

Patient information from the BMJ Group

Hepatitis C

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Hepatitis C

Hepatitis C is an infection that can harm your liver. It is caused by a virus that is carried in blood. You can catch it if blood from an infected person gets into your body. You may not know you have hepatitis C because there often aren't any symptoms.

If there's a chance that you may have hepatitis C, you can have a blood test to find out. And if you're infected, there are treatments that may help you get rid of the **virus**.

We've brought together the best research about hepatitis C 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 is hepatitis C?

Hepatitis C is an infection that can harm your liver. It is caused by a virus that is carried in blood. You can catch it if blood from an infected person gets into your body. You may not know you have hepatitis C because there often aren't any symptoms.

Some people with hepatitis C stay healthy all their life. But some people's **liver** gets badly damaged by the infection. Unfortunately, there isn't any way to tell what will happen to you. But there are treatments that may get rid of the **virus**. Getting rid of the virus makes it less likely that you will get liver damage.

Key points for people with hepatitis C

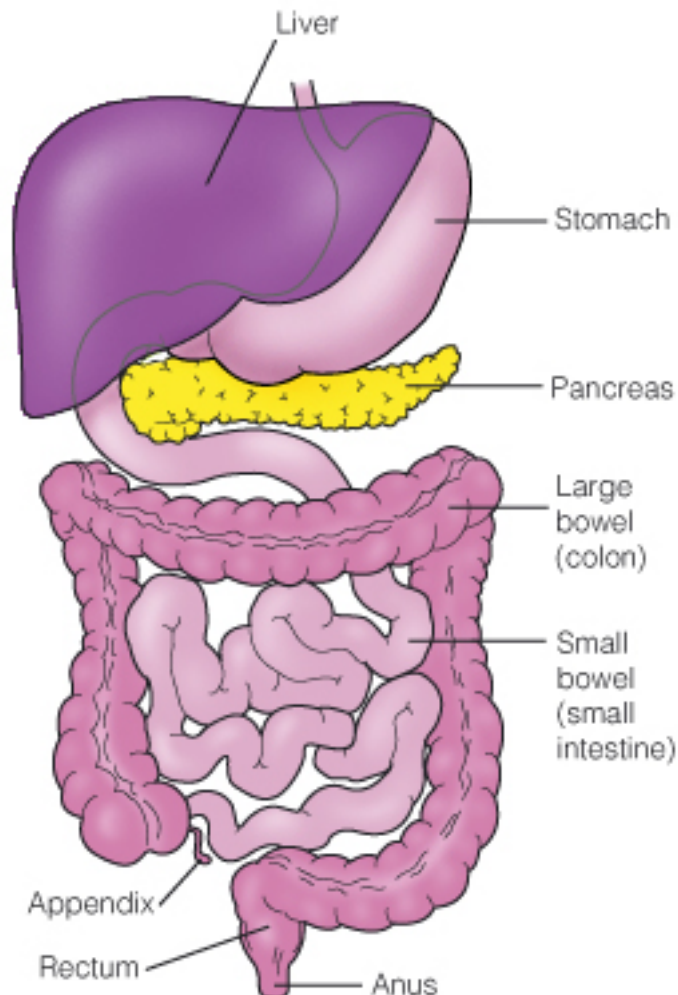
- You can become infected by the hepatitis C virus if blood from a person with hepatitis C gets into your body. The most likely way for this to happen is if you share needles to inject illegal drugs such as heroin. ^[1] ^[2] ^[3] But you can get it in other ways too.
- Hepatitis C can be passed from an infected pregnant woman to her fetus; through unprotected sex; via a blood transfusion (but this is very rare in the UK); through being tattooed with unclean/re-used needles; and through needle injuries in healthcare workers.
- The only way to find out for certain if you are infected is to have a blood test. For more information, see [Should I be tested for hepatitis C?](#)

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- You may not get any symptoms from hepatitis C. But if the virus stays in your body for a long time, you may get serious liver damage.^[3]
- You can take treatments that may get rid of the virus. But the treatments don't work for everyone and they have unpleasant side effects.
- If you have hepatitis C, you can do some things that make it more likely you'll stay well, such as drinking less alcohol and eating healthy foods.

What does my liver do?

To understand what can happen when you get hepatitis C, it helps to know a bit about what your liver does.



The liver is one of the biggest organs in your body.

Your liver is just under your ribs, on the right side of your body. It weighs about 2 kilograms (about 4 pounds). That makes it one of the biggest organs in your body.^[7]

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Your liver does more than 500 different jobs in your body. Some of the things your liver does are listed below.^[7]

- It turns some foods into a type of sugar (called glucose) that your muscles can use for energy.
- It breaks down harmful substances and wastes in your body, including alcohol and many medicines.
- It fights infections.
- It makes many of the chemicals in your body, including ones that help your blood to clot and ones that help your wounds to heal.

If you have had liver damage for only a short time, you may feel fine. You can get by with less than half of your liver working. So, it may take many years before you get any symptoms of liver damage. Also, your liver can get better if the damage lasts only a short while. But if the damage goes on for a long time (many months or years), it can stop your liver working properly.

What happens in hepatitis C?

The virus that causes hepatitis C is carried in human blood. You can catch it if blood from someone with the virus gets into your body and then into your bloodstream. This could be just a tiny bit of blood. You might not even be able to see it.

When the hepatitis C virus gets to your liver, it causes **inflammation**. You might feel ill for a while. But you might not notice any symptoms at all.^[8] If you have recently been infected with the hepatitis C virus, your body may fight off the virus naturally, without any treatment. This happens in about 2 in 10 people.^[3] But usually the virus stays in your body.

If you have had the infection for more than six months, doctors say you have **chronic hepatitis C**. Chronic means an illness that is long term. Eventually (usually after many years), having chronic hepatitis C may cause scarring in your liver and stop your liver working properly.^[8]

If your liver isn't working properly, all the jobs that it does are affected. So, you may not have enough energy. You may get more infections than normal. And wastes may build up in your body. These things can put your life in danger.

There are six different types of hepatitis C virus, all of which have different **genes**. Doctors call the types **genotypes**. They are numbered 1 to 6. It is important to know which type you have. That's because the type of hepatitis C virus you have affects the chances that treatment will work for you.

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Most people in the UK who have hepatitis C have genotype 1 or genotype 3. Genotype 1 is generally harder to treat than the other genotypes. ^[3] ^[9] ^[10]

Hepatitis C: why me?

It can be a shock to find out that you have hepatitis C. You may wonder how you caught the virus. We've listed some of the ways this can happen below. But some people never find out how it happened.

There are two main ways that people catch the hepatitis C virus.

- Most people who get hepatitis C are infected by sharing needles to inject illegal drugs. ^[2] ^[3]
- Before 1991, some people were accidentally given transfusions of blood infected with hepatitis C. ^[11] Since then, the government has used new ways to check the blood that's used for transfusions. So, your chances of being infected with hepatitis C from a blood transfusion are now tiny. ^[3] ^[8]

There are some other ways you can catch the hepatitis C virus. But these are less common.

