

Micronutrients during pregnancy

Small building blocks
with a big impact



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D

What are micronutrients?

They're the vitamins, minerals and trace elements your body needs in tiny amounts, but they're still essential for good health.

Even though they don't provide energy, they support many vital processes in the body, including:

- development of the brain and nervous system
- hormone production
- a healthy immune system
- digestion and metabolism

Ca

Zn

B12

Mg

Fe



A

Micronutrients during pregnancy – why are they so important?

During pregnancy, an adequate supply of micronutrients is particularly important because they are essential for both the healthy development of the foetus and the health of the mother.

Some micronutrients should also be taken as dietary supplements, as the requirements during pregnancy are higher and cannot be met by diet alone.

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Vitamin D as a special case

Unlike other micronutrients, vitamin D is mainly produced when the skin is exposed to sunlight. Intake through food is low.

People who rarely spend time outdoors or cover themselves completely are at increased risk of vitamin D deficiency because their skin is exposed to very little sunlight. If you are concerned that you are not getting enough vitamin D, ask your doctor for advice.



“Don't eat more, eat more nutrient-dense.”

A varied and balanced diet provides most of the nutrients you need. This means eating plenty of vegetables, beans, lentils and fruit. Choose wholemeal products and consume milk and dairy products every day. Enjoy fish once or twice a week and meat and sausage products in moderation, ideally no more than 300 g per week. When preparing your meals, make sure to use iodised salt to support your iodine intake – this applies to both the general population and pregnant women.

Energy requirements increase only slightly – women need around 10% more calories in the final trimester.

Find more information directly on [‘The German Nutrition Society’](#).

During pregnancy, certain nutrients become especially important, and many people don't get enough of them through food alone. Folic acid supplementation is recommended before conception and during the first trimester to help lower the risk of neural tube defects (e.g., spina bifida), and iodine should be taken throughout pregnancy. It also helps to include foods rich in folate and iodine whenever possible. Omega-3 fatty acids and iron are essential as well, but they're best obtained from food unless your intake is low or you avoid fish and seafood.



Folic acid (Folate)

Why? Essential for cell division and growth, especially in the early stages of pregnancy.

Supplementation (in addition to a folate-rich diet):

- 400 µg folic acid/day **for all**
- Start taking it at least 4 weeks before conception and continue until the end of the first trimester.
- If supplementation begins later: 800 µg folic acid / day

Food sources:

- Green vegetables, legumes, wholegrain products.

Caution: Supplementation is key as its levels in food are too low to reach recommended levels.



Iron

Why? Vital for oxygen transport in the blood and growth.

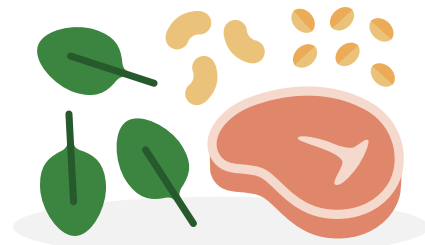
Supplementation:

- Supplement only if iron deficiency is diagnosed by a doctor.
- Excess iron can also pose health risks.

Food sources:

- Red meat
- Legumes, whole grains, dark green leafy vegetables

Tip: Eating vitamin C-rich foods like citrus fruits, berries, peppers or cauliflower or a small amount of meat at the same time helps your body absorb more iron from plant-foods. Avoid drinking green/ black tea or milk during meals, as they can reduce iron absorption.



Iodine

Why? Supports production of thyroid hormones and the child's brain development.

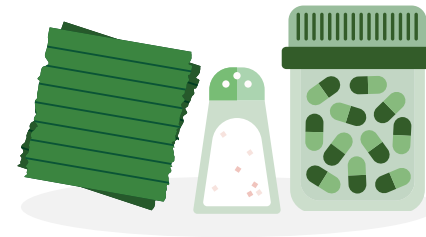
Supplementation (in addition to an iodine-rich diet):

- 100-150 µg iodine/day **for all**
- Discuss with a physician if you have a thyroid disorder.

Food sources:

- e.g. iodised table salt, products made with iodised salt, milk, dairy products, sea fish and other marine foods such as seaweed

Caution: Be careful with algae products, as some can contain very high amounts of iodine. Choose ones that clearly state their iodine content and make sure your intake fits with the recommended amount for pregnancy.



Omega 3 fatty acids (DHA)

Why? While Omega-3 fatty acids are not strictly a micronutrient, they are crucial for brain development and eyesight and many people don't eat enough.

