

## Patient information from the BMJ Group

# Morning sickness

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## Morning sickness

It's normal to get morning sickness in the first few months of pregnancy. But if you feel sick or vomit all the time, there are treatments that can help.

We've brought together the best research about nausea and vomiting in early pregnancy and weighed up the evidence about how to treat it. You can use our information to talk to your doctor and decide which treatments are best for you.

## What are nausea and vomiting in early pregnancy?

It's normal to feel sick, and sometimes be sick, in the first 12 weeks of pregnancy. But if you are being sick all the time and can't hold food or fluids down, you may need treatment.

## Key points about nausea and vomiting in early pregnancy

- It's normal to feel sick or vomit during the first few months of pregnancy. About 8 in 10 pregnant women do.
- Nausea and vomiting won't usually harm you or your baby.
- You may feel nauseous at any time of the day, not just in the mornings.
- About 1 in 200 pregnant women have severe nausea and vomiting which can be dangerous to their health and their baby's health.
- Nausea and vomiting usually stop after about 12 weeks of pregnancy. But 1 in 10 pregnant women still feel sick after 20 weeks.

# Morning sickness

## What's normal



Feeling nauseous can make you feel miserable. But it's a normal part of early pregnancy.

Feeling nauseous and being sick is often the first sign that you're pregnant. In fact, you may not have realised you were pregnant until you started to feel sick.

Almost all pregnant women have some nausea, although not everyone is actually sick. These symptoms usually begin about six weeks after the start of your last period. <sup>[1]</sup> <sup>[2]</sup>

Even if you're sick two or three times a day, usually you can keep some food down and won't lose weight during the first few months of pregnancy.

A survey of 1,000 pregnant women in the first half of their pregnancy gives us some idea of how you may feel during your pregnancy. <sup>[1]</sup>

- About 6 in 10 pregnant women feel sick every day.
- About half of all pregnant women are sick, but only about 2 in 10 are sick every day.
- Although nausea and vomiting in pregnancy is often called 'morning sickness', only about 2 in 10 women say that their symptoms stop by noon.
- Many women feel sick or are sick at any time of the day, although they usually feel worse in the morning.
- The earlier in your pregnancy that symptoms start (for example, about the fourth week), the more often you are likely to have them.

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### Triggers for sickness in early pregnancy

Many women notice that certain things make them feel worse, or 'trigger' their symptoms. Some common triggers are: <sup>[3]</sup> <sup>[4]</sup>

- Smelling certain odours, especially coffee, perfumes, cigarette smoke, and petrol
- Cooking and eating certain foods, especially meat, fatty meals, or spicy meals
- Becoming very tired
- Feeling anxious or worried
- Changing position quickly (for example, standing up too fast).

We know very little about why some women feel sick in early pregnancy and others don't. But it's nothing to worry about.

### What's not normal

It's normal to feel sick or be sick when you're pregnant. But it's not normal to be so sick that you can't hold down any food or fluids for days on end.

Here's what we know about severe nausea and vomiting in pregnancy, which is called **hyperemesis gravidarum**.

- About 1 in 200 pregnant women have severe nausea and vomiting. <sup>[5]</sup>
- If you have hyperemesis gravidarum, your vomiting may be so bad that you lose weight, often about 4 kilograms (10 pounds). To learn more, see [What are the symptoms of normal and severe nausea and vomiting in early pregnancy?](#)
- When you're pregnant, it's normal to feel very tired and emotional, and to be worried about your baby. But you may feel even more emotional if you're also feeling very nauseous and vomiting all the time.
- You might be upset that you feel so sick, especially if you were looking forward to your pregnancy.
- Your symptoms may seem to clear up after your third month of pregnancy, but they might come back from time to time.
- You may need to go to hospital for treatment to stop you becoming **dehydrated** and to make sure you get enough of the right nutrients. To learn more, see [What happens in hospital?](#)

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- Unborn babies are usually not harmed by their mothers' severe nausea and vomiting. There's a small chance that you will lose weight or have a small baby, but if you have treatment, this probably won't happen.
- If you are very sick during one pregnancy, you have about a 50 percent chance of being sick during another pregnancy.<sup>[6]</sup>

### Why does it happen?

Researchers are not sure why most women feel sick or are sick when they're pregnant. But some think feeling sick may be designed to protect your baby from threats in the environment. Being pregnant may make you more sensitive to these dangers.<sup>[4]</sup>

For example, when you are near car or gas fumes, you may move away because the smell makes you feel sick. This may keep poisons out of your body and away from your unborn baby.

Nausea and vomiting may go away when you're about three months pregnant because your baby has passed through important stages of development. Poisons are generally less harmful to your baby later in your pregnancy.

### What causes it?

Here are some of the theories about morning sickness.

- Many doctors think that the sudden rise of a hormone called **human chorionic gonadotrophin (HCG)** during early pregnancy makes women feel sick.<sup>[4]</sup> There seems to be no link, however, between how much HCG you have in your blood and how bad your nausea and vomiting is. You may be more likely to feel sick and vomit if you're expecting twins, when levels of this hormone rise higher than if you're expecting one baby. But most women who have morning sickness that's worse than usual don't end up having twins.
- HCG looks a lot like another hormone (thyroid stimulating hormone, or TSH) that tells the body to make more thyroid hormone. So HCG can also send a message to the body to make more thyroid hormone. It is possible that high levels of thyroid hormone are what cause the nausea and vomiting.
- Not getting enough of certain vitamins and minerals, such as vitamin B6, may cause nausea and vomiting.

There are many more theories about what causes nausea and vomiting in early pregnancy, but none of them have been proved.

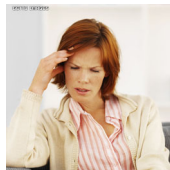
## Morning sickness

### Morning sickness: why me?

Doctors don't know why some women feel sick and vomit during pregnancy and others feel fine. They also don't know why one woman has only mild nausea while another vomits several times a day for many months.

But there are certain things that increase your chances of being sick when you're pregnant. Doctors call these **risk factors**.

If you have one of the following risk factors, bear in mind that this doesn't mean that you will be one of those women who feel sick and are sick while they are pregnant. It just means your chances are higher.



If you've had migraine headaches, you may be more likely to get severe nausea and vomiting when pregnant.

- If you're having twins, you're more likely to feel or be sick than if you're carrying one baby.<sup>[4]</sup> But remember, most women who have morning sickness that's worse than normal don't end up having twins.
- If you were sick during an earlier pregnancy, it's more likely that you'll be sick during other pregnancies.<sup>[7]</sup>
- If your mother had very bad nausea and vomiting when she was pregnant, some research shows that you will, too.<sup>[7] [1] [8]</sup>
- If you have felt sick while using contraceptive pills, you may have a greater chance of morning sickness during pregnancy.<sup>[8]</sup>
- If you get travel sickness or migraine headaches, there's some evidence that you are more likely to have severe nausea and vomiting when you're pregnant.<sup>[1] [9]</sup> Doctors believe these problems have something to do with your inner ear, which helps control your balance.<sup>[9]</sup> But we don't yet know whether treating inner ear problems will help prevent nausea and vomiting during pregnancy.
- A germ called *Helicobacter pylori* can cause stomach problems such as indigestion and ulcers. For some women, this might make nausea and vomiting worse. One study found that women who were very sick in pregnancy were more likely to be infected with *Helicobacter pylori* than women who weren't very sick.<sup>[10]</sup> Some treatments can get rid of the germ, but they aren't usually used when you're pregnant. You may be able to take some medicine to reduce your symptoms, such as antacids. But you should talk to your doctor before taking any medicine during pregnancy.

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- One study has found that eating foods that contain a lot of saturated fat, such as meat, cheese, and butter, may increase your chances of having bad nausea and vomiting during pregnancy.<sup>[1]</sup> But the study was small, so we need more research before we can say whether eating low-fat foods can help.
- Women who have a type of abnormal growth called a molar pregnancy often have severe nausea and vomiting. A molar pregnancy is when the placenta, the organ that normally carries food and oxygen to a growing baby, grows into a tumour. It's very rare. See [Molar pregnancy](#) to learn more.
- Some studies show you are more likely to feel very sick during pregnancy if you are expecting a girl. But others have found no connection.<sup>[11]</sup>

### What are the symptoms of normal and severe nausea and vomiting in early pregnancy?

Most women feel sick during the first three months of their pregnancy and many actually are sick.