- Before 1986, some people were accidentally given products made from blood infected with hepatitis C. For example, some people had haemophilia, and to treat it they were given products that help blood clot. (If you have haemophilia, your blood doesn't clot properly.) But strict checks have been in place since then. ^[12] So, your chances of getting infected this way are now tiny. ^[3] ^[8]
- Sometimes health care workers such as doctors and nurses get injured by needles. For example, this could happen when giving injections to patients. If you scratch yourself with a needle that has been used to treat someone with hepatitis C, you can catch the virus. ^[8]
- Some babies are born with hepatitis C because their mothers have the virus.
- Nearly 1 in 20 people who have hepatitis C in the UK may have got infected by having tattoos or body piercings with equipment that was not cleaned properly. ^[3]

There's also a small chance that you can get hepatitis C if you have sex and you don't use a condom (unprotected sex). Doctors aren't certain if the virus is passed on in semen or just in blood. But you are at higher risk if: ^[8]

- You have unprotected sex with many different people
- You regularly have unprotected sex with someone who has hepatitis C.

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You can't catch hepatitis by kissing, cuddling, or holding hands. And you can't get it by using household items such as plates or knives and forks that are also used by someone who has the virus.^[8] But you can get it from sharing toothbrushes or razors.

If you have hepatitis C, there are things you can do to cut down the risk of passing the virus on to other people. For more information, see [Cutting the risk of passing on hepatitis C](#).

What are the symptoms of hepatitis C?

Lots of people who have hepatitis C don't get any symptoms for many years. So, you may not know you have the virus until it has started to damage your liver. Most people who have hepatitis C don't know they have it.^[15] They might get mild symptoms, such as feeling tired, or they might not get any symptoms at all.^[16] Also, the symptoms can come and go. And you may not get all of them.

The main symptoms of hepatitis C are listed below. You are more likely to get them if you've had hepatitis C for a long time and it has affected your **liver**.^{[15] [16] [17]}

- Your skin and the white parts of your eyes turn yellow. Doctors call this **jaundice**. It happens because a chemical called bilirubin builds up in your body. Normally bilirubin is broken down in the liver and the products of this breakdown are passed out of the body in faeces.
- You feel tired. This may happen because your muscles aren't getting enough energy from the food you eat.
- Your urine becomes darker.
- You have pain in the upper right side of your abdomen.
- You don't feel hungry and you lose weight.
- You feel sick.

These symptoms happen because your liver isn't working properly. Your liver does many jobs in your body. So, if it isn't working, you can get lots of different symptoms. Some people with hepatitis C say it feels like they have the flu.

If the hepatitis C virus keeps damaging your liver over a long time, you may get more serious symptoms, such as a swollen liver, bloating in your abdomen, and itchy skin. For more information, see [What will happen to me?](#)

Most people who have hepatitis C don't know they are infected.^[15] The only way to find out for certain is to have a blood test. For more information, see [Should I be tested for hepatitis C?](#)

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How do doctors diagnose hepatitis C?

Most people with hepatitis C don't get any symptoms for many years after they've been infected. So, it often takes a long time before people are diagnosed with hepatitis C.

If you think you might have hepatitis C, it is important to tell your doctor so they can find out for certain. If you do have hepatitis C you will need to:

- Think about having treatment
- Do things to stay as healthy as possible
- Take steps so that you don't pass the hepatitis C virus on to other people.

Here are some of the things your doctor may do to work out if you have hepatitis C.

Questions your doctor may ask

Your doctor may ask some questions to find out if you are at high risk of having hepatitis C. It's important to be honest. So, tell your doctor even if these things happened a long time ago.

These are questions your doctor will probably ask you. ^[42]

- Have you ever injected illegal drugs?
- Do you have sex with someone who has hepatitis C? Do you use a condom?
- Do you share toothbrushes or razors with someone who has hepatitis C?
- Have you ever had blood transfusions or products made from blood?
- Have you ever got medical or dental treatment in a country with lower hygiene standards than the UK?
- Have you ever had a tattoo or got any part of your body pierced?

Your doctor will also ask you to describe any symptoms that you have noticed.

Physical examination

Your doctor may examine your abdomen. They will check to see if it's bloated and if your liver is bigger than normal. Your doctor will look at your skin and the white parts of your eyes to see if they have turned yellow. They may also check your ankles to see if they're swollen.

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Tests your doctor might order

The only way to find out if you have hepatitis C is to have a blood test. You may wonder if testing is right for you. For more information, see [Should I be tested for hepatitis C?](#)

There are several blood tests to check for the hepatitis C virus. Some of the tests are more reliable than others.^[42] ^[43] For more information, see [Blood tests for hepatitis C](#). If you have a blood test and the result is positive, that means you have the virus in your blood. But it doesn't tell you if the virus has affected your liver. And it doesn't tell you how long you've had the virus.

Your doctor will order other blood tests to see if your liver has been affected. These are sometimes called liver function tests (LFTs). You may hear them called an **alanine aminotransferase test** (ALT test for short) and an **aspartate aminotransferase test** (AST test for short).

Your doctor may also suggest that you have a small piece of your liver taken out and checked under a microscope. This is called a liver biopsy. It will show if the virus has damaged your liver. The results may help you decide whether to have treatment straight away, or whether to wait and see what happens to your liver.

A liver biopsy can hurt. Also, there is a chance it might make you bleed a lot. So it's reasonable to ask your doctor if you really need this test.^[42] ^[44] For more information, see [Having a liver biopsy](#).

How common is hepatitis C?

Hepatitis C is fairly common. But lots of people don't know they have it. So, it's hard to say exactly how many people are living with hepatitis C.

Experts estimate that around 214,000 people in the UK have chronic hepatitis ('chronic' means they've had the infection for more than six months).^[9] This means that 3 or 4 in 1000 people in the UK have the disease.

In some parts of the world, hepatitis C is much more common. Doctors think between 60 in 1000 and 280 in 1000 people in Egypt have hepatitis C.^[18]

Young men are most likely to get hepatitis C. This is because they are most likely to inject illegal drugs.^[19]

What treatments work for hepatitis C?

Hepatitis C is an infection that can harm your liver. It is caused by a virus that is carried in blood. You can catch it if blood from an infected person gets into your body. You may not know you have it because there often aren't any symptoms.

Treatments help many people, but they don't work for everyone. And they can have unpleasant side effects. So, you need to think carefully about whether to go ahead with treatment or whether to wait for a while.

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Key points about treating hepatitis C

- The treatment pegylated interferon (also called peginterferon) taken with ribavirin works best to get rid of the hepatitis C virus. It's the most widely used treatment. ^[49]
- But some people can't take ribavirin. You can't take it if you have certain illnesses, if you're pregnant or if your liver has been badly damaged. ^[50] So, you may need to take pegylated interferon on its own.
- Your doctor may give you an older kind of interferon, called **standard interferon**. But this isn't used much any more.
- If you have genotype 1 hepatitis C (one of the most common types), your doctor may recommend taking a drug called a **protease inhibitor** along with pegylated interferon and ribavirin. This increases the chance that you will get rid of the virus.
- You may need to take treatment for a long time, up to 48 weeks (and occasionally longer), to get rid of the virus.
- Many people get side effects from treatment, but only a few people get serious ones. ^{[50] [51] [52]}
- Treatment for hepatitis C can be unpleasant and hard to stick with. It can be hard to decide if treatment is right for you at this time. Talk to your doctor so that you know what to expect. For more information, see [When to have treatment for hepatitis C](#).