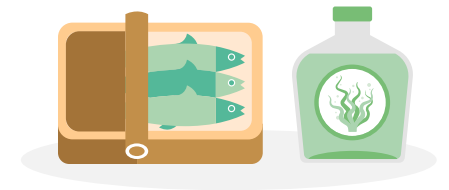
Supplementation:

- Consider a supplement (at least 200 mg DHA/ day) if you do not consume 1-2 servings of fatty fish per week

Food sources:



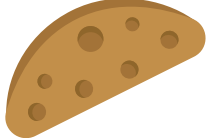
- Fatty fish (e.g. salmon, herring, mackerel)
- For vegetarians/vegans: vegetable oils enriched with algae-derived DHA

Caution: Predatory fish (e.g. monkfish, tuna, swordfish...) may have higher levels of contaminants, so they should be avoided.

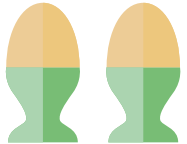




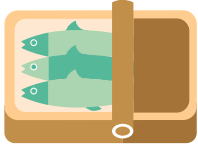

Food sources of key nutrients

- guideline values -

Folate	100 g spinach  145 µg	100 g broccoli  110 µg	1 slice of whole grain bread  25 µg
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Iron	legumes, 150 g lentils (cooked)  7 mg	30 g pumpkin seeds  3 mg	100 g beef (well done)  2.5 mg
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Iodine	110 g boiled eggs  57 µg	1 teaspoon (≈ 5 g) iodised salt  75 - 100 µg	250 ml milk  45 - 90 µg
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Omega 3 fatty acids (DHA)	150 g herring  2.5 g	algae oil (1 ml)  200 - 300 mg
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Caution: Try not to consume more than 300g of red and processed meat per week.

Vegetarian and vegan diets during pregnancy

A balanced vegetarian diet (ovo-lacto-vegetarian, i.e. including eggs and milk/dairy products) can meet most nutritional requirements during pregnancy. A vegan diet requires supplementation to avoid nutrient deficiencies.

Vegetarian diet (ovo-lacto-vegetarian)

Micronutrients to pay attention to:

- ✓ iron
- ✓ vitamin B12
- ✓ zinc
- ✓ iodine
- ✓ folic acid

Recommendations:

- Supplement folic acid and iodine (as outlined above).
- Choose foods deliberately to meet nutrient needs.

Caution: As there is an increased risk of inadequate nutrition, medical advice is recommended.

Vegan diet (only plant foods)

Micronutrients to pay attention to:

- ✓ iron
- ✓ vitamin B12
always supplemented
- ✓ zinc
- ✓ iodine
- ✓ folic acid
- ✓ calcium
- ✓ vitamin D
- ✓ riboflavin
- ✓ selenium
- ✓ vitamin A

Recommendations:

- Supplement folic acid and iodine (as outlined above).
- Additional targeted nutritional supplements after consulting a doctor.

Caution: As there is a risk of deficiency, critical nutrients should be checked regularly by a doctor. In addition, individual nutritional advice is recommended.



5 practical tips for everyday life

1



Got leftover vegetables? You can make vegetable soup using whatever you have on hand. Add a can of beans for extra nutrients.

- **Legumes** like beans, lentils and chickpeas are rich in iron, zinc, folic acid and magnesium.
- **Use frozen vegetables** when you need something quick and easy.

2



Need a quick heathy snack? Try a handful of mixed nuts. They're rich in B vitamins, vitamin E, and minerals such as potassium and magnesium.

Caution: avoid Brazil nuts. They can contain naturally-occurring radium, which may pose a health risk when eaten regularly.

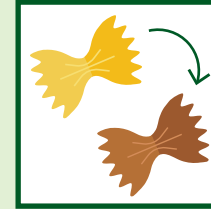
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Brighten up your breakfast with muesli made from oats, nuts, milk, and fresh fruit. It delivers a good mix of micronutrients like calcium, B vitamins, and vitamin C.

- **If you use plant-based milk alternatives,** choose fortified options with nutrients such as calcium, iodine, vitamin D, vitamin B12, and riboflavin. Organic plant-based drinks can't be fortified under current EU rules.

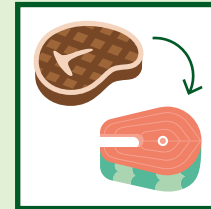
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Want more nutrients without much effort? Try swapping refined carbs like white bread, white pasta and white rice for whole grain versions. They naturally contain more vitamins and minerals.

- **Don't like whole grain rice?** Try par-boiled rice. Its special processing helps it keep more nutrients than regular white rice.

5



Swap one of your weekly meat days for a fish day using fatty fish like salmon, mackerel, trout, or herring.

- They provide valuable **omega-3 fatty acids and iodine.**

Curious to learn more about micronutrients?

Check out our website and discover more information about the project and latest materials!

 zerohiddenhunger.eu



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