More than half feel better by the end of the 12th week.<sup>[1]</sup> <sup>[2]</sup> But you may feel sick for longer. More than 1 in 10 women still have nausea and vomiting after their 20th week of pregnancy.<sup>[1]</sup>

You may have the following:

- **Nausea:** This is when you feel as if you're about to be sick. About 8 in 10 pregnant women experience nausea, and 6 in 10 have nausea every day early in their pregnancy.<sup>[1]</sup>
- **Vomiting:** This is when the contents of your stomach are forced up towards and out of your mouth. About 4 out of 10 women who have morning sickness vomit every day.<sup>[1]</sup>
- **Dry retching:** This is when you gag as if you're going to be sick, but nothing comes out.

These symptoms aren't pleasant, but for most women they are mild. More severe nausea and vomiting can make you feel miserable. One study found that the nausea felt by pregnant women is similar to one of the worst kinds of nausea, which is caused by the [chemotherapy](#) used to treat cancer.<sup>[12]</sup>

For more than one-third of pregnant women, nausea and vomiting are bad enough to make them miss work.<sup>[2]</sup> More than one-quarter of women can't do as much housework as usual.<sup>[2]</sup> You may also feel weak if you can't keep much food down. But feeling or being sick is unlikely to affect your health or the health of your baby.

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### When symptoms are severe

About 1 in 200 women have very severe nausea and vomiting during pregnancy.<sup>[5]</sup> Doctors call this **hyperemesis gravidarum**.

If you have very severe sickness, you vomit so much that your health and your baby's health may be in danger. You may:<sup>[13]</sup> <sup>[14]</sup>

- Have severe vomiting
- Become so **dehydrated** that your skin starts to sag, and you pass urine less often than usual
- Feel very sluggish
- Feel dizzy
- Get very tired because you don't sleep well.

You may also feel depressed and tearful, especially if you were looking forward to being pregnant.<sup>[15]</sup> <sup>[16]</sup>

If your doctor thinks that you are losing too much fluid, you will probably be admitted to hospital. To learn more, see [What happens in hospital?](#)

**Call your GP if you have been very sick for more than 24 hours and feel as if you can't hold down fluids.**

### How do doctors diagnose normal and severe nausea and vomiting in early pregnancy?

Feeling or being sick is a normal part of early pregnancy. But if you have severe nausea and vomiting, it's best to see your doctor.

Your doctor may want to make sure something else isn't making you feel sick. For example, you may have food poisoning, a stomach **ulcer**, or a **urinary tract infection** and you may need treatment.

If you have severe vomiting and can't keep anything down, your doctor will want to make sure you aren't in danger of **dehydration**. This is when your body loses too much fluid, and it can be serious. He or she may ask you the following:

- How often are you being sick?
- Have you managed to keep any food down in the last 24 hours?
- Can you drink without vomiting afterwards?

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- Are you passing urine less often than usual?
- Do you feel dizzy, weak, or anxious?
- Are you gaining weight?
- Could something else, such as food poisoning, be causing your vomiting?

### Tests for severe nausea and vomiting

Your doctor may also check for the following.

- Symptoms of dehydration: When you don't have enough fluids in your body, your skin may look loose, you may have a dry mouth, and you may feel dizzy or confused. You may not be passing urine as often as usual. If you're admitted to hospital, doctors may take some blood to check whether your body is getting enough fluid.
- Chemicals in your urine: The presence of chemicals called ketones is a sign of dehydration.
- An abnormal placenta: Your doctor may order an **ultrasound scan** to check your placenta, which is the organ that carries food and oxygen to your baby. A rare condition called hydatidiform mole, or molar pregnancy, can cause severe vomiting. It happens when the placenta grows abnormally. To learn more, see [Molar pregnancy](#).
- More than one baby: An ultrasound scan will also show whether you're carrying more than one baby, which may cause worse vomiting.

If you are dehydrated, you may be admitted to hospital to correct the balance of fluids and chemicals in your body. To find out more, see [What happens in hospital?](#)

### How common are nausea and vomiting in pregnancy?

Feeling or being sick is very common during early pregnancy.

Nausea and vomiting are the most common symptoms in early pregnancy.

- About 7 out of 10 women feel sick during pregnancy.<sup>[17]</sup>
- About 6 out of 10 vomit.<sup>[17]</sup>
- The severe form of nausea and vomiting known as **hyperemesis gravidarum** is far less common. It affects about 1 in 200 pregnant women.<sup>[5]</sup>



### What treatments work for nausea and vomiting in early pregnancy?

It's normal to feel sick or be sick in early pregnancy. Most women's symptoms are mild and last just a few months. But, occasionally, women get severe nausea and vomit a lot (this is called hyperemesis gravidarum).

### Key points about treating nausea and vomiting in early pregnancy

- If you have mild nausea and vomiting, ginger and acupressure are two non-drug treatments that are likely to help.
- Taking vitamin B6 supplements may also improve your symptoms, although this seems to work better for nausea than for vomiting.
- We don't know whether an antihistamine drug called promethazine (brand name Phenergan) or a drug called prochlorperazine may reduce your vomiting.
- If you have severe vomiting (hyperemesis gravidarum), your doctor may try other drugs. These include ondansetron (brand name Zofran) and metoclopramide (brand name Maxolan).
- You may be worried about using medicine when you're pregnant, but sometimes it is necessary. To learn more, see [Is it safe to take drugs in pregnancy?](#)

### Which treatments work best for nausea and vomiting in early pregnancy?

We've divided this section into two parts:

- [Treatments for normal nausea and vomiting in early pregnancy](#)
- [Treatments for severe nausea and vomiting in early pregnancy \(hyperemesis gravidarum\)](#)

### Treatment Group 1

#### Treatments for normal nausea and vomiting in early pregnancy

There are both natural remedies and medicines that may help you feel better if you have normal nausea and vomiting.

#### Key points about treating normal nausea and vomiting in early pregnancy

- Ginger is a natural remedy that helps many women with nausea and vomiting feel better.

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- Vitamin B6 supplements may make you feel less sick, but they may not stop you vomiting.
- Wearing an acupressure wristband on your forearm may help to reduce nausea and vomiting. But we don't know yet whether acupuncture helps.
- We don't know whether the antihistamine drug called promethazine (brand name Phenergan) may reduce your vomiting.
- We don't know yet whether a medicine called prochlorperazine works and is safe to take during pregnancy.

You may be worried about using medicine when you're pregnant. Guidelines for doctors on all the drugs mentioned here say they should be either used with caution or used only when the benefits to the mother outweigh the risks to the unborn baby.<sup>[26]</sup> To learn more, see [Is it safe to take drugs in pregnancy?](#)

Which treatments work best? We've looked at the best research and given a rating for each treatment according to how well it works.

For more help in deciding what treatment is best for you, see [How to use research to support your treatment decisions](#).

### Treatments for normal nausea and vomiting in early pregnancy

#### Treatments that are likely to work

- [Ginger](#) : This root is used to flavour foods, but it's also a natural remedy for nausea and vomiting. [More...](#)
- [Acupressure](#) : To relieve nausea and vomiting, pressure is applied to a point on your forearm, either using fingers or a wristband. [More...](#)
- [Vitamin B6](#) : This vitamin is found in many foods, including chicken, fish, pork, whole grains, nuts, and vegetables. To help with nausea, you might try taking a B6 supplement. [More...](#)

#### Treatments that need further study

- [Acupuncture](#) : A practitioner inserts thin needles into your skin at specific points on your body. [More...](#)
- [Prochlorperazine](#) : This is a type of drug called a phenothiazine. They are used to treat many problems. Your doctor may offer you prochlorperazine (brand name Stemetil), if other treatments haven't worked. [More...](#)

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- [Promethazine](#) : This drug is an antihistamine, a kind of medicine normally used to treat allergies. Doctors sometimes use an antihistamine called promethazine (brand name Phenergan) to treat nausea and vomiting in pregnancy. [More...](#)

## Treatment Group 2

### Treatments for severe nausea and vomiting in early pregnancy (hyperemesis gravidarum)

Some women get severe nausea and vomit a lot during pregnancy. They can't keep down any food or fluids. Doctors call this [hyperemesis gravidarum](#) . If you have this condition, you'll probably be treated in hospital. You may be given some medicine to prevent vomiting. To learn more, see [What happens in hospital?](#)

### Key points about treating severe nausea and vomiting in early pregnancy

- Acupressure is a non-drug treatment that may help women with severe nausea and vomiting.
- Ginger is a natural remedy that helps many women with mild nausea and vomiting. But we don't know if it can help women with more severe symptoms.
- Acupuncture is another non-drug treatment sometimes used to help with severe vomiting.
- Some women are given ondansetron (brand name Zofran), which is an anti-nausea drug also given to people having [chemotherapy](#) for cancer.
- Other drugs are also sometimes used, such as corticosteroids and a medicine called metoclopramide.