There are good treatments for getting rid of the hepatitis C virus. We've carefully weighed up the research for the standard treatments and found they all fall under the category 'Treatments that work'.

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

Treatment Group 1

Treatments for hepatitis C

Treatments that work

- [Pegylated interferon plus ribavirin](#) : This is the usual treatment for hepatitis C. It works well. But it has side effects. And some people can't take it. The brand names of pegylated interferon in the UK are Pegasys and ViraferonPeg. Another brand name, PegIntron, is used for pegylated interferon in the US and some other countries. The brand names of ribavirin are Rebetol and Copegus. [More...](#)

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- [Pegylated interferon on its own](#) : If you can't take ribavirin, you might take just pegylated interferon. It still works on its own, but not as well as it does with ribavirin. [More...](#)
- [Standard interferon](#) : This is an older kind of interferon. It isn't used much any more. It works, but not as well as pegylated interferon. The brand names are Roferon-A and Viraferon. [More...](#)

Other treatments

We haven't looked at the research on these treatments in as much detail as we have for most of the treatments we cover. (To read more, see Our method.) But we've included some information because you may have heard of them or be interested in them.

- [Protease inhibitors](#) : These are newer treatments for people with genotype 1 hepatitis C. They are taken along with pegylated interferon and ribavirin. Their names are telaprevir (brand name Incivo) and boceprevir (Victrelis). [More...](#)

What will happen to me?

It's hard to say what will happen to you. Many people with hepatitis C have few problems with their health and live a normal life. But other people get very ill because of hepatitis C.

There are treatments that can get rid of the **virus** that causes hepatitis C. Getting rid of the virus can lower your chances of getting damage to your **liver** . But the treatments can have side effects. And they don't work for everyone. So, it can be hard to decide about whether you should have treatment. For more information, see [When to have treatment for hepatitis C](#) .

Will the virus go away if I don't have treatment?

If you have recently been infected with the hepatitis C virus, your body may fight off the virus naturally, without any treatment. This happens to about 2 in 10 people. ^[20] If it happens to you, you may feel ill for just a short time. Or you may not notice any symptoms at all. If your body gets rid of the virus naturally, you won't get liver problems and you won't need treatment. ^[21]

If you have hepatitis C but you don't have any signs of **inflammation** or damage in your liver, your doctor may suggest that you wait and see if your body gets rid of the virus naturally. ^[21]

But most people still have the virus in their body more than six months later. This happens to between 7 in 10 and 8 in 10 people. ^[22] ^[23] It's called **chronic hepatitis C**.

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Will the virus go away if I do have treatment?

If you have chronic hepatitis C, you will need to decide whether to have treatment to get rid of the virus. The usual treatment is a once a week injection of a medicine called pegylated interferon plus daily treatment with another medicine called ribavirin. For more information, see [Pegylated interferon plus ribavirin](#) .

The chances of the treatment working for you depend on several things. The most important one is the type of hepatitis C you have. There are six different types of hepatitis C virus, which all have different genes . Doctors call the types **genotypes**. They are numbered 1 to 6. Most people in the UK who have hepatitis C have genotype 1 or genotype 3. ^[9]

Genotype 1 is generally harder to treat than the other types. About 4 in 10 to 5 in 10 people with genotype 1 get rid of the virus with usual treatment. ^[24] However, adding a third treatment called a [protease inhibitor](#) can improve the chances of getting rid of the virus.

There are other things that affect whether treatment will work for you. ^[25] You are more likely to get rid of the virus by having treatment if:

- You are younger
- You're treated soon after you've been infected
- You don't have any liver damage
- You're a woman.

Will I get liver damage if I don't get rid of the virus?

Lots of people live with the hepatitis C virus in their bodies for many years and don't have any health problems. ^[26] But other people get liver damage, which can be serious. Unfortunately, there isn't any way of knowing what will happen to you.

Research shows that people tend to fall into one of three groups. ^[27]

- One third of people with hepatitis C get scarring in their liver (cirrhosis) within 20 years of being infected.
- One third of people get cirrhosis between 20 and 50 years after being infected.
- And the remaining third get cirrhosis more than 50 years after being infected, or not at all.

The idea of getting serious liver problems some day can be frightening. But remember that some people with hepatitis C never get these problems. It's important to stay in touch

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with your doctors. That way, if you get any symptoms, they can be picked up early. Then you can talk about whether to have treatment, if you haven't already had it. And there are things you can do to improve your chances of staying healthy.

About 2 in 10 people who have been infected with hepatitis C for more than 10 years get scarring in their liver (**cirrhosis**).^[23] It tends to get worse over time. And it may stop your liver from working properly. Cirrhosis is why some people with chronic hepatitis C get serious problems with their liver.

The symptoms of cirrhosis include:^[23]

- A swollen liver, which may make your abdomen feel sore and bloated
- A yellow tinge to your skin and the whites of your eyes (**jaundice**)
- Weak muscles
- Swollen ankles
- Bloating in your abdomen (from a build-up of fluid)
- Itchy skin.

If you get any of these symptoms, see your doctor.

Over time, cirrhosis can cause serious problems with your liver or liver cancer. These things happen in between 1 in 100 and 5 in 100 people with chronic hepatitis C after 20 years or more.^{[22] [23]}

If these things happen to you, you may need an operation to get a new liver.^[22] This is called a **liver transplant**. It's a big operation. But it can save your life if your liver is badly damaged.

What can I do to try to keep my liver healthy?

If you have hepatitis C, you can do some things to try to keep your liver as healthy as possible.

You may need to cut down how much alcohol you drink. That's because alcohol can harm your liver. Talk to your doctor about how much you drink and ask if you need to cut down.^[28]

You don't need to eat in a special way. But try to keep a healthy weight.^[28] You should eat sensibly and stick to healthy foods. And you should take regular exercise. If you're not certain how to do these things, ask your doctor.

Questions to ask your doctor

Finding out that you have hepatitis C can be a shock. You'll probably have lots of questions.

Here are some questions you may want to ask your doctor.

- What tests will I need to have?
- Do I need to have a small piece of my **liver** taken out and checked under a microscope (a liver **biopsy**)?
- What type (genotype) of hepatitis C do I have?
- Are there any signs that my liver is damaged?
- If I decide to have treatment, which one is best for me?
- What can I expect during treatment?
- Does the treatment have side effects?
- If I decide not to have treatment yet, how will you watch my condition?
- How likely am I to get rid of the hepatitis C **virus** if I have treatment?
- Do I need to tell my employer that I have hepatitis C?
- How can I be certain not to pass the virus to anyone else?
- What can I do to stay as healthy as possible?
- Can I drink alcohol?

Treatments:

Pegylated interferon plus ribavirin

In this section

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[How good is the research on pegylated interferon plus ribavirin?](#)

This information is for people who have hepatitis C. It tells you about pegylated interferon plus ribavirin, a treatment used for hepatitis C. It is based on the best and most up-to-date research.

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Does it work?

Yes. There is good evidence that pegylated interferon and ribavirin, taken together, work well to get rid of the hepatitis C virus in some people.^[53] ^[54] If you get rid of the virus, it may not have had time to damage your liver.

