

RAYNAUD'S DISEASE

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Raynaud's Disease is largely an upper extremity arterial disease divided into two main categories, vasospastic (spasm of the arteries) and occlusive (blocked arteries). There can be confusing terminology such as Raynaud's Syndrome, Disease or Phenomenon; Primary or Secondary Raynaud's; and Vasospastic or Occlusive Raynaud's. Raynaud's Disease typically presents with colour changes of the fingertips. When the blood flow to the affected parts is severely limited, this causes them to change colour (white or blue) and is often associated with pain. The extremity also feels cold and becomes numb. When warmed the affected limb may throb and turn red again as blood flow improves and then may turn red and be associated with pain or severe discomfort.

Vasospastic Raynaud's usually has no identifiable underlying cause for the vasospasm and classically involves both hands symmetrically. Vasospastic Raynaud's occurs more frequently in patients of small stature with smaller blood vessels such as females. There is a strong correlation between Vasospastic Raynaud's and smoking, cold temperatures and stress. Symptoms are often mild and most patients do not seek treatment as it improves with lifestyle changes such as wearing gloves in cold weather and stopping smoking.

Occlusive Raynaud's is caused by occlusive arterial disease, resulting in arterial ischemia (lack of oxygenated blood to the distal fingers). Blockages of the blood flow in the arteries of the small blood vessels slow down the blood flow, this makes the blood more sluggish and clots are formed. As the small arteries of the hands and fingers spasm due to cold or other factors, the blood flow distally to the vasospasm dramatically decreases resulting in symptoms. Occlusive Raynaud's classically presents in an asymmetrically, usually affecting one hand (occasionally both) and not involving all the fingers simultaneously. Occlusive Raynaud's can be associated with severe irreversible tissue loss with digital ulcers, skin necrosis (death) and gangrene. Possible causes of occlusive arterial disease include peripheral vascular disease, Buerger's Disease, connective tissue diseases (such as lupus, Sjogren's syndrome or rheumatoid arthritis), carpal tunnel syndrome, trauma to extremities, work related overuse injuries, atherothromboembolism from proximal arterial aneurysms, arterial thoracic outlet syndrome and certain medications.

Management of Raynaud's Disease

The management of Raynaud's Disease include:

- Protection from the cold, using mittens rather than gloves and remembering that if your body feels cold, the blood vessels are constricting in your extremities to keep your core body temperature up, so keep your body warm. Wear long sleeve

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shirts and warm beanbags to keep your fingers and hands warm in cooler weather. Try not to work in freezers or fridges and if you need to put your hands into a freezer, use protective gloves. Limit the time you are handling cold items and warm your hands afterwards.

- Other Lifestyle changes include decreasing or swapping caffeine (in Ceylon tea and coffee) with herbal teas. Stress reduction such as exercise and yoga can help prevent attacks. Exercise is also excellent as it improves circulation, but make sure you wrap up warmly in cooler weather.
- Avoid causes of vasoconstriction. Nicotine is a potent vasoconstrictor. Patients need to stop smoking and vaping. Some medications also contain vasoconstrictors such as weight loss pills, beta blockers (often used for high blood pressure or heart conditions), migraine medications and many cold and flu medications. It is very important to remind your doctor or pharmacist that you have Raynaud's disease, so that they can prevent these groups of drugs when treating you.
- Exercises. Swinging your arms in a circular motion increases the blood flow and blood pressure to your extremities and is often successful in breaking an attack of vasospasm.
- Food supplements: Some studies have found that taking fish oil in larger doses has been found to decrease symptoms.
- Medications. Medications such as calcium-channel blockers, alpha-adrenergic blockers, antiplatelet therapy, anticoagulation and thrombolysis are all possible treatments which will be considered by your vascular surgeon, based on the extent of your symptoms.
- Management of Occlusive Raynaud's Disease includes treatment of underlying cause and necrotic tissue debridement.



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