

Patient information from the BMJ Group

Raynaud's phenomenon

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Raynaud's phenomenon

Raynaud's phenomenon is an illness that can cause blood to suddenly be unable to reach parts of your body. It usually affects your fingers and toes. During an attack, they change colour, and feel numb or painful. This can be unpleasant but it isn't usually serious. The simplest way to prevent attacks is to keep warm. Some medicines may help if your symptoms are severe.

We've brought together the best research about Raynaud's 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 Raynaud's phenomenon?

If you have Raynaud's, your fingers, your toes, and other parts of your body can suddenly become numb, white, and cold.



When you have an attack of Raynaud's in your hands, they turn white, then blue.

This happens because blood can't get to them. They then go blue because they're not getting enough oxygen. As the blood returns, they go very red. They may then feel hot and painful.

Raynaud's phenomenon is named after the doctor who first linked having the attacks with going out in the cold. ^[1]

These sudden Raynaud's attacks happen because small blood vessels in your fingers and toes suddenly become narrow and stop your blood flowing normally. This can also happen to your nose and ear lobes and, more rarely, your nipples and tongue. ^[2] Attacks

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usually happen because of cold temperatures, but some people get attacks if they feel upset or stressed. ^[2]



When the blood flows back into your hand, it will look red and feel hot.

People who have Raynaud's have blood vessels that are more sensitive to cool weather. Just a small change in temperature can trigger an attack.

In most people with Raynaud's, the disease isn't connected to any serious medical problem. In fact, nobody knows what causes it. ^[1]

You can get Raynaud's at any age, although some research has shown that people usually get symptoms before the age of 40. ^[3] Most people with Raynaud's start to have attacks when they are teenagers. ^[1] Sometimes the condition runs in families. ^[4]

Some people have Raynaud's caused by a more serious illness, such as lupus (a disorder of the immune system that can affect many different parts of the body) and rheumatoid arthritis. For these people, the symptoms are often much more serious. ^[4] Some people get Raynaud's because of medicines they are taking, such as beta-blockers and drugs for migraines. And people who work with vibrating tools, such as road diggers, also have a higher chance of getting it. ^[5]

Here, we are only looking at treatments for Raynaud's that is not connected to a more serious condition.

What are the symptoms of Raynaud's phenomenon?

Having Raynaud's is not the same as frequently having cold hands or fingers.

During a Raynaud's attack: ^[4]

- Some or all of your fingers suddenly go white
- Your toes, ear lobes, and nose (and more rarely your tongue and nipples) may also go white
- Your fingers will feel cold, may tingle, and will feel numb or painful
- Because your fingers aren't getting any oxygen, they may then turn blue

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- As the blood returns to your fingers, they turn very red and may throb and hurt.

The attack can last for anything from a few minutes up to a few hours. It depends on how quickly your fingers get warm again.

Raynaud's can be very unsettling and worrying, but it is usually not serious and the symptoms should disappear completely after each attack.

Some people get ulcers on their fingers and toes, but this is rare. If your attacks are very bad and you get symptoms such as ulcers, then a more serious medical problem may be causing the attacks. You should see your doctor straight away.^[1]

How common is Raynaud's phenomenon?

Raynaud's phenomenon is quite common.

Between 3 in 100 and 5 in 100 people have it, and it is much more common in places with cold weather.^{[6] [7] [8] [9]} Women are slightly more likely to have Raynaud's than men.

Most people with Raynaud's start to have attacks when they are teenagers.^[1]

What treatments work for Raynaud's phenomenon?

If your symptoms are mild, you probably won't need any treatment. If your symptoms are more severe, your doctor may recommend taking medicines.

Key points about treating Raynaud's phenomenon

- Keeping warm is the best way to prevent attacks.
- A medicine called nifedipine can help prevent Raynaud's attacks. But it can cause side effects.
- Your doctor may try other medicines, but there's not enough research to say whether they work or not.

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

Treatment Group 1

Treatments for Raynaud's phenomenon

Treatments that are likely to work

- [Keeping warm](#)

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- [Exercise](#)

Treatments that work but whose harms may outweigh the benefits

- [Nifedipine](#)

Treatments that need further study

- [Giving up smoking](#)
- [Amlodipine](#)
- [Diltiazem](#)
- [Nicardipine](#)
- [Other medicines](#)
- [Alternative treatments](#)

What will happen to me?