But how well pegylated interferon plus ribavirin works depends on the type of hepatitis C virus you have. There are six types of hepatitis C virus, which all have different genes. Doctors call the types **genotypes**. They are numbered 1 to 6. It is important to know which type you have. That's because which type of hepatitis C virus you have affects the chances that treatment will work for you.

Most people in the UK who have hepatitis C have genotype 1 or genotype 3. You are almost twice as likely to get rid of the hepatitis C virus with pegylated interferon and ribavirin if you have genotype 2 or genotype 3 than if you have genotype 1.^[55] ^[56] However, adding a third treatment called a [protease inhibitor](#) may improve your chances of getting rid of the virus if you have genotype 1.

What is it?

Pegylated interferon is also known as peginterferon. It is the newest form of a medicine called interferon.

The difference with the original forms of [interferon](#) is that pegylated interferon remains active in the body for longer. It works better than the older form of interferon and needs to be given less often. It helps your body get rid of the hepatitis C virus. This may stop the virus damaging your liver.

The brand names for pegylated interferon in the UK are Pegasys and ViraferonPeg. You have pegylated interferon as an injection once a week.^[56] ^[57]

Ribavirin is a drug that fights viruses. It's not used on its own to treat hepatitis C. But it helps pegylated interferon work better. Its brand names are Rebetol and Copegus. You take it as a tablet or as a liquid.

But some people can't take ribavirin. And it has side effects. Also, ribavirin can be harmful if you have certain medical conditions. You can't take it if:^[58]

- You're a woman and you are pregnant
- You have bad liver damage
- You have [heart disease](#).

If you can take pegylated interferon and ribavirin, you will probably start by taking them together. You need to take them for quite a long time.^[53] ^[54] But how long depends on the type (genotype) of hepatitis C you have.^[59]

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- If you have genotype 1, you may need to take both drugs for 48 weeks, and sometimes even longer. ^[60] ^[61]
- If you have genotype 2 or genotype 3, you may need to take both drugs for up to 24 weeks. If your infection responds to the drugs early, you may only need to take them for 14 to 16 weeks. ^[62] ^[63] ^[64]

Doctors think pegylated interferon with ribavirin is the best treatment for the hepatitis C virus. If you have genotype 1, your doctor may recommend also taking a third drug called a [protease inhibitor](#). Protease inhibitors help to stop the hepatitis C virus multiplying. This increases the chance that pegylated interferon and ribavirin will get rid of the virus.

The National Institute for Health and Care Excellence (NICE) is the government body that decides which treatments should be available on the NHS. NICE recommends that this treatment should be used for most people who have had hepatitis C for more than six months. ^[59] If you've had hepatitis C for longer than six months, it's called **chronic hepatitis C**.

NICE says shorter courses of treatment may be appropriate for people who have genotype 2, and whose infection responds quickly treatment within four weeks. ^[65]

But this treatment won't make you feel better in the short term. In fact, you might feel worse while you are taking treatment, because of side effects.

The only way to see if this treatment is working is to have blood tests to check for the virus. If your test is positive, you still have the virus. If your test is negative, there isn't any of the virus in your blood. For more information, see [Blood tests for hepatitis C](#).

It takes about 12 weeks to tell if this treatment is working. So, you will be tested about 12 weeks after you start having the medicines. If they are not working, your doctor will probably advise you to stop taking them. ^[59]

The virus can come back after treatment is over. So, to be certain that the treatment has worked, your doctor will check to see if you are still free of the virus six months after you finish the treatment. If you are, doctors say you have a **sustained virological response** (SVR for short).

How can it help?

There is good evidence that taking pegylated interferon with ribavirin gets rid of the hepatitis C virus. ^[54]

We also know that combined pegylated interferon and ribavirin works better than: ^[53] ^[66]
^[67] ^[40]

- [Pegylated interferon on its own](#)

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- An older form of interferon (called [standard interferon](#)) taken with ribavirin.

Your chances of getting rid of the virus with pegylated interferon plus ribavirin are much better if you have genotype 2 or genotype 3 of the hepatitis C virus.

- If you have genotype 2 or genotype 3, you have an 8 in 10 chance of getting rid of the virus if you take pegylated interferon with ribavirin. ^[56]
- But if you have genotype 1, you have only a 4 in 10 to 5 in 10 chance of getting rid of the virus with pegylated interferon plus ribavirin. ^[56] However, you may be more likely to get rid of the virus if you also take a third treatment called a [protease inhibitor](#)

If you've had treatment before

You may have already had treatment for hepatitis C, using standard interferon on its own. This doesn't work for everyone. In some people, it works for a while and then the virus flares up again.

If you've been treated with standard interferon alone and the virus came back, taking pegylated interferon with ribavirin may work for you. ^[41] We don't know if it will work if you had interferon on its own before and it didn't work at all. There hasn't been much research into this.

We also don't know how well treatment will work if you've already been treated with pegylated interferon plus ribavirin and it hasn't worked. If you have genotype 1, your doctor may recommend having the treatment again combined with a [protease inhibitor](#)

How does it work?

Interferons are substances that your body makes naturally. They fight **infections** . They can also be made in a laboratory and taken as medicines. If you take them as medicines, they can help your body fight off infections. Interferon has been used to treat hepatitis C for many years.

Pegylated interferon has a different chemical makeup to standard interferon. This helps it to last longer in your body and makes it better at fighting the virus than standard interferon. Because it lasts longer, you need to have injections only once a week. Standard interferon has to be injected three times a week. ^[56] ^[57]

Ribavirin is a medicine that works against some types of viruses. It doesn't work against hepatitis C on its own. But when you take it with pegylated interferon, the two drugs work well together. We don't know why.

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Can it be harmful?

Yes. Both pegylated interferon and ribavirin can have side effects. These can make you feel ill while you are taking them. You need to weigh up these side effects against the chance of getting liver damage from hepatitis C if you don't have treatment.

Common side effects

Common side effects of pegylated interferon that happen in more than 1 in 10 people include: ^[56] ^[57]

- Tiredness
- Aches and pains
- Nausea
- Weight loss
- Hair loss (but it grows back).

You may also feel irritable and depressed.

The side effects are much worse at the start of the treatment. They can make you feel as if you have a bad flu infection. ^[56] ^[57] You may need to take treatments like painkillers or antidepressants to help you through the early stages. Your doctor will know the sorts of side effects you may get and can help. ^[68]

One study looked at how often people got depressed after taking the different types of interferon. It found that people who took pegylated interferon were less likely to get depressed than people who took standard interferon. ^[53]

But other studies showed the people taking pegylated interferon were more likely to get: ^[67] ^[69]

- Soreness or swelling where they had the injection
- A fever
- Joint pain (called arthralgia)
- A problem where their body did not make enough **white blood cells** (called neutropenia)
- A problem where their body did not make enough **platelets**, which help your blood to clot (called thrombocytopenia).

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Ribavirin has many side effects. The most important one is that your body can stop making enough **red blood cells**. This is called **anaemia**.

You should not take ribavirin if you have bad liver damage or heart disease.

Some of the other common side effects are: ^[56] ^[57] ^[58]

- Feeling tired
- Feeling irritable
- Getting skin rashes
- Feeling that your nose is stuffed up and itchy
- Coughing.

