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Raynaud's phenomenon

Raynaud's phenomenon, often just called Raynaud's, is a condition where the small blood vessels of the fingers become narrow (constrict), most commonly when they are in a cool environment. Sometimes blood vessels to other extremities such as the toes, ears and nose are affected. It is named after Dr Maurice Raynaud, the man who first described it in 1862.

Raynaud's phenomenon occurs when the extremities of the body, usually the fingers and toes, change colour and may become painful. It is due to a narrowing (constriction) of the small blood vessels on exposure to the cold, or to a change in temperature, or to emotional stress. In most cases, the cause is not known. In some cases, it is a symptom of an underlying condition such as scleroderma, lupus, or rheumatoid arthritis.

Symptoms

Typically, symptoms develop in fingers when you become cool - for example, in cold weather.

- At first the fingers go white and cool. This happens because the small blood vessels in the fingers narrow (constrict).
- The fingers then go a bluish colour (or even purple or black in severe cases). This happens because the oxygen is used up quickly from the blood in the narrowed blood vessels.
- The fingers then go bright red. This happens because blood vessels open up again (dilate) and the blood flow returns. This may cause tingling, throbbing, numbness and pain (which can be severe in some cases).

Many people with Raynaud's do not have the full classic colour changes but develop bouts of uncomfortable, pale, cold fingers. Only the fingers are affected in most cases. In some cases the toes are also affected. Less commonly other extremities of the body are affected, such as the earlobes, nose, nipples or tongue. Each bout of symptoms can last from minutes to hours.

Raynaud's is usually mild, with infrequent, brief bouts of symptoms that last just a few minutes. Sometimes it is moderate with more frequent bouts of symptoms that last longer. Rarely, it is severe with repeated frequent bouts, with each bout lasting longer periods of time.

Causes

Primary Raynaud's - when the cause is not known

In most cases there is no known cause (more than 9 in 10 cases). This is called primary Raynaud's. The small blood vessels in the fingers, toes, etc, just appear to be more sensitive than normal to cool temperatures. There is no other underlying disease. Symptoms are triggered more easily in some people than in others. Even mildly cool weather, or getting something out of the freezer, can trigger symptoms in some people. Strong emotion may also trigger symptoms in some cases.

Usually, all fingers on both hands are affected in primary Raynaud's. It also tends to run in some families. Women are affected much more often than men. It usually first develops before the age of 30. There are no other symptoms apart from those described above, and symptoms go completely after each bout.

Secondary Raynaud's - due to an underlying cause

In fewer than 1 in 10 cases, there is an underlying cause. This is called secondary Raynaud's. Various conditions of blood vessels, joints, muscles, nerves or skin can cause secondary Raynaud's. For example, scleroderma, rheumatoid arthritis, multiple sclerosis, systemic lupus erythematosus (SLE) and other 'connective tissue' diseases.

If you have secondary Raynaud's you will normally have other symptoms in addition to the symptoms of Raynaud's. The Raynaud's is just one feature of the condition. For example, you may also have joint pains, rashes, joint swelling, etc.

Often, the underlying condition is already present and you may develop Raynaud's as a complication. Sometimes the symptoms of Raynaud's occur first and other symptoms of the underlying condition develop weeks, months or even years later.

In secondary Raynaud's, symptoms may first begin in just one or two fingers on one hand. This is in contrast to primary Raynaud's when all fingers on both hands are typically affected. Certain medicines may also cause secondary Raynaud's as a side-effect (see below).

Hand-arm vibration syndrome (vibration white finger) is one common cause of secondary Raynaud's. This is caused by using vibrating tools regularly over a long time. For example, it occurs in some shipyard workers, mine workers, road diggers, etc. It is thought that repeated vibrations over time may damage the small blood vessels or their nerve supply.

How common is Raynaud's?

Raynaud's is a common disorder. About 1 in 20 people develop Raynaud's phenomenon. Up to 9 in 10 cases are primary Raynaud's. Primary Raynaud's usually first develops in teenagers and young adults, but it can develop at any age. Secondary Raynaud's can develop at any age when the underlying condition develops.

Do I need any tests to confirm the diagnosis?

Not in most cases. There is no test that confirms primary Raynaud's. The diagnosis of primary Raynaud's is made on the basis of the typical symptoms (described above) and there is no abnormality found that may suggest a secondary cause when a doctor examines you.

Features that may suggest secondary Raynaud's include:

- Onset of symptoms after 30 years of age.
- Abrupt onset with rapid progression and worsening of symptoms.
- Severe symptoms that may include an ulcer or gangrene of part of a finger or toe.
- Symptoms that only affect one hand or foot, or the symptoms are not the same or as severe on both hands and feet.
- Joint pains or arthritis.
- Skin rashes.
- Dry eyes or mouth.
- Muscle weakness or pain.
- Swallowing difficulties.
- Breathlessness.
- Mouth ulcers.
- Previous work with vibrating tools.

Blood tests and other tests may be done if secondary Raynaud's is suspected. Sometimes the diagnosis of an underlying cause is already known (for example, rheumatoid arthritis) and the development of Raynaud's is not a surprising feature.

Possible complications

- Primary Raynaud's - complications seldom, if ever, occur.

