercising daily

and following other advice given in this pamphlet.

To expectant parents

Pregnancy is a time of change in every woman's life. Daily life no longer revolves solely around one's own needs but also around the needs of another individual (or even two or more individuals). Proper nutrition during pregnancy is important for the growth and development of a baby in the womb and will contribute to the baby's health later on in life. Good nutrition is no less important, however, for the health and wellbeing of the mother herself. Pregnancy gives the entire family an excellent opportunity to re-examine eating and lifestyle habits. In this pamphlet you will find basic advice on diet during pregnancy, but more detailed information may be found on the websites listed at the back of the pamphlet.

Diet during pregnancy

- *good, basic food*

Women do not need to follow a special diet when they're expecting a child. A healthy balance of wholesome, everyday foods satisfies the needs of both mother and child, with a few exceptions.

Expectant mothers are, for example, advised to take **folic acid** supplements (in tablet form) and make sure to eat foods rich in this B vitamin as it reduces the likelihood of foetal damage. In addition, most women need to take vitamin D. Good sources of vitamin D are cod liver oil, fish liver oil capsules and multivitamins. The proper preparation of foods is particularly important during pregnancy, and several types of food, such as raw meat and fish, are best avoided during these months. A good diet is very important for the health and wellbeing of the mother, and it also contributes to a proper increase in weight over the course of the pregnancy. Even though the need for energy increases as the pregnancy advances, expectant mothers do not necessarily need to eat more than they did previously as most women rest more and move less during the latter part of their pregnancy.

Proper weight gain during pregnancy

- *It is perfectly natural and desirable to gain weight*

Advice regarding appropriate weight gain during pregnancy takes your weight prior to pregnancy into consideration and is linked to research on the health of mothers and babies. It is advisable for women who are at or below their ideal weight to gain more weight than those who are over their ideal weight. All women, however, should gain at least some weight during pregnancy – this is definitely not the right time to be losing weight. Going on a diet may damage the baby's growth and development. More or less weight gain than prescribed in the table below may be perfectly normal.

*Body Mass Index (BMI) = weight (kg)/(height (m) x height (m)).

Example: A woman who is 1.70 m tall and weighs 67 kg *prior* to pregnancy has a BMI of 23.2 kg/m² (she is at her ideal weight). A desirable increase in weight for her would be 12-18 kg over the course of her pregnancy. Shorter women and women well over their ideal weight should aim to gain less weight. It is natural for women to gain more weight when carrying more than one baby.

Recommended weight gain (kg) during pregnancy

Women within or under ideal weight (BMI < 25*) 12-18 kg

Women over ideal weight (BMI > 25*) 7-12 kg





If you are in good health, you live a healthy lifestyle, your diet is well-balanced and you are eating a proper amount of food, more or less weight gain than recommended here should not be cause for concern.

Give yourself time to eat – preferably 3-5 meals a day

Many women are accustomed to eating irregularly or on the run and skipping meals. It is best for both you and your baby if you give yourself the time to eat breakfast, lunch and supper as well as two to three snacks over the course of the day. This ensures that nutrients are being carried to your baby both constantly and evenly.

It is important to get **variety** in your diet so that you will receive all necessary nutrients from your food. A limited diet is the recipe for inadequate nourishment.

The best way to guarantee variety and a healthy balance is to include the following foods in your daily diet:

- all types of fruits and vegetables, preferably at every meal and as snacks
- grain products rich in fibre, such as breakfast cereals, oatmeal and whole grain bread.
- fresh meat or fish, eggs or bean/lentil dishes
- low-fat dairy products
- water to drink

Many women experience nausea during the first part of their pregnancy, which may be accompanied by loss of appetite or a craving for certain specific foods. If you do not lose much weight and attempt to eat as many types of foods as possible, there is no call to be too concerned.

It is important to give yourself time to enjoy your food and to eat a healthy amount of food. It is good to eat a warm meal containing fish, meat or beans every day and to use oil in salads and when cooking. Women who frequently eat fast food and candy and drink large quantities of soda during pregnancy are in danger of gaining more weight than necessary, and such foods provides little in the way of necessary nutrients. It is therefore best to consume these foods in moderation, though there is no need to avoid them altogether, particularly if your diet is healthy and varied in other respects.