Rarer but serious side effects

Treatment with these medicines can cause rarer but more serious side effects too. These happen to fewer than 2 in 100 people. They include: ^[56] ^[57] ^[58]

- Problems with your thyroid gland
- Serious infections
- A problem where your body makes hardly any white blood cells (severe neutropenia)
- A problem where your body makes hardly any platelets (severe thrombocytopenia)
- Seizures
- Severe **depression**. ^[70]

While you are taking treatment, you will have regular blood tests to check for some of these serious problems.

Birth defects

If you're a woman and you are pregnant, ribavirin can harm your baby. The baby could have birth defects. Women who are pregnant or planning to get pregnant, and men whose partners are trying to get pregnant, shouldn't take ribavirin.

Talk to your doctor about contraception if you have been prescribed ribavirin. You'll need to use reliable contraception while you're taking treatment and for six months after you stop. ^[58]

How good is the research on pegylated interferon plus ribavirin?

There's a lot of good evidence to show that pegylated interferon plus ribavirin works to get rid of the virus that causes hepatitis C.

We found one good-quality study (called a [randomised controlled trial](#), or RCT) of nearly 500 people with hepatitis C who had not been treated before. ^[54] It showed that slightly more than half of the people who took this treatment for 48 weeks got rid of the virus. People with genotype 2 or genotype 3 hepatitis C were more likely to get rid of the virus than those with genotype 1.

Pegylated interferon plus ribavirin has also been tested against other types of treatment for hepatitis C. We found good studies (RCTs) involving several thousand people in total. ^[67] ^[71] ^[72] ^[73] ^[74] They compared pegylated interferon plus ribavirin with:

- [Pegylated interferon on its own](#)
- [Standard interferon](#) (an older form of interferon) plus ribavirin.

The studies found pegylated interferon plus ribavirin worked best.

The type of pegylated interferon used in combination with ribavirin does not seem to matter. The two widely used pegylated interferons seem to work as well as each other and have a similar range of side effects. We found one good-quality study (a randomised controlled trial) that directly compared combinations of different pegylated interferons and ribavirin in 3,070 patients with genotype 1 hepatitis C infection. It found that each type of peginterferon combined with ribavirin worked as well as the other, and that side effects were similar. ^[75]

Pegylated interferon on its own

In this section

[Does it work?](#)

[What is it?](#)

[How can it help?](#)

[How does it work?](#)

[Can it be harmful?](#)

[How good is the research on pegylated interferon on its own?](#)

This information is for people who have hepatitis C. It tells you about pegylated interferon on its own, a treatment used for hepatitis C. It is based on the best and most up-to-date research.

Does it work?

Yes. There is good evidence that pegylated interferon, taken on its own, works to get rid of the hepatitis C virus in some people. ^[76] This may stop the virus damaging your liver.

Hepatitis C

Pegylated interferon works best when taken with another medicine called ribavirin. But some people can't take ribavirin. You can't take ribavirin if you are pregnant or have certain medical conditions. So, your doctor may suggest you take pegylated interferon on its own.

What is it?

Pegylated interferon is also known as peginterferon. It is the newest form of a type of medicine called interferon. It helps your body get rid of the hepatitis C virus.

Its brand names in the UK are Pegasys and ViraferonPeg. You have it as an injection once a week.^[77] ^[78] You will need to take pegylated interferon for quite a long time (maybe as long as 48 weeks).^[79] ^[80]

The treatment won't make you feel better in the short term. In fact, you might feel worse while you are having treatment because of the side effects.

The only way to see if this treatment is working is to have a blood test for the hepatitis C virus. If you test positive, you still have the virus. If you test negative, it means there isn't any of the virus in your blood. For more information, see [Blood tests for hepatitis C](#).

It takes about three months to tell if this treatment is working. So, you will be tested about three months after you start the medicine. If it isn't working, your doctor will probably advise you to stop taking it.^[81]

The virus can come back after treatment is over. So, to be certain that the treatment has worked, doctors check to see if you are still free of the virus six months after you finish treatment. If you are, doctors say you have a **sustained virological response** (SVR for short).

How can it help?

There's good evidence that pegylated interferon on its own works to get rid of the hepatitis C virus for some people. One study showed that six months after treatment, almost one third of people didn't have the virus any more.^[80]

But it doesn't work as well alone as it does with ribavirin. The same study showed that more than one half of people who had been given pegylated interferon plus ribavirin didn't have the virus any more. For more information, see [Pegylated interferon plus ribavirin](#).

There's also good evidence that pegylated interferon on its own works better than an older form of interferon (standard interferon) on its own. Studies show that people who take pegylated interferon are much more likely to get rid of the hepatitis C virus than people who take standard interferon.^[76] ^[82] For more information, see [Standard interferon](#).

Hepatitis C

If you've had treatment before with standard interferon

You may have already had treatment for hepatitis C, using standard interferon on its own. This doesn't work for everyone. In some people, it works for a while and then the virus flares up again.

If you've been treated with standard interferon alone and it hasn't worked, you might want to try pegylated interferon. Unfortunately, we don't know if taking pegylated interferon on its own will help you if interferon on its own didn't. There hasn't been any good research on this.

How does it work?

Interferons are substances that your body makes naturally. They fight **infections**. They can also be made in a laboratory and taken as medicines. If you take them as medicines, they can help your body fight off infections.

Pegylated interferon is a type of interferon with a different chemical makeup than standard interferon. This helps it last longer in your body and makes it better at fighting the virus than standard interferon. Because it lasts longer, you need to have injections only once a week. Standard interferon has to be injected three times a week. ^[77] ^[78]

Can it be harmful?

Yes. Pegylated interferon has some side effects. It can make you feel ill while you are taking it. You need to weigh up these side effects against the chances of getting serious damage to your liver from the hepatitis C virus if you don't have treatment.

There are some common side effects of pegylated interferon that happen in more than 1 in 10 people. They include: ^[77] ^[78]

- Tiredness
- Aches and pains
- Feeling sick
- Losing weight
- Feeling irritable and depressed
- Losing your hair (but it grows back).

The side effects are much worse at the start of the treatment. They can make you feel as if you have a bad flu infection. ^[77] ^[78] You may need to take treatments like painkillers or **antidepressants** to help you through the early stages. Your doctor will know the sorts of side effects you may get and can help. ^[83]

Hepatitis C

One study showed that people who took pegylated interferon were less likely to get depressed than people who took standard interferon. ^[80]

But other studies showed the people taking pegylated interferon were more likely to get: ^[69] ^[67]

- Soreness or swelling where they had the injection
- A fever
- Joint pain (called arthralgia)
- A problem where their body did not make enough **white blood cells** (called neutropenia)
- A problem where their body did not make enough **platelets**, which help your blood to clot (called thrombocytopenia).

Pegylated interferon can cause rarer but more serious side effects too. These happen to fewer than 2 in 100 people. They include: ^[77] ^[78]

- Problems with your **thyroid gland**
- Serious infections
- A problem where your body makes hardly any white blood cells (bad neutropenia)
- A problem where your body makes hardly any platelets (severe thrombocytopenia)
- **Seizures**
- Severe **depression**. ^[84]

While you are taking treatment, your doctor will give you regular blood tests to check for some of these serious problems.

How good is the research on pegylated interferon on its own?

We found some good evidence to show that pegylated interferon, taken on its own, can get rid of the **virus** that causes hepatitis C.