You may be worried about using medicine when you're pregnant. Guidelines for doctors on all the drugs mentioned here say they should be either used with caution or used only when the benefits to the mother outweigh the risks to the unborn baby.<sup>[26]</sup> To learn more, see [Is it safe to take drugs in pregnancy?](#)

Which treatments work best for severe nausea and vomiting? We've looked at the best research and given a rating for each treatment according to how well it works.

For more help in deciding what treatment is best for you, see [How to use research to support your treatment decisions](#).

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### Treatments for severe nausea and vomiting in early pregnancy

#### Treatments that need further study

- [Acupressure](#) : To relieve nausea and vomiting, pressure is applied to a point on your forearm either using fingers or a wristband. [More...](#)
- [Acupuncture](#) : A practitioner inserts thin needles into your skin at specific points on your body. [More...](#)
- [Corticosteroids](#) : These drugs are like the hormones your body makes naturally in your adrenal glands. The name of the corticosteroid used in the UK is prednisolone. [More...](#)
- [Ginger](#) : This root is used to flavour foods, but it's also a natural remedy for nausea and vomiting. [More...](#)
- [Ondansetron](#) : This is an anti-nausea drug that's often used to prevent severe nausea and vomiting in people who are having chemotherapy for cancer. The brand name for ondansetron is Zofran. Occasionally, doctors prescribe it to women in hospital for severe nausea and vomiting in pregnancy. [More...](#)

#### Treatments that are unlikely to work

- [Metoclopramide](#) : This is another anti-nausea drug that is sometimes used for severe nausea and vomiting in pregnancy. The brand name is Maxolon. [More...](#)

### What will happen to me?

It's normal to feel sick or be sick in early pregnancy.

Many women view these symptoms as signs that their pregnancy is probably healthy. Research shows they're right to think this. A review of more than 15,000 pregnant women found that those who had nausea and vomiting were less likely to have a miscarriage .  
[18]

Nausea and vomiting in pregnancy can make life miserable for a while, and it can also make life difficult.<sup>[19]</sup> More than one-third of pregnant women who feel nauseous have time off work.<sup>[2]</sup> And more than one-quarter of women spend less time doing work around the home.<sup>[2]</sup>

The good news is the feelings of nausea usually disappear after the first three months of pregnancy.<sup>[1]</sup> But sometimes they go on for longer. About 1 in 10 women still feel sick after 20 weeks.<sup>[1]</sup>

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### Severe nausea and vomiting

Most women have mild nausea and vomiting. But if you have more severe sickness, you may feel:

- Helpless and isolated, because constant nausea and frequent vomiting limit what you can do <sup>[16]</sup>
- Worried about your health and your baby's health. But remember that nausea and vomiting are unlikely to harm your health or your unborn baby. <sup>[20]</sup>

### More serious problems

If you have the very severe nausea and vomiting called **hyperemesis gravidarum**, you will probably spend some time in hospital. You may be admitted a few times.

If hyperemesis gravidarum is not treated, severe vomiting can lead to the following serious problems. <sup>[13]</sup> <sup>[14]</sup>

- **Kidney** or **liver** damage
- Damage to your eyes
- A brain disease that doctors call Wernicke's encephalopathy, which is brought on by lack of vitamin B1. This can cause confusion, memory loss, eye problems, and difficulty coordinating your movements. It can be treated with injections or supplements of vitamin B1. <sup>[21]</sup>
- Collapsed lung <sup>[22]</sup>
- Premature birth <sup>[23]</sup>
- Low birth weight for your baby <sup>[23]</sup>
- A higher risk of **malformations** in your baby. <sup>[23]</sup> Some studies show there is a higher risk, but others suggest there is no increase in risk. <sup>[22]</sup>
- The death of your unborn child

These problems are very rare because most women who get hyperemesis gravidarum have treatment for it. A study of nearly 200 women with hyperemesis gravidarum found that they were no more likely to have an early labour or a small baby than those who did not have the condition. And they and their babies were no more likely to have health problems. <sup>[20]</sup>

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Whether your nausea and vomiting is mild or serious, it won't go on forever. The sickness will stop, often quite suddenly.

### Questions to ask your doctor

If you feel very sick during your pregnancy, you may want to talk to your doctor, midwife, or obstetrician to find out more.

Here are some questions that you might ask.

- Is my baby at risk?
- Is my health at risk?
- How can I change my diet so I feel less sick?
- What natural treatments can reduce my nausea and vomiting?
- Is there any medicine that will stop me vomiting?
- Will the medicine harm my baby?
- Do I need treatment in hospital?
- When should I contact you if I keep being sick?
- How do I know if I'm becoming dehydrated ?
- When should I start to feel better?

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## Treatments:

### Ginger for normal nausea and vomiting in early pregnancy

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[How good is the research on ginger for normal nausea and vomiting?](#)

This information is for women who have normal nausea and vomiting in early pregnancy. It tells you about ginger, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

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### Does it work?

Yes, probably. Many women who take ginger during the first few months of pregnancy feel less nauseous and do not vomit as much.

But we don't know whether ginger reduces the severe vomiting of [hyperemesis gravidarum](#). To read more see [Ginger for severe nausea and vomiting in early pregnancy](#)

### What is it?

Ginger is a spicy root used to flavour food such as gingerbread, biscuits, and stir-fried vegetables. It's also found in drinks such as ginger tea, ginger ale, and ginger beer.

Ginger is used in herbal medicine to relieve all kinds of digestion problems. It's also one of the most widely used treatments for nausea and vomiting in pregnancy.<sup>[28]</sup> Many pregnant women prefer to use a natural remedy such as ginger instead of drugs.<sup>[28]</sup>

In some studies, women have taken 250 milligrams (mg for short) of ginger four times a day to prevent nausea and vomiting during pregnancy. In some studies, the ginger came in a capsule.<sup>[29]</sup> <sup>[30]</sup> In another, it came in syrup. In that study, women took four daily doses of 15 millilitres (mL for short) of the ginger syrup. That's about four tablespoons a day.<sup>[31]</sup>

You can also get your ginger by drinking ginger tea or eating fresh ginger root. But ginger beer and ginger biscuits probably don't contain enough of the spice to prevent nausea and vomiting in pregnancy.<sup>[31]</sup>

### How can it help?

If you take ginger in either capsules or syrup, there's a good chance that you'll feel less nauseous and vomit less often.<sup>[29]</sup> <sup>[31]</sup> <sup>[32]</sup> <sup>[33]</sup> <sup>[34]</sup> <sup>[35]</sup> Here's what some of the research on ginger has found.

- Women who took ginger for about a week, either as a syrup or as capsules, were two to three times less likely than women who took dummy (placebo) treatments to feel sick or to vomit.
- Between 7 in 10 and 9 in 10 women who took ginger said their nausea and vomiting was much better.

Ginger seems to work just as well as another treatment called [vitamin B6](#).<sup>[32]</sup>

### How does it work?

We don't really know why ginger helps relieve nausea and vomiting when you're pregnant. Researchers still haven't found the active ingredient in ginger that works against sickness.

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<sup>[29]</sup> Ginger also reduces other kinds of nausea and vomiting, such as the sickness people may have when taking drugs to treat cancer ( [chemotherapy](#) ) or when travelling. <sup>[31]</sup>

### Can it be harmful?

Some women get heartburn and acid in your throat (reflux) from taking ginger capsules. In one study, 4 out of 60 women are thought to have stopped taking ginger for these reasons. <sup>[30]</sup> But these symptoms are common in pregnancy anyway. They may be due to the baby pressing on your stomach and not due to the ginger.

There's no evidence that taking ginger can harm your baby. <sup>[30]</sup> However, there isn't much research on the safety of ginger for pregnant women, so we need more research to know for certain. <sup>[28]</sup> But studies do suggest that taking up to 1 gram of ginger a day in syrup or capsules should be safe. <sup>[31]</sup>

### How good is the research on ginger for normal nausea and vomiting?

There's good evidence that ginger helps reduce normal nausea and vomiting in pregnancy. We found two good summaries of the evidence about how well ginger works, and how safe it is, <sup>[36]</sup> <sup>[33]</sup> as well as several other good-quality individual studies. <sup>[29]</sup> <sup>[31]</sup> <sup>[34]</sup> <sup>[35]</sup>

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## Acupressure for normal nausea and vomiting in early pregnancy

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[How good is the research on acupressure for normal nausea and vomiting?](#)

This information is for women who have normal nausea and vomiting in early pregnancy. It tells you about acupressure, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Does it work?