Fish and other seafood are sources of important nutrients that other foods contain little of, including Omega-3 fatty acids, which are necessary for the development of a foetus' central nervous system. For this reason, expectant mothers are advised, as are everyone else, to eat fish at least twice a week. Common types of fish found in the waters surrounding Iceland, such as haddock, cod, flounder, catfish, monkfish (anglerfish), trout and salmon are healthy foods that pregnant women should enjoy as often as possible.

All raw fish, including hardfish, should, however, be avoided during pregnancy regardless of the type of fish due to a bacteria (*Listeria monocytogenes*) that may be present in the fish (see table). You should also keep in mind that contaminants (such as heavy metals and persistent organic pollutants or POPs such as PCBs) accumulate in some seafood. It is best for expectant and nursing mothers, as well as women planning on becoming pregnant, to avoid these contaminants and therefore these foods. PCBs can, for example, accumulate in the liver and fat of some types of fish and marine mammals. This does not, however, apply to fish liver oils as all contaminants have been removed in the refining process. Other contaminants, including mercury, may have a negative effect on the health of foetuses and young children. Large predatory fish, toothed whales (of suborder Odontoceti) and sea birds' eggs contain the highest levels of mercury.

Fish is a healthy choice during pregnancy

- but should not be eaten raw

Avoid during pregnancy

- Cured fish
- Cold-smoked fish
- Driedfish
- Sushi containing uncooked fish
- Pickled whale
- Cod liver
- Shark
- Swordfish
- Large halibut (>1.8 m or 60 kg)
- Fulmar
- Fulmar eggs



Eat no more than one serving a week

Tuna fish steak

Orange roughy

Eat no more than two servings a week

Canned tuna

Guillemot eggs

Minke whale meat

Folic acid

- protection against foetal damage

All women who plan on conceiving a child are advised take a 400 microgram folic acid tablet a day as well as eat foods rich in folates (the form of the vitamin found in food). Research has shown that folic acid reduces the likelihood of serious damage to a foetus' central nervous system. Fruits and vegetables are the foods richest in naturally-occurring folates, and some breakfast cereals are enriched with folic acid. Although it is important to begin taking folic acid prior to pregnancy, there is no reason to be concerned if you are already pregnant – simply begin taking folic acid straightaway and eat foods rich in folates. It is advisable to take folic acid supplements daily for at least the first 12 weeks of pregnancy.

Health benefits of fruits and vegetables

Fruits and vegetables have various advantages to them besides their folate content. They also contain plenty of vitamins, minerals and fibre, but few calories. Therefore, "5 a day" is an good goal for expectant mothers to keep in mind: five portions of fruits and vegetables a day, whether fresh, dried or frozen and then prepared in a countless number of ways.

Foods rich in folates

Vitamin-enriched breakfast cereal (check the packaging), wheat germ and brown rice.

Broccoli, cauliflower, Chinese cabbage, Brussels sprouts, red pepper, asparagus, spinach and lettuce, avocado, potatoes, red cabbage, cabbage, tomatoes, green pepper, onion, leek, carrots.

Nuts, almonds, beans (for example soybeans, white beans and baked beans).

Bananas, oranges, red currants, strawberries, orange juice, prune juice.

Iron

- the need for iron increases during pregnancy

During pregnancy, the need for iron increases more than the need for most other nutrients. The reason for this is that the amount of blood in the body increases in order to make it possible to carry nourishment and oxygen to the baby. Iron is necessary for producing blood. In most cases, it's enough to meet this increased need for iron by eating foods rich in iron on a daily basis (see table). It's good to keep in mind that the body can make better use of the iron in food if foods rich in vitamin C (such as fruits, fruit juices and vegetables) are eaten at the same time as foods rich in iron. On the other hand, the body cannot make as good a use of iron if tea, coffee, cocoa or milk accompany a meal as these hinder iron absorption. In prenatal care (mæðravernd), iron levels in the blood of pregnant women are well monitored, and even though an expectant mother eats healthy foods, she may be advised to increase her iron intake.