One summary of the evidence (called a **systematic review**) involved more than 2,500 people with hepatitis C who had not been treated before. It compared pegylated interferon with an older form of interferon, called **standard interferon**. ^[85] It showed that the pegylated interferon worked much better at getting rid of the virus.

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Another good study (called a [randomised controlled trial](#)) compared having pegylated interferon with having standard interferon treatment. ^[82] Having pegylated interferon got rid of the virus in 28 in every 100 people but only 11 in every 100 people who took standard interferon got rid of the virus.

A third study compared taking pegylated interferon alone with taking [pegylated interferon plus ribavirin](#) . ^[86] The study involved more than 1,000 people with hepatitis C who hadn't been treated before. It showed pegylated interferon worked, but it worked better when taken with ribavirin.

- Pegylated interferon got rid of the virus in about one third of the people in the study.
- Pegylated interferon plus ribavirin got rid of the virus in slightly more than one half of the people in the study.

Standard interferon

In this section

[Does it work?](#)

[What is it?](#)

[How can it help?](#)

[How does it work?](#)

[Can it be harmful?](#)

[How good is the research on standard interferon?](#)

This information is for people who have hepatitis C. It tells you about standard interferon, a treatment used for hepatitis C. It is based on the best and most up-to-date research.

Does it work?

Yes. There is good evidence that standard interferon, with or without ribavirin, works to get rid of the hepatitis C [virus](#) in some people. This may stop the virus damaging your [liver](#) .

But it doesn't work as well as a newer medication called [pegylated interferon](#) . So, it isn't used much any more.

You need to take standard interferon for a long time (up to 48 weeks). And it has side effects.

What is it?

Interferons are substances that your body makes naturally. They fight [infections](#) . They can also be made in a laboratory, in a form that can be taken as medicine.

Interferon has been used to treat hepatitis C for many years. You take it by injection, several times a week. ^[87] ^[88] Its brand names are Roferon-A and Viraferon.

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It is not used much now because there is a newer form called pegylated interferon. That kind works better. It also lasts longer in your body, so you don't need to have injections as often.

Interferon is usually given along with another medicine, called ribavirin. You take it as a tablet or liquid. Interferon works better if you take ribavirin too. But some people can't take ribavirin. So you may be given interferon on its own.

The treatment will not make you feel better in the short term. In fact, you might feel worse while you are having treatment because of side effects.

The only way to see if this treatment is working is to have a blood test to check for the virus. If you test positive, you still have the virus. If you test negative, there isn't any virus in your blood. For more information, see [Blood tests for hepatitis C](#).

It takes about 12 weeks to tell if this treatment is working. So you will be tested about 12 weeks after you start the medicine. If it isn't working, your doctor will probably advise you to stop taking it. ^[89]

The virus can come back after treatment is over. So to be certain that the treatment has worked, doctors check to see if you are still free of the virus six months after you finish treatment. If you are, doctors say you have a **sustained virological response** (SVR for short).

How can it help?

There is good evidence to show that interferon, taken on its own or with ribavirin, works to get rid of the hepatitis C virus for some people.

One study looked at standard interferon taken on its own in people with hepatitis C. ^[90] Here is what it showed.

- Between 1 in 10 and 2 in 10 people got rid of the virus with interferon on its own.
- But only a few people (about 1 in 100) who didn't have any treatment got rid of the virus.

Another study looked at taking standard interferon plus ribavirin. ^[40] Here is what it showed.

- More than 4 in 10 people given the combined treatment got rid of the virus.
- But fewer than 2 in 10 people given interferon alone got rid of the virus.

But standard interferon doesn't work as well as [pegylated interferon](#). ^[91] Also, standard interferon plus ribavirin doesn't work as well as [pegylated interferon plus ribavirin](#). ^[92] ^[93]

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If you've had treatment before

You may have already had treatment for hepatitis C, using standard interferon on its own. This doesn't work for everyone. In some people, it works for a while and then the virus flares up again.

If you've been treated with standard interferon alone and it hasn't worked, taking a combination of interferon and ribavirin may work for you. ^[40]

If you've been treated with interferon plus ribavirin already and it hasn't worked, your doctor may recommend having treatment again with pegylated interferon plus ribavirin.

How does it work?

Interferons are substances that your body makes naturally. They fight infections. These substances can also be made in a laboratory, in a form that can be taken as medicine.

If you take them as medicines, they can help your body fight off infections. Interferon has been used to treat hepatitis C for many years. ^[87]

Ribavirin is a drug that works against some types of viruses. It doesn't work against hepatitis C on its own. But when you take it with interferon, the two drugs work well together. We don't know why.

Can it be harmful?

Yes, standard interferon has some side effects. It can make you feel ill while you take it. But you need to weigh this up against the chances of getting serious damage to your liver from hepatitis C if you don't have treatment.

Common side effects of standard interferon that happen in more than 1 in 10 people include: ^[87] ^[88]

- Tiredness
- Aches and pains
- Feeling sick
- Losing weight
- Feeling irritable and depressed
- Losing your hair (but it grows back).

The side effects are much worse at the start of the treatment. They can make you feel as if you have a bad flu infection. ^[87] ^[88] You may need to take treatments like painkillers

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or antidepressants to help you through the early stages. Your doctor will know the sorts of side effects you may get and can help. ^[94]

One study found that people who took standard interferon were more likely to get depressed than people who took pegylated interferon. ^[92]

But other studies showed the people taking pegylated interferon were more likely to get: ^{[69] [67]}

- Soreness or swelling where they had the injection
- A fever
- Joint pain (called arthralgia)
- A problem where their body did not make enough **white blood cells** (called neutropenia)
- A problem where their body did not make enough **platelets**, which help your blood to clot (called thrombocytopenia).

Standard interferon can also cause rarer, but more serious, side effects. These happen to fewer than 2 in 100 people. They include: ^[87]

- Problems with your **thyroid gland**
- Serious infections
- A problem where your body makes hardly any white blood cells (severe neutropenia)
- A problem where your body makes hardly any platelets (severe thrombocytopenia)
- **Seizures**
- Severe **depression**. ^[95]

Most people taking standard interferon take ribavirin too. Ribavirin also has side effects. The most serious one is that your body doesn't make enough red blood cells. That is called anaemia.

You shouldn't take ribavirin if you have bad liver damage or heart disease.

Some of the other common side effects of ribavirin are: ^{[87] [88] [96]}

- Feeling tired

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- Feeling irritable
- Having skin rashes
- Feeling that your nose is blocked and itchy
- Having a cough.

If you are pregnant, ribavirin can harm your unborn baby. The baby could have birth defects. Women who are pregnant or planning to get pregnant, and men whose partners are trying to get pregnant, should not take ribavirin.

Talk to your doctor about contraception if you have been prescribed ribavirin. You'll need to use reliable contraception while you're taking treatment and for six months afterwards. [\[96\]](#) [\[97\]](#)

How good is the research on standard interferon?

There is good evidence to show that standard interferon, with or without ribavirin, works to get rid of the hepatitis C virus in some people.

One summary of the evidence (a systematic review) looked at just over 400 people who had not been treated for hepatitis C before. Half of them took standard interferon on its own. Half didn't have any treatment. The study showed that the people who took standard interferon were much more likely to get rid of the virus. [\[98\]](#)

But there's also evidence to show that standard interferon with ribavirin doesn't work as well as [pegylated interferon plus ribavirin](#) at getting rid of the virus. [\[99\]](#) But people who are treated with standard interferon plus ribavirin have fewer side effects than people who are treated with pegylated interferon plus ribavirin.