Yes, probably. Wearing an acupressure wristband over a certain place on your forearm may help to reduce nausea and vomiting.

### What is it?

Acupressure is based on similar ideas to [acupuncture](#) . However, it involves putting pressure on the body rather than putting needles into the skin. Acupressure to treat nausea and vomiting applies pressure to a point on the forearm that acupuncturists call the **P6 point**. The P6 point is about the width of three fingers up from the crease of your wrist. You can use your thumbs, fingertips, or a wristband to apply pressure.



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You can buy a wristband that has a plastic disc that fits over the P6 point. This gives continuous acupressure while you're wearing the band. These wristbands, such as Sea-Band, are usually used to prevent travel sickness.

### How can it help?

Wearing an acupressure wristband on your forearm seems to reduce normal morning sickness for some women. <sup>[33]</sup> <sup>[37]</sup>

- You may have fewer hours of feeling sick or fewer bouts of nausea.
- Your nausea may be less severe.
- But there still isn't enough good research on acupressure to say for sure how well it works.

### How does it work?

Acupuncturists believe that the P6 point can be used to prevent all kinds of nausea and vomiting.

Researchers think that putting pressure on certain points on the body causes the brain to release pain-killing substances into the body. But we don't know how this might help reduce nausea and vomiting in pregnancy.

### Can it be harmful?

We found no reports of serious side effects from acupressure. <sup>[33]</sup> But two-thirds of the women in one study had problems with the wristband, including pain, numbness, soreness, and swelling in their hands. <sup>[33]</sup> Two women out of 50 also said they felt more sick while wearing a P6 acupressure wristband.

### How good is the research on acupressure for normal nausea and vomiting?

The main piece of research we found on acupressure was a summary of the research (called a [systematic review](#) ) that included four studies. <sup>[33]</sup>

However, there were problems with some of these studies that makes them hard to rely on. More good-quality research on this treatment is needed before we can really say how well it works.

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## Vitamin B6 for normal nausea and vomiting in early pregnancy

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[How good is the research on vitamin B6 for normal nausea and vomiting?](#)

This information is for women who have normal nausea and vomiting in early pregnancy. It tells you about vitamin B6, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

## Does it work?

Probably. If you take vitamin B6 supplements, you are likely to feel less sick.

## What is it?

As with other vitamins, you need vitamin B6 (also called pyridoxine) for good health. Vitamin B6 is found in many foods, including beans, meat, poultry, fish, and some fruits and vegetables.

Your body needs vitamin B6 to help make your **red blood cells** and keep the level of sugars in your blood normal. Vitamin B6 also helps you fight infections. And it helps your nerve cells communicate with one another.

Vitamin B6 is usually part of the multivitamin supplements that are on sale to pregnant women. There are many different brands of these vitamins, and the amount of B6 in them varies a lot from product to product. However, multivitamins normally contain much less vitamin B6 than the amount used to treat nausea and vomiting in pregnancy.

Doctors don't really know how much vitamin B6 you need to take to stop feeling queasy. <sup>[38]</sup> In one study, doctors found that a dose of 10 milligrams (mg for short) taken three times a day can reduce nausea. <sup>[33]</sup> This dose is about five times higher than the recommended daily dose for pregnant women.

## How can it help?

Vitamin B6 may help you feel less nauseous, but there isn't much evidence about whether it helps reduce vomiting compared with no treatment. <sup>[33]</sup>

But studies have found that vitamin B6 seemed to work just as well as [ginger](#) to reduce sickness and vomiting in pregnancy. <sup>[33]</sup>

## How does it work?

We don't really know. We need more research before we can say how vitamin B6 works to help with nausea during pregnancy. <sup>[39]</sup>

## Can it be harmful?

There's no evidence that taking vitamin B6 in early pregnancy harms your baby. A study of more than 1,000 pregnant women found that there was no increase in the risk of babies being born with things wrong with them if their mothers took the vitamin. <sup>[24]</sup>

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You should check with your doctor before taking any extra vitamins.

### How good is the research on vitamin B6 for normal nausea and vomiting?

There's some evidence that vitamin B6 helps reduce nausea in early pregnancy. We found three summaries of the research (called [systematic reviews](#)). <sup>[24]</sup> <sup>[40]</sup> <sup>[33]</sup>

Two summaries looked at the same two studies (called [randomised controlled trials](#)). But one included a third study. <sup>[24]</sup> But these studies weren't well designed, which may make them less reliable. We need more good-quality research.

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## Promethazine for normal nausea and vomiting in early pregnancy

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[How can it help?](#)

[How do they work?](#)

[Can it be harmful?](#)

[How good is the research on promethazine for normal nausea and vomiting?](#)

This information is for women who have normal nausea and vomiting in early pregnancy. It tells you about promethazine, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Does it work?

We don't know. We didn't find any reliable studies on whether promethazine can reduce nausea and vomiting in early pregnancy. But we do know that this treatment may make you feel drowsy.

### What is it?

Promethazine is a type of drug called an antihistamine. These drugs are often used to treat [allergies](#) such as [hay fever](#). Some antihistamines are also used to prevent travel sickness, nausea, vomiting, and dizziness.

The antihistamine used to treat nausea and vomiting in pregnancy in the UK is promethazine (the brand name is Phenergan).

### How can it help?

We don't know that it can. We didn't find any reliable studies on whether this drug can help with nausea and vomiting in early pregnancy.

One study found that promethazine worked about as well as another drug called prochlorperazine. But we found no good research comparing either drug with a dummy (placebo) treatment. So we can't say whether they work overall.

### How do they work?

Antihistamines are often used to treat hay fever and other types of allergies. They work by stopping the production of a chemical called histamine in your body.

Histamine causes the sneezing, runny nose, and watery eyes that come with hay fever, and the itching and swelling that come with allergic skin rashes and insect bites.

Some antihistamines are also used to prevent nausea, vomiting, dizziness, and travel sickness.<sup>[41]</sup> But doctors don't know exactly if or how they help reduce nausea and vomiting during pregnancy.

### Can it be harmful?

There's not much evidence about whether promethazine is safe to use for pregnant women. But guidelines for doctors say antihistamines should be used with caution in pregnancy.<sup>[26]</sup>

Promethazine can cause side effects in the mother, such as drowsiness, which may affect people's ability to drive.<sup>[42]</sup> The following antihistamines should be avoided:

- cetirizine
- desloratadine
- hydroxyzine
- ketotifen
- loratadine
- mizolastine.

There are many different brand names for these drugs. Ask your pharmacist if you're not sure.

### How good is the research on promethazine for normal nausea and vomiting?

We found no good research about promethazine for nausea and vomiting in early pregnancy.

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## Acupuncture for normal nausea and vomiting in early pregnancy

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[How good is the research on acupuncture for normal nausea and vomiting?](#)

This information is for women who have normal nausea and vomiting in early pregnancy. It tells you about acupuncture, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

## Does it work?

We're not sure. There's some evidence that acupuncture may reduce nausea and dry retching in early pregnancy for some women. But the evidence is not strong enough to recommend it for most women.

## What is it?

Acupuncture is a traditional Chinese treatment. It's a type of complementary or alternative medicine. If you have acupuncture, a trained acupuncturist puts sterile needles into your skin.

Traditional acupuncturists believe that acupuncture improves the flow of energy around the body. Some modern doctors think that putting needles in the skin could encourage the release of natural chemicals that block pain and help you feel relaxed. <sup>[43]</sup> Another theory is that acupuncture might work a bit like talking therapy. Discussing your situation with an acupuncturist and relaxing while the needles are put in might reduce anxiety, or help you cope better with a medical condition.

Acupuncturists say there is a point on the body associated with preventing nausea and vomiting. They call it P6 and say it is on the inside of your forearm, about the width of three fingers up from the crease of your wrist.

## How can it help?

It's not clear whether acupuncture can help with nausea and vomiting in early pregnancy. Studies suggest that a few women might feel better a few weeks after starting acupuncture. But most women found it didn't help. <sup>[33]</sup>

In studies that compared acupuncture with 'sham' acupuncture (a 'placebo' treatment where the needles are not inserted or they're inserted into non-acupuncture points) both treatments worked as well as each other. <sup>[33]</sup> So we don't know if the actual acupuncture makes the women feel better, or if they feel better because they've seen a therapist and been treated in some way.