Foods rich in iron

Meat, blood pudding, beans and lentils, dried fruits, dark green vegetables, iron-fortified breakfast cereals, whole grains, seeds and whole grain breads.

Calcium and Vitamin D

- for the bones

The need for calcium increases during pregnancy as babies' bones require a great deal of this building material from their mothers. The easiest way to meet this need is to drink two to three glasses of milk per day (or consume the equivalent amount of other dairy products), which provides a healthy daily amount of calcium. For women who don't eat dairy products, non-dairy beverages enriched with calcium (such as calcium-enriched soymilk) are an alternative. It's best to choose low-fat dairy products as milk is high in energy and contains more saturated (hard) fat. Cheese may take the place of milk, at least in part, as 25 grams of cheese contain the same amount of calcium as a glass of milk. Note that most multivitamins do not contain calcium as one would have to take three to four calcium tablets per day to get the recommended daily amount of calcium



– 1000 mg a day during pregnancy. Vitamin D is necessary for the body to be able to make use of the calcium. Few foods contain vitamin D with the exception of fish liver oils and fatty fish such as salmon and herring.

Women are strongly advised to take either a teaspoon of cod liver oil (5 ml), a fish liver oil capsule or a multivitamin containing vitamin D daily.

Is there any need to take multivitamins?

Women who eat a wide range of healthy foods do not, in general, need to take other vitamins than folic acid and Vitamin D and in some cases iron during the latter part of their pregnancy. Should you feel that your diet is not well-balanced enough and that you do not eat a wide enough range of foods, you should naturally supplement this, for example by taking one regular multivitamin tablet a day or vitamins specifically intended for pregnant women. **Do not take more than the recommended daily intake. Women who take fish liver oil need to remember to choose multivitamins that do not contain vitamin A.** The reason for this is that vitamin A can possibly harm the foetus when it is consumed in great quantities. Pollock liver oil (ufsalysi) should not be consumed during pregnancy as it contains a much higher amount of vitamin A than the recommended daily intake.

Liver (from both land and marine animals) and foods made from liver, such as liver sausage, liver pâté and liverwurst, are not desirable foods during pregnancy as they contain large amounts of vitamin A.

Coffee, tea, colas and energy drinks

- consumption of these is best kept to a minimum

Coffee, tea (both green and black), energy drinks and colas all contain caffeine, which is believed to increase the likelihood of miscarriage if consumed in large quantities.

It is best to drink no more than what is equivalent to 1-2 cups of coffee a day or 3-4 cups of tea. The amount of caffeine in colas and energy drinks is somewhat less, but it is still preferable to consume these in moderation as well.

Alcohol and tobacco

- addictive substances are best avoided altogether

Alcohol and tobacco directly harm the foetus, and new research has shown that it is best to avoid alcohol and tobacco altogether during pregnancy.

Herbal products and food supplements

- should be avoided during pregnancy

Use of herbal products and food supplements during pregnancy is not recommended as the effect on the foetus is often unclear. This includes substances such as fat burning pills, creatine, ginseng, ginkgo biloba and CLA. It is best to consult a doctor, dietician or midwife regarding the use of these substances.

Medication

- only when advised by a doctor

Do not take any medication without consulting a doctor, midwife or pharmacist, regardless of whether the medication is over-the-counter or prescription. Always make sure to inform anyone you consult that you are expecting a child.



Good kitchen hygiene

- even more important than before

It's always important to maintain high standards of cleanliness around food and when preparing food, but this becomes even more important during pregnancy, as harmful bacteria and parasites may affect the health of both an expectant mother and the baby she carries.

Important things to keep in mind:

- Wash your hands both frequently and well.
- Make sure meat and fish is cooked sufficiently (they should reach a temperature of over 75°C).
- Place all leftovers in the refrigerator at the end of the meal.
- Don't eat raw fish, meat or eggs or drink unpasteurised milk.
- If you are not sure whether a certain food is raw (smoked or marinated, for example), it's best not to eat it.

