

The VEU

The Vascular & Endovascular Update

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Raynaud's Syndrome: What Physicians Need To Know



Scandinavian legends speak of winter and freezing sleet, of icicles and snow, and of a child of Kari, the goddess of the winds. Never human, this being is sometimes portrayed as a child or a teenager but most often as an old man.

He brings finger-nipping weather, painting the leaves in autumn, tipping everything in rime as the weather chills and silvering fern-like patterns into cold windows.

They called him Frosti or Jokul but as time went on, these two names were combined in English. Today, we refer to him whenever the weather goes cold. There are stories, books and movies about him – he's even a leading character in the *Rise of The Guardian* films!

To learn his name, visit our Facebook page or Instagram account!



How could temperatures in the 50's cause frostbite?

About 5 – 10% of Americans will watch a finger or two - or more - turn white, nearly fluorescent, then blue. When fingers warm up, they flush red with a stinging pain or prickling, numbing feeling and, in about 15 minutes or so, feel and look normal again.

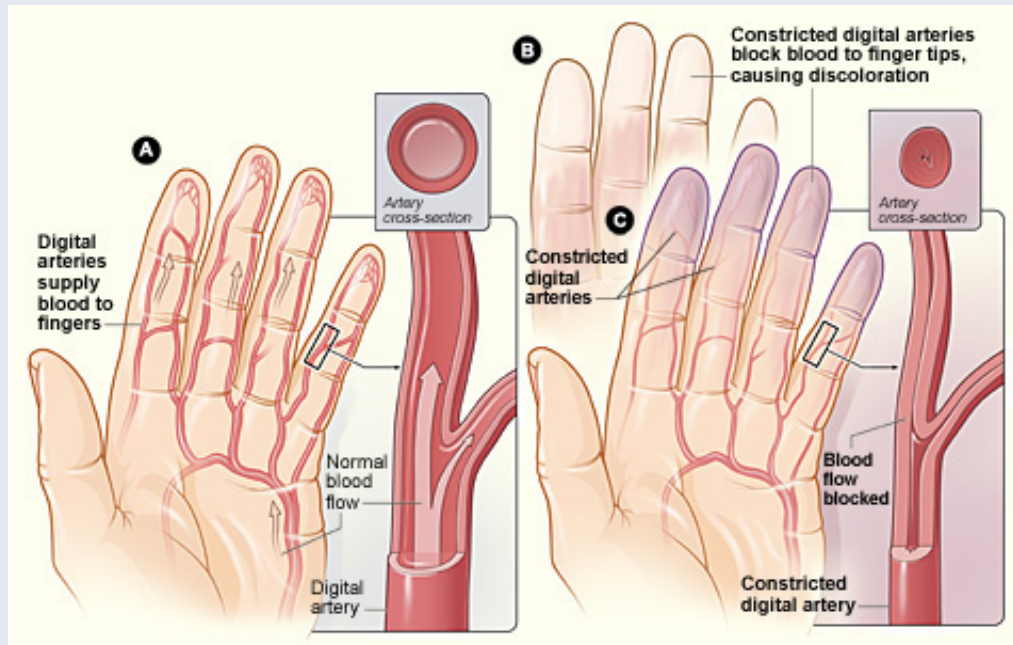
But how can above-freezing temperatures cause such a severe reaction?

Your patient could have Raynaud's Disease, also known as Raynaud's Syndrome or Phenomenen, first described by Maurice Raynaud in 1862.

Raynaud's Disease affects the arteries, causing vasospasms, an episode of narrowing of these blood vessels, reducing blood flow and causing discoloration. When arteries relax and widen, circulation improves, bringing with it the redness, tingling, throbbing and swelling.

While most patients see Raynaud's in their fingers, it can also affect the toes. Rarely, it can be seen in the nose, ears, lips and even the nipples.

Exposure to cold, such as placing hands in cold water, taking something from a freezer or being outside in cold air, even as mild as the mid-50's, is usually the trigger



(courtesy of NIH) Figure A shows arteries in the fingers (digital arteries) with normal blood flow. The inset image shows a cross-section of a digital artery. Figure B shows fingertips that have turned white due to blocked blood flow. Figure C shows narrowed digital arteries, causing blocked blood flow and blue fingertips. The inset image shows a cross-section of a narrowed digital artery.

for a Raynaud's episode. For some patients, emotional stress can trigger an episode.