## How does it work?

It's not clear how acupuncture might work. One theory is that it stimulates the release of natural chemicals in the body that block pain. These chemicals are called endorphins

## Morning sickness

and enkephalins. But we don't know how these substances might help with nausea and vomiting in pregnancy.

### Can it be harmful?

There's no evidence that acupuncture has any bad effects on mothers or unborn babies. A study of almost 600 women found that acupuncture did not make it more likely that a woman would have problems while pregnant, or that her baby would have abnormalities.

<sup>[44]</sup> But we need more research to know the effects of acupuncture for sure.

We did find some information on whether acupuncture can harm you. But this information is based on research that hasn't been reviewed to the same scientific standards that we use to judge other research (to learn more, see Our method). We include this information because we think it may be helpful if you're deciding whether to try acupuncture.

- In one study, doctors and **physiotherapists** who used acupuncture to treat a variety of medical problems were asked if the treatment had ever caused a patient any harm. Of 10,000 acupuncture treatments given, the healthcare providers reported that acupuncture caused bleeding in about 1 in every 30 treatments, and pain in about 1 in every 90 treatments. <sup>[45]</sup>
- Another study looked at 34,407 acupuncture treatments given by professional acupuncturists. None of the treatments caused any serious harm. Side effects included mild bruising in about 1 in 60 treatments, pain in about 1 in 80 treatments, and bleeding in about 1 in 250 treatments. <sup>[46]</sup>
- There have been some reports of serious harm from acupuncture, such as injury to the nerves or lungs and **infections** contracted from dirty needles. These serious problems are very rare. <sup>[47]</sup>

### How good is the research on acupuncture for normal nausea and vomiting?

There isn't very much evidence on whether acupuncture helps relieve normal nausea and vomiting in early pregnancy. We found only two studies of any quality. <sup>[48]</sup> <sup>[49]</sup> Both were summarised in a summary of the evidence (called a **systematic review**). <sup>[33]</sup> In total the studies included about 650 women.

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## Prochlorperazine for normal nausea and vomiting in early pregnancy

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[How good is the research on prochlorperazine for normal nausea and vomiting?](#)

This information is for women who have normal nausea and vomiting in early pregnancy. It tells you about prochlorperazine, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Does it work?

We're not sure. The research we have is old and we need more evidence before we can say for certain. We also need more research to say whether it is safe to take prochlorperazine when you are pregnant.

### What is it?

Prochlorperazine is one of a group of drugs called phenothiazines. They are used to treat many conditions, including serious mental health problems like schizophrenia. They are also used to treat colds and allergies, to calm patients before surgery, and to stop nausea and vomiting.

Your doctor may suggest prochlorperazine (brand name Stemetil) if other treatments haven't worked for you.

Guidelines say it should be used with caution.<sup>[26]</sup>

### How can it help?

If you have taken other medicines for severe nausea and vomiting and they haven't worked, your doctor may suggest prochlorperazine. But we found very little good evidence about how well it works.<sup>[33]</sup>

One study found that prochlorperazine seemed to work as well as an antihistamine drug called promethazine. About 4 in 10 women who took either drug felt better three days after starting the drug.<sup>[50]</sup> But we found no good studies comparing either drug with a dummy (placebo) treatment. So we can't really say whether they work overall.

### How does it work?

We don't know how these drugs help reduce nausea and vomiting.

### Can it be harmful?

We don't know. There isn't much research on whether prochlorperazine is safe to take in pregnancy. In the study we found, one of the 50 women who took the drug had a baby with a birth defect. But with so little research we don't know whether this was anything to do with the drug.<sup>[33]</sup>

Prochlorperazine can also cause side effects in the mother, such as drowsiness, which may affect people's ability to drive. Very occasionally it cause stiffness or abnormal movements or shaking.<sup>[42]</sup>

### How good is the research on prochlorperazine for normal nausea and vomiting?

We didn't find much good research on whether prochlorperazine helps reduce nausea and vomiting in early pregnancy.

We found one summary of the research (called a [systematic review](#)).<sup>[33]</sup> It only included one study, which compared prochlorperazine with an antihistamine called phenothiazine.<sup>[51]</sup>

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### Acupressure for severe nausea and vomiting in early pregnancy

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[How good is the research on acupressure for severe nausea and vomiting?](#)

This information is for women who have severe nausea and vomiting in early pregnancy. It tells you about acupressure, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

#### Does it work?

We don't know. There's some evidence that applying pressure to a point on your wrist can help reduce severe nausea and vomiting. But we need more evidence to be sure.

#### What is it?

Acupressure is based on similar ideas to [acupuncture](#). However, it involves putting pressure on the body rather than putting needles into the skin. Acupressure to treat nausea and vomiting is usually aimed at a place on the wrist that acupuncturists call the **P6 point**. The P6 point is on your forearm, about the width of three fingers up from the crease of your wrist. You can use your thumbs, fingertips, or a wristband to apply pressure.

You can buy a wristband that has a plastic disc that fits over the P6 point. This gives continuous acupressure while you're wearing the band. These wristbands, such as Sea-Band, are usually used to prevent travel sickness.

#### How can it help?

In one study of women admitted to hospital with severe nausea and vomiting, women felt less sick and vomited less if they had acupressure at the P6 point, compared with women who had 'sham' acupressure at another point on their wrist.<sup>[52]</sup> But the study had some problems with its methods, so we can't read too much into it.



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The women in the study did acupressure by pressing with their thumbs on the P6 point three times a day for 10 minutes.

### How does it work?

Acupuncturists believe that the P6 point can be used to prevent all kinds of nausea and vomiting.

Researchers think that putting pressure on certain points on the body causes the brain to release pain-killing substances into the body. But we don't know how this might help reduce nausea and vomiting in pregnancy.

### Can it be harmful?

There's no evidence that acupressure can be harmful.

### How good is the research on acupressure for severe nausea and vomiting?

We found only one suitable study (a randomised controlled trial ) that looked at acupressure for women who had severe nausea and vomiting.<sup>[52]</sup> The study included 66 women. It suggested acupressure works, but it wasn't a good-quality study. We need bigger and better studies to know this for certain.

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## Acupuncture for severe nausea and vomiting in early pregnancy

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[How good is the research on acupuncture for severe nausea and vomiting?](#)

This information is for women who have severe nausea and vomiting in early pregnancy. It tells you about acupuncture, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Does it work?

We're not sure. There's some evidence that if you have severe nausea and vomiting (called hyperemesis gravidarum ), acupuncture may reduce your symptoms. But we need more research before we can say for certain.

### What is it?

Acupuncture is a traditional Chinese treatment. It's a type of complementary or alternative medicine. If you have acupuncture, a trained acupuncturist puts sterile needles into your skin.

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Traditional acupuncturists believe that acupuncture improves the flow of energy around the body. Some modern doctors think that putting needles in the skin could encourage the release of natural chemicals that block pain and help you feel relaxed.<sup>[43]</sup> Another theory is that acupuncture might work a bit like talking therapy. Discussing your situation with an acupuncturist and relaxing while the needles are put in might reduce anxiety, or help you cope better with a medical condition.

Acupuncturists say needles put into the forearm at a point they call P6 prevent nausea and vomiting. This P6 point is on the inside of your forearm, about the width of three fingers up from the crease of your wrist.

### How can it help?

If you have severe nausea and vomiting, acupuncture may reduce or stop your vomiting.<sup>[53]</sup>

In one study:

- About 10 out of 17 women with severe vomiting stopped vomiting after being treated with acupuncture three times a day for two days
- Only 4 out of 16 women stopped vomiting if they were treated with 'sham' acupuncture, where needles were inserted into non-acupuncture points.

### How does it work?

It's not clear how acupuncture might work. One theory is that it stimulates the release of natural chemicals in the body that block pain. These chemicals are called endorphins and enkephalins. But we don't know how these substances might help with nausea and vomiting in pregnancy.

### Can it be harmful?

Probably not. In a study of almost 600 women, researchers found that women who used acupuncture were no more likely to have pregnancy problems or newborns with abnormalities than women who didn't use acupuncture.<sup>[54]</sup> But we need more research to know for sure.

We did find some information on whether acupuncture can harm you. But this information is based on research that hasn't been reviewed to the same scientific standards that we use to judge other research (to learn more, see Our method). We include this information because we think it may be helpful if you're trying to decide whether or not to try acupuncture.