- Avoid old leftovers, for example leftover boiled or roasted meat.
- Keep cooked food away from raw food to prevent cross-contamination. Always wash cutting boards and other kitchen utensils when switching between one type of raw food to another (so that the same knife and cutting board are not, for example, used to cut both raw chicken and raw vegetables).
- Always rinse fruits and vegetables before eating them.
- Make sure that everyone involved in preparing food in the household is aware of the importance of following these guidelines.

Diet on trips abroad

- good hygiene is key

Before making a trip abroad, pregnant women and nursing mothers should acquaint themselves with the advice of health authorities in all countries they intend to visit regarding the consumption of fish. They should also avoid soft or mouldy cheeses when abroad. Unpasteurised milk is often used to make these cheeses, and they also provide good growing conditions for various types of bacteria. Also avoid pâté, liverwursts and other foods made of liver. As mentioned before, it is also important to not eat foods such as fish, meat and eggs raw.

Teeth

- good oral hygiene is important during pregnancy

It is common for pregnant women to develop gingivitis (an inflammation of the gums) due to changes in hormones during pregnancy.

Even if your gums bleed, it is important to brush your teeth frequently and on a regular basis with a soft toothbrush and fluoride toothpaste. You should also floss daily. Eating habits sometimes change during pregnancy. Nausea may lead to increased snacking, and some women also allow themselves more sweets. This increases the risk of cavities. It is therefore necessary to brush your teeth more frequently than usual. It is also helpful to rinse your teeth with fluoride rinse and/or chew sugar-free gum for ten minutes after eating a snack. Cavities are caused in part by an infectious disease. Transmission of this occurs first and foremost from mother to child after birth. Good oral hygiene is therefore important for the health of your child's teeth in the future.

Exercise

- regularly and at a suitable level of exertion

Regular exercise is an important part of healthy living, and it remains important throughout your pregnancy. A minimum of 30 minutes exercise a day is recommended. There is no reason to quit exercising when you're expecting a baby – in fact, it's even more important to get some kind of acceptable form of exercise than before. Women who did not exercise regularly before becoming pregnant can begin with easy workouts, walking/hiking or swimming. Women accustomed to engaging in a great deal of heavy physical training before becoming pregnant can continue to do so, but they should consult with a doctor or midwife regarding acceptable levels of physical activity and limits on training during pregnancy.

Swimming is a good form of exercise during pregnancy, and it is fine to relax in hot pots set at body temperature as long as this is done in moderation.



A good diet when breastfeeding

- is just as important as when pregnant

You should continue to eat the same good, nutritious food recommended here in this pamphlet for your pregnancy while you're breastfeeding your baby, though it is fine to eat raw fish (such as sushi, smoked and cured fish). Naturally, it remains important to continue to ensure good hygiene in the kitchen and elsewhere. Nursing mothers must also take care to drink enough liquids daily. Water is the best choice of beverage – it isn't good to drink too much coffee or cola. It is natural to be several kilograms heavier after giving birth than you were before pregnancy, and it is best to lose weight gradually. However, many women either remain the same weight or lose weight very slowly during the first few months. The period during which you are breastfeeding your baby is definitely not the right time to go on a strict diet or attempt to lose weight rapidly.

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Further information

If you would like to learn more about diet during pregnancy, more information is available on the following websites:

Umhverfisstofnun (english.ust.is/assignments/Food_Division/Recommendationforpregnantwomen/)

A simple Body Mass Index (BMI) calculator (in both imperial and metric) is available at www.eatwell.gov.uk/healthydiet/healthyweight/bmicalculator/

The following Icelandic websites also provide information on diet and pregnancy (in Icelandic):

Lýðheilsustöð (www.lydheilsustod.is)

Miðstöð mæðraverndar (www.hg.is)

Umhverfisstofnun (www.ust.is)

Enjoy your pregnancy

Eat good and nutritious food.

Exercise regularly, and choose the form of exercise you like best.

Remember that your baby will be safer if not exposed to alcohol, tobacco or other addictive substances.

Find ways of relaxing that suit you and that you can fit into your daily life, such as reading, music, meditation, aerobics, walking/hiking or baths.

Do something special for yourself or your child – something you find enjoyable.

Make use of prenatal care services (mæðravernd).