

## Raynaud Phenomenon Diagnosis and Management

Raynaud phenomenon is diagnosed with nailfold capillary microscopy, complete blood count (CBC), and autoimmune antibodies. It can be treated by avoiding triggers, smoking cessation, nifedipine, and topical nitroglycerin.



PLAY PICMONIC

### Diagnosis

#### Nailfold Capillary Microscopy

##### [Nailfold Caterpillar Microscope](#)

Nailfold capillary microscopy (capillaroscopy) can help in diagnosing Raynaud's. This is the gold-standard. It is a quick, cheap, non-invasive test that helps differentiate between primary and secondary Raynaud's. Patients with primary Raynaud's will typically have normal results. On the other hand, patients with secondary Raynaud's often show abnormal findings like enlarged capillaries and microhemorrhages. Later stages can show loss of capillaries and disorganized vascular architecture.

#### Complete Blood Count (CBC)

##### [Blood Cell Count-dracula](#)

Complete blood count helps to differentiate primary Raynaud phenomenon from other suspected causes, such as polycythemic syndromes, malignancies, and autoimmune disorders. Findings may include anemia or thrombocytopenia.

#### Antibody Testing

##### [Ant-tie-body](#)

Measurement of antibodies in patients with Raynaud's can assist in determining if the disease is autoimmune in nature. Antibody profiles that can be checked include antinuclear antibody (ANA), anti-RNA polymerase III, anti-SSA, anti-SSB, anti-Smith, anti-ribonucleoprotein, anti-double-stranded DNA, anti-Scl-70, anti-fibrillarin, anti-Pm-Scl, and anti-centromere. Antinuclear antibodies should be tested first.

### Management

#### Avoid Triggers

##### [Avoid-sign with Trigger](#)

Educating patients to avoid triggers is important. This may include avoiding the cold, increasing exercise, and reducing stress. Medications such as ergotamines, amphetamines, and chemotherapeutic agents can also act as triggers.

#### Smoking Cessation

##### [No Smoking Sign](#)

Smoking may exacerbate symptoms of Raynaud Phenomenon. Endothelial injury and elevated blood viscosity are proposed mechanisms for this association. Smoking cessation is paramount in the management of Raynaud's phenomenon.

## **Nifedipine**

### **Knife-dipping**

Nifedipine is the first choice for treating Raynaud phenomenon due to its potent vasodilatory effect, especially in cases refractory to non-pharmacological management. It is a calcium channel blocker (dihydropyridine), and has been proven to reduce severity and number of attacks in patients. Patients should have a log of blood pressure and note the frequency and severity of attacks so that healthcare providers can monitor the patient's response to treatment.

## **Topical Nitroglycerin**

### **Topical Nitro-glacier**

Topical nitroglycerin (1% or 2%) helps to increase blood flow to the fingers. Topical nitrate is metabolized by aldehyde dehydrogenase, causing nitric oxide formation, leading to vasodilation. Side effects include headache and dizziness.