- In one study, doctors and physiotherapists who used acupuncture to treat a variety of medical problems were asked if the treatment had ever caused a patient any harm. Out of 10,000 acupuncture treatments given, the health care providers reported not a single episode of serious harm. There were minor side effects, but these were

## Morning sickness

fairly rare. For example, acupuncture caused bleeding in about 1 in every 30 treatments, and pain in about 1 in every 90 treatments. <sup>[45]</sup>

- Another study looked at 34,407 acupuncture treatments given by professional acupuncturists. None of the treatments caused any serious harm. Again, minor side effects did occur, including mild bruising in about 1 in 60 treatments, pain in about 1 in 80 treatments, and bleeding in about 1 in 250 treatments. <sup>[46]</sup>
- There have been some reports of serious harm from acupuncture, such as injury to the nerves or lungs, and infections from dirty needles. These serious problems are very rare. <sup>[55]</sup>

### How good is the research on acupuncture for severe nausea and vomiting?

We found just one study that looked at acupuncture in women with very severe nausea and vomiting during pregnancy (called hyperemesis gravidarum). <sup>[53]</sup> The study looked at 33 women who were being treated in hospital for very severe nausea and vomiting.

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## Corticosteroids for severe nausea and vomiting in early pregnancy

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[How good is the research on corticosteroids for severe nausea and vomiting?](#)

This information is for women who have severe nausea and vomiting in early pregnancy. It tells you about corticosteroids, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Do they work?

We're not sure. There's not enough good-quality research to tell us whether taking a corticosteroid drug can stop severe vomiting in pregnancy (called hyperemesis gravidarum). We also can't say for certain that taking corticosteroids is safe for your baby.

### What are they?

Doctors call these drugs corticosteroids. They are not like the steroids used by some bodybuilders. Instead, they are like some of the hormones your body makes naturally in your adrenal glands which help to lower stress.

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Corticosteroids aren't a standard treatment for severe vomiting in pregnancy. They tend to be used as a last resort.

Here are the corticosteroids sometimes used to treat hyperemesis gravidarum. Most of the research has looked at corticosteroid tablets, but corticosteroids can also be given as injections.

- methylprednisolone (brand name Medrone)
- prednisolone
- dexamethasone

### How can they help?

We don't know whether they can help. Some research has found that if you have been in hospital for severe vomiting during pregnancy, corticosteroids can reduce your chances of having to go back for more treatment.<sup>[56]</sup> But corticosteroids don't reduce vomiting.

### How do they work?

Corticosteroids work well in treating other kinds of nausea and vomiting, such as nausea after chemotherapy for cancer.<sup>[24]</sup> But we're not sure exactly how they work.

### Can they be harmful?

Studies involving more than 100,000 women found **no increase** in the number of major malformations in babies whose mothers took corticosteroids during the first 12 weeks of pregnancy.<sup>[24]</sup>

Some recent studies showed a small increase in the chances of babies developing cleft palates if their mothers took corticosteroids during the first 12 weeks of pregnancy.<sup>[56]</sup> But researchers don't know for certain as there isn't enough evidence.

There are also side effects if you take corticosteroids for a long time when you are pregnant.<sup>[57]</sup> They include:

- Infections
- Diabetes during pregnancy.

About 1 in 20 people find that corticosteroid tablets affect their mood.<sup>[58]</sup> This can happen a few days or weeks after you start treatment. You may be irritable, anxious, or confused, or have trouble sleeping. Or you can get an unusually high mood (euphoria). Rarely, people get more serious side effects, such as thinking about suicide or seeing things that aren't really there. It's also possible to get these side effects when you stop taking corticosteroids.

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Your doctor should explain the benefits and risks of corticosteroids before you start taking them. Doctors are advised to use corticosteroids in pregnancy only if the benefits of treatment outweigh the risks to the baby. <sup>[26]</sup>

If you get any worrying symptoms while you're taking corticosteroids, see your doctor straight away.

### How good is the research on corticosteroids for severe nausea and vomiting?

There isn't enough good evidence to say for certain that corticosteroid drugs help reduce severe vomiting and nausea during pregnancy. We found four studies. <sup>[59] [56] [57] [60]</sup>

Two studies compared corticosteroids with a dummy treatment (a placebo). <sup>[59] [57]</sup>

Two studies compared corticosteroids with another drug (called promethazine). <sup>[56] [60]</sup>

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## Ginger for severe nausea and vomiting in early pregnancy

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[How does it work?](#)

[Can it be harmful?](#)

[How good is the research on ginger for severe nausea and vomiting?](#)

This information is for women who have severe nausea and vomiting in early pregnancy. It tells you about ginger, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Does it work?

We're not sure. We know ginger helps relieve [normal nausea and vomiting in early pregnancy](#). But more research is needed to say whether taking ginger can help reduce the symptoms of severe nausea and vomiting in pregnancy (called hyperemesis gravidarum).

### What is it?

Ginger is a spicy root used to flavour food such as gingerbread, biscuits, and stir-fried vegetables. It's also found in drinks such as ginger tea, ginger ale, and ginger beer.

Ginger is used in herbal medicine to relieve all kinds of digestion problems. It's also one of the most widely used treatments for nausea and vomiting in pregnancy. <sup>[28]</sup> Many pregnant women prefer to use a natural remedy such as ginger, instead of drugs. <sup>[28]</sup>

In the study we found, women with severe nausea and vomiting took four capsules of ginger a day. Each capsule contained 250 milligrams (mg for short) of ginger. <sup>[33]</sup>

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### How can it help?

We're not sure it can help. In one study, women who'd been taken to hospital with severe nausea and vomiting had less severe symptoms after taking capsules four times a day. But the study was not big enough to rely on the results. <sup>[61]</sup>

### How does it work?

We don't really know why ginger may help to relieve nausea and vomiting when you're pregnant. Researchers still haven't found the active ingredient in ginger that works against sickness. <sup>[29]</sup> Ginger also reduces other kinds of nausea and vomiting, such as the sickness people may have when taking drugs to treat cancer ( chemotherapy ) or when travelling. <sup>[31]</sup>

### Can it be harmful?

You may get heartburn and acid in your throat (reflux) from taking ginger capsules. In one study of women with normal nausea and vomiting, 4 out of 60 women are thought to have stopped taking ginger for these reasons. <sup>[30]</sup> But these symptoms are common in pregnancy anyway. They may be due to the baby pressing on your stomach and not due to the ginger.

There's no evidence that taking ginger can harm your baby. <sup>[30]</sup> However, no good studies have been done on the safety of ginger for pregnant women, so we need more research to know for certain. <sup>[28]</sup> But studies do suggest that taking up to 1 gram of ginger a day in syrup or capsules should be safe. <sup>[31]</sup>

### How good is the research on ginger for severe nausea and vomiting?

There hasn't been much research on the effects of ginger in women with severe nausea and vomiting.

We found two summaries of the research (called [systematic reviews](#) ). <sup>[33]</sup> <sup>[62]</sup> In these, one study of only 30 women looked at this treatment. <sup>[61]</sup>

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## Ondansetron for severe nausea and vomiting in early pregnancy

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[How good is the research on ondansetron for severe nausea and vomiting?](#)

## Morning sickness

This information is for women who have severe nausea and vomiting in early pregnancy. It tells you about ondansetron, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.

### Does it work?

We're not sure. There isn't enough evidence from research to tell us whether ondansetron (brand name Zofran) reduces severe nausea and vomiting in pregnancy (called hyperemesis gravidarum).

### What is it?

Ondansetron is a drug often used to stop sickness caused by chemotherapy, radiotherapy, anaesthesia, and surgery.

Ondansetron can be taken as a tablet, or as an injection given by a doctor or nurse. Occasionally, doctors might try this drug if your nausea and vomiting is so bad it might threaten your health or that of your baby.

### How can it help?

We're not sure it can help. There isn't enough evidence on this treatment.

We found one small study comparing ondansetron with another drug called metoclopramide that's sometimes used for severe nausea and vomiting in pregnancy. Metoclopramide seemed to work better at reducing vomiting.<sup>[63]</sup>

### How does it work?

Ondansetron is usually used to treat nausea and vomiting not linked to pregnancy. For example, it works well to reduce the nausea and vomiting that people can get from cancer chemotherapy.<sup>[24]</sup>

Research shows that cancer treatments such as chemotherapy and radiation lead to increased amounts of a chemical called serotonin in the brain, which may cause nausea and vomiting.<sup>[64]</sup> Ondansetron was developed to counter this effect. It stops serotonin working in certain parts of the brain.

