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## Raynaud phenomenon

### What is Raynaud phenomenon?

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Raynaud phenomenon is an episodic reduction in the blood supply to the fingers and/or toes occurring mainly in response to cold (vasospastic disease). It can be divided into two main types:

1. Primary Raynaud phenomenon, also known as Raynaud Disease, and is not associated with any other conditions. 'Disease' is perhaps a misnomer for a condition that affects at least one in five young women and could therefore be regarded as an exaggeration of the normal response of the circulation to cold.
2. Secondary Raynaud phenomenon either has an identifiable cause or is associated with some other condition.

### How do I know if I have Raynaud phenomenon?

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An attack of Raynaud phenomenon is triggered by exposure to cold, such as going out into a cold wind or immersing the hands in cold water. Sudden emotional or psychological upsets can also bring on an attack. Typically, one or more fingers will turn white and numb and, on rewarming, blue due to a sluggish blood flow. This is then sometimes followed by a bright red colour due to a compensatory increased blood flow before the normal skin colour and sensation are restored. Attacks may be painful and can last from minutes to hours. The condition most commonly affects the hands, but sometimes involves the feet and occasionally the tip of the nose or the earlobes.

#### Raynaud phenomenon



Systemic sclerosis

### How do I distinguish primary from secondary Raynaud phenomenon?

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Primary Raynaud phenomenon is about twice as common as the secondary form. It usually starts under 25 years of age and is five times commoner in women than in men. Individuals often recall cold intolerance dating back to childhood.

Patients with secondary Raynaud phenomenon will often have the symptoms of an associated condition (see below) or be on medication that can cause Raynaud phenomenon as a side effect. If you develop Raynaud phenomenon for the first time when you are older than 25 years and do not recall any cold intolerance in childhood, then it is particularly important that you seek medical advice in order to exclude any underlying

causes.

## What are the causes of secondary Raynaud phenomenon?

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Secondary Raynaud phenomenon is much less common than the primary form, but can be associated with a variety of underlying conditions. The commoner causes are as follows:

### Connective tissue diseases

This is a group of conditions believed to be due to disordered regulation of the immune system. The one most likely to cause Raynaud phenomenon is [systemic sclerosis](#) (also known as scleroderma), which can also occur in a more benign localised form called CREST syndrome. The hallmark of this condition is thickening and tightening of the skin, especially on the hands and face. Dilated blood vessels known as telangiectases may appear in these areas, along with deposits of chalky material under the skin known as [calcinosis](#). In severe forms of the disease, ulceration of the fingertips may occur. Raynaud phenomenon also occurs in [systemic lupus erythematosus](#), [dermatomyositis](#), [Sjogren syndrome](#) and [Wegener granulomatosis](#). It is important to emphasise that the underlying connective tissue disease may not be apparent at the time that you develop Raynaud phenomenon. Sometimes it manifests itself months or even years after the Raynaud phenomenon and can only be diagnosed at an early stage by special blood tests.

### Drugs

If you are on a beta-blocker (widely used for angina, high blood pressure, anxiety), a migraine remedy containing ergotamine or methysergide, bleomycin (for cancer treatment), clonidine (for high blood pressure, migraine or flushing), bromocriptine (for Parkinsonism and some other conditions), imipramine (for depression) or an oral contraceptive pill and develop Raynaud phenomenon, you should consult your doctor as any of these drugs can be responsible. Other drugs including [chemotherapy agents](#) can also cause Raynaud phenomenon, so ask if in doubt. Once your doctor has taken you off the offending drug, your Raynaud phenomenon is likely to clear up quite quickly.

### Arterial disease

Raynaud phenomenon may sometimes indicate underlying atherosclerosis, especially in smokers.

### Nerve disorders

Raynaud phenomenon may develop in a limb affected by a stroke and can also occur in multiple sclerosis and polio. Rarely patients may have an extra rib which presses on the nerve and blood vessel roots at the top of the arm, resulting in Raynaud phenomenon.

### Occupation

Certain occupations are known to be associated with Raynaud phenomenon, such as use of vibrating tools (e.g. pneumatic drill operators, lumberjacks) and industrial exposure to vinyl chloride polymerisation processes.

### Miscellaneous

Disorders that increase the viscosity (thickness) of the blood so that it does not flow easily through the small blood vessels in the fingers can also cause Raynaud phenomenon, as can an underactive thyroid gland.

## What should I do if I suspect that I have Raynaud phenomenon?

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You should seek medical advice for the following reasons:

- Raynaud phenomenon, although harmless in the more common primary form, can be an uncomfortable condition and there are various treatments available that may help you.
- If you have one of the conditions associated with secondary Raynaud phenomenon, it is important to diagnose this at an early stage. As mentioned above, special blood tests can indicate if you are likely to

develop a connective tissue disease in the future.

- If your Raynaud phenomenon is very severe and is left untreated, it could result in permanent damage of the affected extremities. It should be emphasised, however, that this complication is rare.

In the first instance your general practitioner will probably refer you to a dermatologist, or possibly a rheumatologist, who will examine you and may arrange some blood tests. You may also have a special examination of the small blood vessels in your nail cuticles, known as nail fold capillary microscopy, which helps to distinguish primary from secondary Raynaud phenomenon. On the basis of these investigations, your dermatologist should be able to advise you on whether you have primary or secondary Raynaud phenomenon and, if secondary, will be able to recommend treatment for the associated disorder.

## What can I do myself to improve the Raynaud phenomenon?

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Raynaud phenomenon may persist for a long time or may improve spontaneously. There are various measures that you can take yourself which can help the condition.

- If you smoke, you should stop. Nicotine can further impair your circulation by constricting your blood vessels and by making the blood flow in peripheral areas like the fingers more sluggish.
- Ensure that your home is as well insulated and well heated as possible.
- Try to avoid activities that you know from experience are likely to trigger an attack.
- Wear warm gloves.
- Other helpful gadgets include hand and foot warmers and insulated drinking glasses.
- Counselling or relaxation therapy may help if stress or emotional upsets are triggering factors.
- Swinging your arms around during an attack may help to restore a normal circulation to your fingers.

## What can my dermatologist do to help my Raynaud phenomenon?

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Your dermatologist will be able to give you a lot of advice about your Raynaud phenomenon and the general measures that can be taken to help it.

Any underlying disease, or predisposition to such a disease, will be diagnosed and treated accordingly.

Some drugs can be helpful, especially in primary Raynaud phenomenon. The most effective are those known as calcium channel blockers, such as nifedipine or diltiazem. These act by dilating the small blood vessels, thereby increasing the blood flow to the peripheries. Recently, sildenafil (Viagra™) has been reported to be of benefit.

A very small minority of patients with severe and intractable Raynaud phenomenon may require a sympathectomy. This involves cutting the nerves that constrict the peripheral blood vessels. However the procedure is not without complications and has a fairly low success rate, so should only be considered if all else has failed.

Very severe disease that is resulting in ulceration or resorption of the fingertips may be treated by an intravenous infusion of prostacyclin. This requires admission to hospital for a few days.

### Related information

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#### On DermNet NZ:

- [Systemic sclerosis](#)
- [Cutaneous lupus erythematosus](#)
- [Dermatomyositis](#)
- [Chilblains](#)

#### Other websites:

- [Raynaud Association, Inc.](#)
- [Raynaud and Scleroderma Association](#)
- [International Scleroderma Network](#)

- [Raynaud's Phenomenon](#) – emedicine, the online textbook
- [Raynaud Phenomenon](#) – emedicine consumer health

**Books about skin diseases:**

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