Protease inhibitors

In this section

[What are they?](#)

[How can they help?](#)

[Can they be harmful?](#)

This information is for people who have hepatitis C. It tells you about protease inhibitors, a treatment used for hepatitis C that is genotype 1.

We haven't looked at the research on protease inhibitors in as much detail as we have for most of the treatments we cover. (To read more, see Our method.) But we've included some information because you may have heard of these treatments or be interested in them.

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What are they?

Protease inhibitors are newer treatments for hepatitis C that is genotype 1 (one of the most common types). They are used along with two standard treatments for hepatitis C called [pegylated interferon and ribavirin](#) .

You can have a protease inhibitor if you've never been treated for genotype 1 before, or if you have been treated but it did not work or did not work well enough. ^[100] ^[101]

The protease inhibitors used for hepatitis C are:

- telaprevir (brand name Incivo)
- boceprevir (brand name Victrelis)
- simeprevir (brand name Olysio).

You take these medicines three times a day with meals.

How can they help?

Protease inhibitors help to stop the hepatitis C virus from multiplying. This increases the chance that pegylated interferon and ribavirin will get rid of the virus. It can also sometimes shorten how long people need to have treatment. ^[100] ^[101]

Can they be harmful?

Protease inhibitors can cause side effects, but these are usually not serious.

Common side effects from boceprevir include: ^[102]

- Having too few red blood cells ([anaemia](#))
- Tiredness
- Nausea
- Headache
- Problems with your sense of taste (dysgeusia).

Common side effects from telaprevir include: ^[103]

- Having too few red blood cells ([anaemia](#))
- A rash

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- Itching
- Diarrhoea
- Nausea
- Vomiting
- Haemorrhoids (piles)
- Anal pain (proctalgia).

Further informations:

Should I be tested for hepatitis C?

The only way to tell if you have hepatitis C is to have a blood test.

Doctors advise certain groups of people to be tested for the virus that causes hepatitis C. This is because they have a high risk of getting infected.

These groups include: [\[4\]](#) [\[5\]](#) [\[6\]](#)

- People who have used needles to inject illegal drugs, even if it was many years ago.
- People who got a [blood transfusion](#) before 1991 or were given products made from blood before 1986.
- Health care workers who have been injured with a needle that had blood on it or who have got splashed in the eye with blood.
- Babies of mothers who have hepatitis C (babies can be tested after they are between 12 months and 18 months old).
- People who have been in a long-term sexual relationship with a partner who has hepatitis C.
- People who have had medical or dental treatment in other countries with equipment that wasn't cleaned properly.
- People who have had ear piercing, body piercing, tattooing, or acupuncture with equipment that was not cleaned properly.

Cutting the risk of passing on hepatitis C

If you have hepatitis C, you may worry about passing it on to other people. You can't pass it on through normal daily contact. But you can pass it on in some other ways.

If you have hepatitis C, here are some steps you need to take. ^[13]

- Don't share needles, syringes, or other equipment used to inject drugs.
- Don't give blood.
- Don't carry a card for donating your organs if you die.
- Don't share household items that may have blood on them (for example, razors and toothbrushes).

Hepatitis C can be spread by sex. But this doesn't happen often. To make the risk of passing hepatitis C to sexual partners even lower, you can use condoms. ^[13] ^[14]

When to have treatment for hepatitis C

Treatment for hepatitis C takes a long time. It has some side effects. And it doesn't work for everyone. So it's not easy deciding when to have treatment. There are some things you need to think about and talk over with your doctor before you decide what to do.

Is your liver damaged?

If you have hepatitis C, but you don't have any liver damage, your doctor will probably say you don't need treatment now. ^[29] But you might still get liver damage in the future. So, you need to keep in touch with your doctor and have regular tests.

If you have mild liver damage, there's a better chance that treatment will work than if your liver damage is more serious. You need to weigh up the chance that the damage may get worse against the side effects of treatment. ^[29] But your doctor should offer you treatment. Your doctor may be able to tell you more about your chance of getting worse liver damage in the future.

If you have serious liver damage, your doctor will probably suggest that you have treatment as soon as you can. ^[29] But you may not be able to take the most powerful treatment, [pegylated interferon plus ribavirin](#). ^[30] ^[31] That's because you can't take ribavirin if you have bad liver problems. You can talk to your doctor about your options.

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Will you be able to cope with the side effects?

Treatment for hepatitis C can be a big challenge, for several reasons. You need to be clear about what to expect.

You can get side effects from treatment. They can include feeling depressed, feeling like you have the flu, getting aches and pains, and feeling sick.^[32] ^[33] Your doctor may be able to give you medicine to help. But you'll still need plenty of determination and support to help you through this time.

Also, treatment can take as long as 48 weeks. That's almost one year. Occasionally people need treatment for even longer.

If you're a woman and you're planning to get pregnant, or if you're a man whose partner is trying to get pregnant, you can't take ribavirin. Anyone being treated with ribavirin needs to use reliable contraception during treatment and for six months afterwards. This is because ribavirin can harm a baby in the womb.^[34] The baby can have problems when it is born, called birth defects.

What type of hepatitis C virus do you have?

There are six types of hepatitis C virus, which all have different genes. Doctors call the types **genotypes**. They are numbered 1 to 6. It is important to know which type you have. That's because what type of hepatitis C virus you have affects the chances that treatment will work for you. If you don't know what type you have, ask your doctor. Most people in the UK who have hepatitis C have genotype 1 or genotype 3.

If you have genotype 2 or genotype 3, the standard treatment ([pegylated interferon plus ribavirin](#)) is much more likely to work for you: you have about an 8 in 10 chance of getting rid of the virus with treatment.^[32] Most doctors recommend that people with these genotypes have treatment.

But if you have genotype 1, you have about a 4 in 10 to 5 in 10 chance that standard treatment will work.^[32] However, you may be able to take a third treatment called a [protease inhibitor](#) to improve your chance of getting rid of the virus. You'll need to weigh up this chance against the side effects of treatment.

Your doctor may be able to tell you more about the chance that treatment will work for you.

Do you have any other medical conditions?

If you have other medical conditions, or if you're pregnant, this may affect the type of treatment you can take.

If you're pregnant, you can't take ribavirin because it can cause serious birth defects in your baby.^[30] Pegylated interferon also isn't recommended for pregnant women. Talk

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to your doctor about your options. You may want to wait until after you've had your baby to start treatment.

People with the human immunodeficiency virus (HIV for short) often have hepatitis C too. If you have both illnesses, doctors may adjust your HIV treatment while you have treatment for hepatitis C. ^[29] ^[35] That's because some drugs used to treat HIV can harm your liver, or interfere with hepatitis C treatment. Your liver may have a better chance of coping with the HIV drugs once you have got rid of the hepatitis C virus from your body. Studies show that pegylated interferon plus ribavirin works for 26 in 100 to 57 in 100 people with both HIV and hepatitis C, depending on the genotype of the virus. ^[36] ^[37]

^[38] ^[39] Mostly, the side effects are the same as for people without HIV. For more information about HIV treatments, see our articles on [HIV infection](#) .