But there's no evidence that the amount of serotonin in your brain increases when you're pregnant.<sup>[64]</sup> So we're not sure how, or if, ondansetron works to reduce severe nausea and vomiting when you're pregnant.

### Can it be harmful?

The study we found didn't say whether ondansetron caused any side effects in women taking it for severe nausea and vomiting.<sup>[63]</sup> We need more research before we know for sure that this drug is safe to take in early pregnancy.<sup>[65]</sup>

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Doctors are advised to avoid prescribing this drug for pregnant women unless the benefits outweigh the risks to the baby. <sup>[26]</sup>

Minor side effects from ondansetron can occur, but they are not common. <sup>[66]</sup> They include:

- Diarrhoea
- Headache
- Constipation
- Rash
- Dizziness
- Dry mouth
- Drowsiness.

### How good is the research on ondansetron for severe nausea and vomiting?

There's very little evidence that ondansetron helps reduce severe nausea and vomiting during pregnancy. We didn't find any research summaries (called **systematic reviews**) or good-quality studies (called **randomised controlled trials**) that compared ondansetron with a tablet containing no medicine (called a **placebo**).

The only study we found of any quality included 83 women and compared ondansetron with metoclopramide. <sup>[63]</sup>

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## Metoclopramide for severe nausea and vomiting in early pregnancy

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[How good is the research on metoclopramide for severe nausea and vomiting?](#)

This information is for women who have severe nausea and vomiting in early pregnancy. It tells you about metoclopramide, a treatment used to relieve these symptoms. It is based on the best and most up-to-date research.



## Morning sickness

### Does it work?

Probably not.

### What is it?

Metoclopramide (brand name Maxolon) is a medicine sometimes used to treat pregnant women who have severe nausea and vomiting (called [hyperemesis gravidarum](#)).<sup>[24]</sup> It is normally used by doctors in hospital if a pregnant woman's vomiting is so bad it could harm her or her unborn baby.<sup>[24]</sup>

The drug was originally used to treat the nausea and vomiting that often comes with [chemotherapy](#) or [radiotherapy](#) for cancer. Since metoclopramide helped reduce sickness in cancer patients, doctors thought it might also work for pregnant women. However, there are very few studies that look at this.

### How can it help?

We don't think it can help much. We didn't find any studies comparing metoclopramide with no treatment, or with a dummy ( [placebo](#) ) drug.

But one study showed it didn't work as well as [corticosteroids](#) for severe nausea and vomiting.

### How does it work?

Metoclopramide works on chemicals in the body that help muscles in the stomach and intestines to tense up. This speeds up the movement of food in the body, so there's less chance that the food will cause nausea or lead to vomiting.

Since the movement of food through the stomach and intestines slows down during pregnancy, doctors think this may be a good drug to use when pregnant women have severe vomiting.<sup>[6]</sup>

### Can it be harmful?

We found one study that looked at the effects of metoclopramide in women with severe nausea and vomiting in pregnancy.<sup>[67]</sup> This study looked only at whether the drug was safe for pregnant women, not at whether it helped relieve nausea and vomiting.

The study included 175 pregnant women who had taken metoclopramide. The researchers found that, compared with women who had not taken metoclopramide, the women who took the drug were:

- Three times more likely to go into labour early (13 women who took metoclopramide went into labour before they had passed 37 weeks of pregnancy, compared with four women in the group who did not take the drug)
- No more likely to have a baby with a major [malformation](#)

## Morning sickness

- No more likely to have a baby with a low birth weight.

Metoclopramide can cause muscle twitches, especially if you take it for a long time.<sup>[42]</sup> You might get problems moving your fingers, or unwanted movements of your lips and tongue. These problems often don't go away once you stop taking metoclopramide, and there's no treatment for them.

Doctors are advised to prescribe metoclopramide in pregnancy only when there are very good reasons to do so.<sup>[26]</sup>

### How good is the research on metoclopramide for severe nausea and vomiting?

There's not much good-quality evidence about metoclopramide. We didn't find any studies comparing it with no treatment.

We found only one study comparing it with another treatment, [corticosteroid medicines](#).<sup>[68]</sup> The study of 40 women found that corticosteroids worked better than metoclopramide for reducing the number of times women vomited each day and for helping women stay out of hospital.

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### Further informations:

#### What happens in hospital?

If you're very sick during your pregnancy, you may be in danger of becoming dehydrated. If so, you may have to go into hospital.

If you have to go into hospital, here is what's likely to happen:

- A doctor or nurse will take your temperature, blood pressure, and pulse, and listen to your breathing with a stethoscope.
- A sample of blood will be taken from a vein, most likely one in your arm. The blood will be tested for water and chemicals. If these aren't present in the right amounts, you may be dehydrated.
- Your urine will be tested for chemicals called ketones. Your body makes these when it doesn't have enough water, so their presence is another sign that you're dehydrated.
- If you're dehydrated, you will be given fluid, minerals, and nutrients through a needle inserted into a vein, probably one in your arm. This is sometimes called a 'drip'.

## Morning sickness

- In very rare cases, when vomiting is extremely bad, a feeding tube is put through your nose, past your stomach, and into your small intestine (part of your digestive system). Liquid food is given to you through the tube. This can help to get food moving through your intestine and reduce nausea and vomiting.
- You'll be encouraged to eat and drink small amounts of food and liquid as often as you can.
- If absolutely necessary, you'll get some medicine to treat nausea and vomiting. Doctors try to avoid giving you medicine before your 12th week of pregnancy as your baby is still at an important stage of development then. To learn more, see [What treatments work for nausea and vomiting in early pregnancy?](#)
- A doctor or nurse may check that your baby is growing normally by doing an ultrasound scan.
- You'll probably be weighed every day to see if you're losing or gaining weight.
- Your doctor may order other tests, including a test to check for high levels of thyroid hormone, a test to make sure your liver is working normally, or a blood test to check for the germ (bacterium) *Helicobacter pylori*, which can cause indigestion and stomach ulcers.

You'll be able to leave hospital when:

- The water and chemicals in your body are present in the right amounts
- You're no longer dehydrated
- You're able to eat and drink enough to prevent getting dehydrated again.

## Molar pregnancy

A molar pregnancy (also called **hydatidiform mole**) is not usually a real pregnancy with a baby. Instead something causes the organ that normally provides oxygen and food to a growing baby (called the placenta) to grow quickly and abnormally into a tumour.

This tumour contains many tiny pockets called cysts, and resembles a bunch of grapes. It can become a cancer, but this is very rare.

Only 1 in about 2,000 pregnancies is a molar pregnancy. Occasionally, a baby does develop, but it is usually malformed and dies before birth.

## Morning sickness

During a molar pregnancy, women often have very bad nausea and vomiting. Some doctors think this is because they have a much higher than normal amount of a hormone called **human chorionic gonadotrophin (HCG)** in their blood. Other symptoms include severe tiredness and bleeding from the vagina.

If your doctor thinks your pregnancy might be a molar pregnancy, you will probably have an **ultrasound scan** and a blood test to measure your level of HCG. If you have a hydatidiform mole, you will need an operation to remove the mole (and baby if there is one) as well as check-ups with your doctor afterwards.

If cancer cells are found, you might need treatment with drugs. But this is very rare. Most women don't need any more treatment. Your doctor may monitor your HCG level for about two years to check for cancer. The most likely time for cancer to grow is during the year after your molar pregnancy. Doctors usually advise women not to get pregnant during this time.

### Is it safe to take drugs in pregnancy?

Most women (and doctors) worry about using medicines during pregnancy, especially in the first 12 weeks when the baby is beginning to grow. <sup>[24]</sup>

When you take a drug, some of it gets into your blood. This means it may reach your unborn baby. The concern is that some drugs may harm your developing baby and lead to birth defects.

There are many things to consider about drugs and pregnancy.

- We don't have much evidence on how safe it is to take drugs during pregnancy because testing drugs on pregnant women is rarely allowed. <sup>[25]</sup>
- Very few drugs have been proved to be harmful to the unborn child. On the other hand, no drug is safe beyond all doubt. <sup>[26]</sup>
- Guidelines for doctors advise them to prescribe drugs in pregnancy only if the benefit to the mother is thought to be greater than the risk to the baby. <sup>[26]</sup>
- In cases of morning sickness, drugs are used only when pregnant women have very severe vomiting.
- Women usually think the risk of their baby being born with a problem because of taking medicines is higher than it really is. <sup>[27]</sup> Some women have even ended pregnancies unnecessarily because they feared their baby might have been harmed by drugs. <sup>[27]</sup>

# Morning sickness

## If you're thinking about taking a drug while you're pregnant, it's important to:

- Find out as much as you can about the drug
- Discuss your concerns with your doctor.