For most people with Raynaud's, the attacks are just a minor but uncomfortable problem.

One study has found that only about 1 in 10 people with Raynaud's have severe, frequent attacks. ^[1]

Some research shows that just over 1 in 10 people who have Raynaud's are later found to have a more serious condition. ^{[2] [10]}

If your symptoms are mild then there probably won't be any need to take medicines. The best thing you can do is avoid getting cold. ^[1]

Here's what you can do to help yourself. ^[2]

What to do during an attack

Re-warm your hands, your feet, or the affected part of your body by going indoors. You can use warm water to help do this. If stress has triggered the attack, try to remove yourself from the stressful situation.

What to do to help prevent attacks

Doing the following things can make it less likely that you'll get a Raynaud's attack.

- Keep warm.
- Stop smoking. The chemicals in tobacco may make your symptoms worse.

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- Exercise regularly. This is recommended for people with Raynaud's by some doctors. But we don't know if it helps, because there hasn't been any good research.
- Control stress. If you find that your attacks start when you are upset or stressed then you should try to avoid stressful situations. You may find a stress management course helpful.

Treatments:

Keeping warm

In this section

The symptoms of Raynaud's phenomenon are usually triggered by cold. So, it's common sense that staying warm should mean you get fewer symptoms. There's been no good research to find out exactly how much difference it makes to your symptoms if you keep warm. But it's probably the first thing your doctor will advise you to try.

Don't just try to keep your hands and feet warm. You need to keep your whole body warm to stop your fingers and toes over-reacting to the cold. Here are a few ideas: ^[1] ^[4] ^[11]
^[2]

- Use layers of loose-fitting clothing
- Use hats and gloves in cold weather
- Keep your feet dry
- Wear gloves or socks in bed during winter
- Use portable heating aids and chemical warmers for your hands and feet if you need to stay outside for a long time
- Remember that air conditioning can make rooms very cool.

Exercise

In this section

Exercise gets your blood pumping and improves your circulation. There hasn't been any good research looking at what difference exercise makes to Raynaud's phenomenon, but doctors usually recommend it.

Government advice recommends getting at least 30 minutes of exercise, most days of the week. ^[12] Make sure you exercise safely and don't overdo it, or you could risk injuring yourself.

Nifedipine

In this section

Nifedipine is the medicine doctors usually recommend. It's only available on prescription. One brand name is Adalat.

Nifedipine makes your blood vessels relax and widen. This should help the blood flow to your fingers and toes.

A summary of studies (called a **systematic review**) found that nifedipine can help prevent Raynaud's attacks or reduce the symptoms of an attack.^[13] One of the studies found that nifedipine cuts the number of attacks people have by about one-half.^[14]

A more recent summary of studies also found that nifedipine can reduce the number of attacks, but the improvement may be fairly small.^[15]

Nifedipine can cause side effects, such as heart flutter (**palpitations**), headaches, flushing, and swollen ankles. People who take higher doses tend to get more side effects. In one study, between one-half and three-quarters of people taking it had side effects.^[16]

Giving up smoking

In this section

There's no good research looking at what effect smoking has on Raynaud's phenomenon. But we do know that smoking damages your blood vessels. So, it's possible that stopping smoking could improve your circulation and help your symptoms improve.

Lots of people find it hard to stop smoking, but there are things that can make it easier.

- Getting help from a doctor, nurse, or counsellor makes it easier to stop.
- Nicotine patches and gum can make it easier to stop smoking. You can also get other nicotine replacement products, such as lozenges, inhalers, and a nasal spray.
- There are two drugs available in the UK that make it easier to stop smoking. They're called bupropion (brand name Zyban) and varenicline (Champix). But they both have side effects, and they're not suitable for everyone.
- The NHS offers a smoking helpline that smokers and their families can call for free, expert advice. The number is 0300 123 1044. You can also get help from the NHS website (<http://smokefree.nhs.uk>).

To read more about how to give up, see our information on [Smoking](#) .

Amlodipine

In this section

Amlodipine makes your blood vessels relax and widen. This should help the blood flow to your fingers and toes. The brand name for this medicine is Istin. It's only available on prescription.