If you have heart disease or bad liver damage, you may not be able to take ribavirin. ^[30] That's because it can make these conditions worse. You can probably have other treatments for hepatitis C. But they are less likely to work. Talk to your doctor about your options.

If you inject illegal drugs, it may be hard to stick to taking regular treatment and using regular contraception. You could also pick up hepatitis C again if you share needles or an injection kit with other people who use illegal drugs. But this doesn't mean you can't have treatment for hepatitis C. Talk with your doctor about how you are going to cope with treatment. ^[29]

Have you had treatment before?

Hepatitis C treatments don't work for everyone. And for some people, they work for a while and then the infection comes back.

But treatments have got a lot better in the past 10 years. If you've been treated before but the treatment didn't work, you may want to think about trying again.

If you were treated for hepatitis C using [standard interferon](#) (an older form of interferon) on its own, doctors think that trying again with the newer [pegylated interferon plus ribavirin](#) may work for you. ^[40] ^[41]

If you've already been treated with pegylated interferon plus ribavirin and it didn't work, your doctor may suggest having treatment again, but it's not clear how well this will work. If you have genotype 1, your doctor may recommend having the treatment again combined with a drug called a [protease inhibitor](#) .

Blood tests for hepatitis C

There are several blood tests to see if you have hepatitis C. For these tests, a small bit of blood is taken, usually from your arm. The blood is then sent to a laboratory to see if it contains the hepatitis C virus.

Testing for antibodies

The first test you are likely to have looks for substances called **antibodies**. Your body makes specific ones to fight off the hepatitis C virus.

If this test is positive, it means you have been infected with the virus at some time. But it does not tell if you still have the virus in your body. Your body may have got rid of the virus naturally. ^[45]

When you get infected with hepatitis C, it can take up to six months for antibodies to show up in your blood. So, if you have only just been infected, this test might be negative even though you do have the virus. ^[45]

If you have a positive test, you will then have a different blood test to make certain that the first one was correct. ^[45]

Testing for the hepatitis C virus

If you've had a positive test for antibodies, or if you need to find out very quickly whether you are infected, you may have a blood test that checks for the virus itself.

This test is also called a **viral RNA test** or a **PCR test**. It will show if the virus is in your bloodstream. And it works within two weeks of you getting infected. ^[45]

If you're having treatment to get rid of the virus, you may also need another type of test for the virus. That one shows how much is left in your bloodstream. This is to see if the treatment is working. If it is working, the amount of virus in your bloodstream should go down. ^[45]

Testing for damage to your liver

If you have a positive test for antibodies or for the virus, you'll probably have another blood test that helps tell if you have liver damage. Doctors call this a liver function test. It can find out if you have **inflammation** of your liver.

The main test is called an **alanine aminotransferase test** (ALT test for short). ^[45] ^[46]
You'll need to have this test regularly, probably every six months to 12 months, to see if it changes. This test may help you and your doctor decide if you should start treatment.

Hepatitis C

Having a liver biopsy

There is only one way to tell for certain whether the virus that causes hepatitis C has damaged your liver. That is to take out a small piece of your liver and look at it under a microscope.^[47] Doctors call this a **liver biopsy**. It can help tell if there is any inflammation or scarring in your liver.

Your doctor might suggest you have this test to help you decide whether to start treatment to get rid of the hepatitis C virus. If the virus hasn't caused any damage, you probably won't need treatment.^[48] But you may need to have another biopsy after four years to five years, to check again.^[48]

You will probably have the biopsy in hospital. A specialist doctor does the biopsy. You'll be awake during the biopsy but you will have a **local anaesthetic**. This numbs your skin.

Your doctor will pass a thin, hollow needle into your body, probably between the ribs on your right side. They will put the needle quickly into your liver and then take it out. A small piece of your liver will be inside the needle. This will be sent to a laboratory and checked under a microscope.

You'll need to lie on your side, pressed against the area where the needle went in, for up to eight hours. This is to make certain your wound doesn't bleed. Your doctor and nurses will check to make certain your wound is healing properly. Some people find a liver biopsy painful. If you're in pain, ask your doctor or nurse for a painkiller.

You should be able to go home the same day. But you may need someone to drive you home.

Glossary:

viruses

Viruses are microbes (tiny organisms) that need the cells of humans or other animals to exist. They use the machinery of cells to reproduce. Then they spread to other cells in the body.

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.

blood transfusion

If you've lost too much blood from your body, you may need a blood transfusion to replace it. People with diseases of their blood, like sickle cell anaemia, sometimes need blood transfusions to replace blood that doesn't work properly.

inflammation

Inflammation is when your skin or some other part of your body becomes red, swollen, hot, and sore. Inflammation happens because your body is trying to protect you from germs, from something that's in your body and could harm you (like a splinter) or from things that cause allergies (these things are called allergens). Inflammation is one of the ways in which your body heals an infection or an injury.

genes

Your genes are the parts of your cells that contain instructions for how your body works. Genes are found on chromosomes, structures that sit in the nucleus at the middle of each of your cells. You have 23 pairs of chromosomes in your normal cells, each of which has thousands of genes. You get one set of chromosomes, and all of the genes that are on them, from each of your parents.

Haemophilia

Hepatitis C

People with haemophilia have something missing from their blood, which stops their blood clotting properly. Haemophilia is a hereditary disease, which means you have it because of the genes you got from your parents.

biopsy

Biopsy is when doctors remove some tissue from a part of your body, so that it can be examined under a microscope.

antibodies

Antibodies are an important part of your immune system. They are proteins made by white blood cells (another part of your immune system). They help destroy bacteria and other agents that cause infections.

anaesthetic

An anaesthetic is a chemical that blocks the ability to feel sensations like pain or heat. A local anaesthetic blocks the feeling in a specific area of the body. For example, your dentist uses a local anaesthetic like lignocaine in your gums so that you don't feel the pain of having a cavity filled. A general anaesthetic makes you completely unconscious and is usually used only in a carefully controlled environment like an operating room.

heart disease

You get heart disease when your heart isn't able to pump blood as well as it should. This can happen for a variety of reasons.

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.

white blood cells

White blood cells are the cells in your blood that help your body fight infections. They are part of your immune system. The other cells in your blood, red blood cells, carry oxygen around your body.

platelets

Platelets are small disc-shaped particles found in your blood (along with red blood cells and white blood cells). Platelets form the clots that stop the bleeding when you've been cut. People who don't have enough platelets have problems with bleeding too much.

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.

anaemia

Anaemia is when you have too few red blood cells. Anaemia can make you get tired and breathless easily. It can also make you look pale. Anaemia can be caused by a number of different things, including problems with your diet, blood loss and some diseases.

seizure

A seizure (or fit) is when there is too much electrical activity in your brain, which results in muscle twitching and other symptoms.

depression

Depression is a mental illness in which your mood is low and you feel sad most of the time. It can range from a mild illness through to a severe one in which you lose interest in life and may be suicidal.

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.

antidepressant

Antidepressants are medicines used to treat depression and sometimes other conditions. They work by changing the levels of chemicals in your brain called neurotransmitters. There are three main types of antidepressants, which work in different ways: selective serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs) and tricyclic antidepressants (TCAs).

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.

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.

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