### Glossary:

#### dehydrated

When you're dehydrated, you don't have enough fluid in your blood. This could be because you're not drinking enough or because you're losing water by sweating or having diarrhoea.

#### hormones

Hormones are chemicals that are made in certain parts of the body. They travel through the bloodstream and have an effect on other parts of the body. For example, the female sex hormone oestrogen is made in a woman's ovaries. Oestrogen has many different effects on a woman's body. It makes the breasts grow at puberty and helps control periods. It is also needed to get pregnant.

#### thyroid gland

Your thyroid gland is a small organ that sits in your neck, just in front of your windpipe. It sends out a hormone called thyroxine. This acts on receptors within cells. By acting on the receptors it gives the cells a message to speed up their metabolism and work harder.

#### blood pressure

Blood pressure is the amount of force that's exerted by your blood on to your blood vessels. You can think of it like the water pressure in your home: the more pressure you have, the faster and more forcefully the water flows out of the shower. Blood pressure is measured in millimetres of mercury (written as mm Hg). When your blood pressure is taken, the measurement is given as two numbers, for example 120/80 mm Hg. The first, higher, number is called the systolic pressure, and the second, lower, number is the diastolic pressure. The systolic number is the highest pressure that occurs while your heart is pushing blood into your arteries. The diastolic number is the lowest pressure that happens when your heart is relaxing and is not pushing your blood.

#### stethoscope

A stethoscope is a tool doctors use to listen to people's bodies. One part of the stethoscope is a disc (called the bell), which doctors put over a part of someone's body (like their heart or a vein). The bell is connected to ear pieces, which the doctors put in their ears so they can listen to sounds that come from that part of the person's body.

#### ketones

Your body forms ketones when it breaks down fats for energy. This usually happens when your body can't get enough water or sugar for energy, often due to starvation, dehydration and, in some cases, pregnancy.

#### Helicobacter pylori

Helicobacter pylori are bacteria that live in the stomach. In some people, they may cause ulcers or indigestion.

#### ulcer

An ulcer is an open sore. Ulcers can happen in many parts of your body, such as in your stomach, and the skin of your legs, mouth, or genitals.

#### antacids

Antacids are medicines you can buy over the counter. They counteract the acid in your stomach. Antacids can make you feel better if you have heartburn.

#### ultrasound

Ultrasound is a tool doctors use to create images of the inside of your body. An ultrasound machine sends out high-frequency sound waves, which are directed at an area of your body. The waves reflect off parts of your body to create a picture. Ultrasound is often used to see a developing baby inside a woman's womb.

#### chemotherapy

The use of chemicals or drugs to treat or prevent disease, usually cancer.

#### miscarriage

A miscarriage is when something happens before the 28th week of pregnancy that means the fetus does not survive.

#### hyperemesis gravidarum

Hyperemesis gravidarum is very severe nausea and vomiting during pregnancy. About 1 in 100 pregnant women get this condition. If you have hyperemesis gravidarum, you are sick so much that your health and your baby's health may be in danger if you don't have treatment. Women with this condition may have to go into hospital.

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## **kidney**

Your kidneys are organs that filter your blood to make urine. You have two kidneys, on either side of your body. They are underneath your ribcage, near your back.

## **liver**

Your liver is on the right side of your body, just below your ribcage. Your liver does several things in your body, including processing and storing nutrients from food, and breaking down chemicals, such as alcohol.

## **malformations**

A malformation happens when a part of the body doesn't form normally, which makes it an abnormal shape.

## **urinary tract infection**

A urinary tract infection (UTI) happens when bacteria invade the walls of your urinary tract, which includes your kidneys, bladder and urethra. An uncomplicated UTI is one that involves your bladder and urethra, but not your kidneys. A complicated UTI involves your kidneys and can be harder to treat. Doctors may refer to a kidney infection as pyelonephritis.

## **acupuncture**

If you have acupuncture, an acupuncturist puts thin, sterile needles into your skin. People who perform traditional acupuncture believe that it removes blockages along energy channels in your body. Other acupuncturists say that the needles help your body release natural chemicals that block pain.

## **systematic reviews**

A systematic review is a thorough look through published research on a particular topic. Only studies that have been carried out to a high standard are included. A systematic review may or may not include a meta-analysis, which is when the results from individual studies are put together.

## **red blood cells**

Red blood cells are the part of your blood that makes it red. Their main job is to carry oxygen from your heart and lungs to the tissues of your body. Once these cells unload oxygen, they pick up carbon dioxide. They take carbon dioxide back to your lungs so it can be breathed out of your body.

## **randomised controlled trials**

Randomised controlled trials are medical studies designed to test whether a treatment works. Patients are split into groups. One group is given the treatment being tested (for example, an antidepressant drug) while another group (called the comparison or control group) is given an alternative treatment. This could be a different type of drug or a dummy treatment (a placebo). Researchers then compare the effects of the different treatments.

## **allergy**

If you have an allergy to something (such as pollen or a medicine), your body always overreacts to it. The reaction happens because your immune system (your body's system for fighting infection) is too sensitive to it.

## **hay fever**

You get hay fever when your immune system reacts too strongly to pollen or mould. Your doctor may call it seasonal allergic rhinitis. The most common symptoms are sneezing, a runny or blocked nose, and red, itchy eyes. You may also cough or wheeze.

## **physiotherapist**

A physiotherapist is a health professional who is trained to use physical activity and exercises to help people's bodies heal.

## **infection**

You get an infection when bacteria, a fungus, or a virus get into a part of your body where it shouldn't be. For example, an infection in your nose and airways causes the common cold. An infection in your skin can cause rashes such as athlete's foot. The organisms that cause infections are so tiny that you can't see them without a microscope.

## **schizophrenia**

Schizophrenia is a mental illness that causes delusions and hallucinations.

## **steroids**

Steroids are a type of chemical. Your body naturally produces steroids, which play a part in many of its processes. For example, steroids are involved in how your immune system, reproductive system and metabolism work. Steroids can also be given as medicines and are used for a number of different conditions: including asthma, rheumatoid arthritis and eczema. Corticosteroids are not the same as the steroids used by some body builders and athletes. Those steroids are called 'anabolic steroids'.

## **adrenal glands**

You have two adrenal glands. They are on top of your kidneys. Your adrenal glands make hormones that help control your blood pressure, how fast your heart beats and the way your body uses food.

## **cleft palate**

Babies who are born with a cleft palate have a hole in the roof of their mouth. Surgeons usually correct the problem during the first year of a child's life.

# Morning sickness

## diabetes

Diabetes is a condition that causes too much sugar (glucose) to circulate in the blood. It happens when the body stops making a hormone called insulin (type 1 diabetes) or when insulin stops working (type 2 diabetes).

## placebo

A placebo is a 'pretend' or dummy treatment that contains no active substances. A placebo is often given to half the people taking part in medical research trials, for comparison with the 'real' treatment. It is made to look and taste identical to the drug treatment being tested, so that people in the studies do not know if they are getting the placebo or the 'real' treatment. Researchers often talk about the 'placebo effect'. This is where patients feel better after having a placebo treatment because they expect to feel better. Tests may indicate that they actually are better. In the same way, people can also get side effects after having a placebo treatment. Drug treatments can also have a 'placebo effect'. This is why, to get a true picture of how well a drug works, it is important to compare it against a placebo treatment.

## radiotherapy

This is also called radiation therapy. It is a treatment that uses high-energy X-rays to kill cancer cells. It's most often used for tumours that are hard to treat with surgery alone. You won't feel any pain during this treatment, but you may get some side effects afterwards.

## general anaesthetic

You may have a type of medicine called a general anaesthetic when you have surgery. It is given to make you unconscious so you don't feel pain when you have surgery.

## diarrhoea

Diarrhoea is when you have loose, watery stools and you need to go to the toilet far more often than usual. Doctors say you have diarrhoea if you need to go to the toilet more than three times a day.

## constipated

When you're constipated, you have difficulty passing stools (faeces). Your bowel movements may be dry and hard. You may have fewer bowel movements than usual, and it may be a strain when you try to go.

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This information is aimed at a UK patient audience. This information however does not replace medical advice. If you have a medical problem please see your doctor. Please see our full [Conditions of Use](#) for this content. For more information about this condition and sources of the information contained in this leaflet please visit the Best Health website, <http://besthealth.bmj.com> . These leaflets are reviewed annually.