- Secondary Raynaud's - complications occur in a small number of cases and include ulcers developing on affected fingers and toes; scarring of tips of fingers and toes; tissue death (gangrene) of parts of affected fingers and toes.

What can I do to help?

- **Smoking** can make symptoms worse. The chemicals in tobacco can cause the small blood vessels to narrow. If you smoke, stopping smoking may ease or even cure the problem.
- **Some medicines** that are used to treat other conditions sometimes trigger symptoms or make them worse. The medicine may cause the blood vessels to narrow. Such medicines include beta-blockers, some anti-migraine medicines, decongestants and, very occasionally, the contraceptive pill. Don't stop a prescribed medicine if you suspect it may be making symptoms worse. See your doctor to discuss possible alternatives.
- **Other drugs**. Caffeine (in tea, coffee, cola and in some painkillers) triggers symptoms in some people. Try cutting out caffeine for a few weeks to see if it helps. Amfetamines and cocaine may also be a trigger.

- **Try to keep warm in cool weather or in cool environments**:

    - Keep your hands and feet warm. Warm gloves, socks and shoes are essential when you are out in cool weather.
    - Keep your whole body warm, not just your hands and feet. Although your hands and feet are the most important, symptoms are less likely to occur if you keep your entire body warm. So, wrap up warmly before going into cooler areas, such as outside on cold days. For example, wear hats and scarves in addition to warm clothes.
    - It is best to put gloves on when you are warm, before going into colder areas. Ideally, keep gloves, socks and headgear in an airing cupboard or near a radiator so they will be warm when put on.
    - If you have severe symptoms, or symptoms that are easily triggered then portable heat packs and battery-heated gloves and socks are useful. The charity Scleroderma & Raynaud's UK has a list of suppliers - see below for their details. Your pharmacist or local medical supplier may also be able to advise.

- **Try not to touch cold objects**. For example, use a towel or gloves when removing food from the freezer or working with cold food.
- **Regular exercise** is recommended by many experts. Exercise your hands and feet frequently to improve the circulation.
- **When a bout of symptoms develops**, warm the affected hands or feet as soon as possible. Soaking the hands or feet in warm running water is a good way to get warm (but take care that the water does not become too hot, or lose its heat and become cool).

Treatment

Keeping warm is the main treatment. Symptoms are much less likely to occur, and be less severe, if you keep warm (described above). Other treatments are needed only in some cases.

Medication

A calcium-channel blocker called nifedipine may be advised if symptoms are severe. It works by 'opening up' (dilating) the small blood vessels. Some people take nifedipine regularly, each day, to prevent symptoms.

Various other medicines may be tried if nifedipine is not helpful, or causes side-effects. In particular, various medicines have been tried to some effect for people with secondary Raynaud's due to certain conditions.

Stress counselling or relaxation techniques

These may be helpful if you have primary Raynaud's and the symptoms are triggered by stress or emotion.

'Nerve blocks' or other hospital-based treatments

May be tried if you have severe Raynaud's which is not helped by other treatments.

What is the outlook (prognosis)?

Primary Raynaud's

The outlook for people with primary Raynaud's is usually good. Most people have mild symptoms that do not interfere much with daily life. People with more severe symptoms often respond well to treatment with nifedipine. In some cases the condition goes away (remits) in time. In one study that followed up people with primary Raynaud's over seven years, the condition had gone away in nearly two in three cases at some point over the study period.

Sometimes, someone who is thought to have primary Raynaud's develops other symptoms several months or years later and the diagnosis is changed to secondary Raynaud's. This is thought to occur in about 1 in 10 people who are initially diagnosed with primary Raynauds.

Secondary Raynaud's

There are various underlying conditions that can cause secondary Raynaud's and their severity can vary. In general, symptoms are often more severe than with primary Raynaud's, and tend to respond less well to treatment. In some situations, treating an underlying condition will ease the symptoms of Raynaud's.

Further reading

- Scleroderma & Raynaud's UK (SRUK)
- Ennis H, Hughes M, Anderson ME, et al; Calcium channel blockers for primary Raynaud's phenomenon. Cochrane Database Syst Rev. 2016 Feb 25;2:CD002069. doi: 10.1002/14651858.CD002069.pub5.
- Garner R, Kumari R, Lanyon P, et al; Prevalence, risk factors and associations of primary Raynaud's phenomenon: systematic review and meta-analysis of observational studies. BMJ Open. 2015 Mar 16;5(3):e006389. doi: 10.1136/bmjopen-2014-006389.
- Landry GJ; Current medical and surgical management of Raynaud's syndrome. J Vasc Surg. 2013 Jun;57(6):1710-6. doi: 10.1016/j.jvs.2013.03.012. Epub 2013 Apr 23.
- Raynaud's phenomenon; NICE CKS, February 2020 (UK access only)
- Belch J, Carlizza A, Carpentier PH, et al; ESVM guidelines - the diagnosis and management of Raynaud's phenomenon. Vasa. 2017 Oct;46(6):413-423. doi: 10.1024/0301-1526/a000661. Epub 2017 Sep 12.
- Pauling JD, Saketkoo LA, Matucci-Cerinic M, et al; The patient experience of Raynaud's phenomenon in systemic sclerosis. Rheumatology (Oxford). 2019 Jan 1;58(1):18-26. doi: 10.1093/rheumatology/key026.

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