One study found that amlodipine reduced the number of attacks in people with Raynaud's phenomenon, but the study was very small. ^[17] More studies are needed to know for certain whether or not this treatment works.

Amlodipine can also cause side effects such as swollen ankles, flushing, and headaches. ^[17]

Diltiazem

In this section

Diltiazem makes your blood vessels relax and widen. This should help the blood flow to your fingers and toes. The brand name for this medicine is Tildiem. It's only available on prescription.

One small study found that diltiazem reduced the number of attacks, but this study wasn't very good. ^[18] We need more research to know for certain whether or not this treatment works.

Diltiazem can cause side effects such as ankle swelling, flushing, and headaches. ^[19]

Nicardipine

In this section

Nicardipine makes your blood vessels relax and widen. This should help the blood flow to your fingers and toes. One brand name for this medicine is Cardene. It's only available on prescription.

Only a few studies have looked at using nicardipine for Raynaud's. ^[15] They have all been small or had other problems that make their findings less reliable. They have also had different results. For example, one study found that nicardipine can help prevent attacks in some people. But, in another study, the drug didn't work any better than a dummy treatment (a placebo). ^[20] ^[21]

You can get side effects from this medicine, including flushing, headache, and heart flutter (palpitations). ^[21]

Other medicines

In this section

Doctors sometimes try other treatments to see if they can help with Raynaud's phenomenon. Some studies show that these treatments may help some people, but a lot more research needs to be done before we can know for sure.

You'll need a prescription for these pills from your doctor.

- Inositol nicotinate (Hexopal): There isn't enough evidence to say whether this medicine can help or not. ^[22] ^[23] A few people who took the drug got stomach upsets or dizziness. ^[23]
- Moxisylyte (Opilon): We found one summary of the research (a systematic review) It found that Moxisylyte may be more effective than a placebo (dummy treatment) at reducing how often people get Raynaud's attacks. However, it also showed that moxisylyte may be no more effective at reducing how severe an attack is, or how long it lasts, than a placebo. ^[24] Side effects include dizziness and nausea. ^[25]
- Naftidrofuryl oxalate (Praxilene): We found one study of this drug in people with Raynaud's. ^[26] It did seem to help reduce how long attacks lasted. But more research is needed. Side effects include nausea and stomach ache. ^[27]
- Prazosin (Hypovase): One small study found that this drug helped reduce the number of attacks people had. But the study had problems and more research is needed. ^[21] One-half of the people taking it felt dizzy and had heart flutter (palpitations).

Alternative treatments

In this section

Because Raynaud's phenomenon is hard to treat, many people try alternative medicine. We found one summary of the research (a systematic review) into alternative treatments for Raynaud's. The summary looked at acupuncture , antioxidant supplements, biofeedback , essential fatty acid supplements, Ginkgo biloba, L-arginine supplements, laser treatment, glucosaminoglycans supplements, and therapeutic gloves.

The summary found that most of the studies looking at these treatments were old, small, and of poor quality. This makes it hard to draw conclusions from them. However, the summary did find enough research to conclude that biofeedback does not work. ^[28]

Further informations:

Glossary:

immune system

Your immune system is made up of the parts of your body that fight infection. When bacteria or viruses get into your body, it's your immune system that kills them. Antibodies and white blood cells are part of your immune system. They travel in your blood and attack bacteria, viruses and other things that could damage your body.

rheumatoid arthritis

If you have rheumatoid arthritis, your joints get painful, swollen, and stiff. Rheumatoid arthritis is caused by inflammation inside your joints. It happens when your immune system attacks the lining of your joints.

Beta-blockers

These drugs work by blocking the effects of certain chemicals produced by your body (such as adrenaline). Beta-blockers slow your heart rate and improve the beating of your heart. They are often used in people with angina or heart failure.

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.

palpitations

A palpitation is when you feel like your heart is beating very fast.

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.

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.

biofeedback

When you have biofeedback, your doctor helps you use a device that measures how fast your heart beats, how fast you're breathing or how tense your muscles are. The information you get from the device is called 'biofeedback'. Biofeedback lets you see how your heartbeat, breathing or muscle tension change when you do things like stand or sit differently, or slow down your breathing. The idea is that you can learn to sense the messages from your body without the device and learn how to control the way you respond to stress.

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