There are two main types of the condition – primary and secondary.

Primary Raynaud's is referred to as Raynaud's Disease. Researchers aren't sure what causes primary Raynaud's but it is most common and less severe.

Risk factors for primary Raynaud's include:

- Gender, with women being 90% more likely to have primary Raynaud's than men.
 - Age, with primary Raynaud's developing before the age of 30.
 - Family history of Raynaud's
- Secondary Raynaud's, also called Raynaud's phenomenon,** is caused by an underlying medical condition. Although secondary Raynaud's is less common than the primary form, it tends to be more serious.

Risk factors for secondary Raynaud's include:

- Carpal tunnel syndrome
- Repetitive actions such as typing or playing piano
- Operating vibrating tools, such as drills, grinders, sanders, and jackhammers
- Smoking
- Injuries to the hands or feet such as fractures, surgeries or frostbite
- Atherosclerosis
- Connective tissue diseases such as scleroderma, lupus, rheumatoid arthritis and Sjogren's syndrome.
- Certain medications including

beta blockers, migraine medications that contain ergotamine and sumatriptan, ADHD medications, certain chemotherapy agents, and other drugs that cause blood vessels to narrow.

For both types of Raynaud's, living in a cold climate is a risk factor.

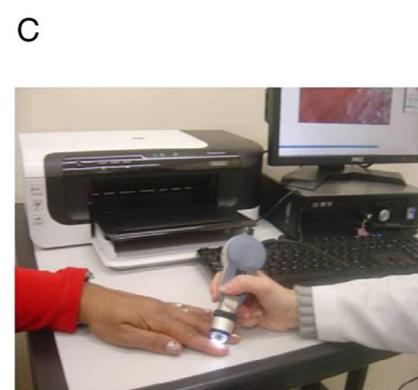
While primary Raynaud's symptoms are usually so mild that patients don't seek treatment, **secondary Raynaud's must be treated to avoid worsening. Secondary Raynaud's may begin in one finger or two but will then spread. It will also cause ulcers and lead to gangrene, which results in amputation.**

When a patient presents with symptoms of secondary Raynaud's, it's recommended physicians get a complete medical history and perform a physical examination.

When Raynaud's is suspected, refer your patient to your trusted vascular surgeon partner.

The vascular surgeon will perform a nailfold capillaroscopy. This is a non-invasive and cost effective test to evaluate the peripheral microcirculation by using a stereomicroscope, (below, A) a ophthalmoscope or dermatoscope (below, B) or a videocapillaroscopy (below, C).

Your vascular surgeon will evaluate the loops, dilated capillaries and look for micro-



hemorrhages and meandering, tortuous or branched capillaries.

The vascular surgeon may also order blood tests, antinuclear antibodies tests or tests to determine the patient's erythrocyte sedimentation rate to look for causes of the Raynaud's.

Once a diagnosis has been made of secondary Raynaud's, your vascular surgeon will determine treatment to:

- Mitigate the underlying disease or condition
- Reduce the number and severity of attacks
- Prevent tissue damage

Treatment may include medications to help relax or widen blood vessels to increase blood flow, to heal skin ulcers or to reduce stress. These may include:

- Calcium channel blockers such as nifedipine (Adalat CC, Procardia), amlodipine (Norvasc), felodipine and isradipine.
- Vasodilators including nitroglycerin cream (Nitro-Dur), losartan (Cozaar), sildenafil (Viagra, Revatio), fluoxetine (Prozac, Sarafem) and prostaglandins.

The vascular surgeon should recommend that the patient:

- Avoid exposure to cold temperatures by wearing gloves and thick socks and dressing in layers once temperatures get below 60° and having gloves nearby to handle items from the freezer or refrigerator.
- Consider meditation and other stress-reducing coping methods.
- Protect hands and feet from injury by wearing properly fitting shoes, avoiding tight wristbands and rings and using a moisturizing lotion to prevent dry and cracked skin.
- Quit smoking and avoid second-hand smoke.
- Make an appointment with a

vascular surgeon immediately if the patient sees a wound that is reluctant to heal or forms an ulcer.

While secondary Raynaud's is rare, it can be life-altering, especially if your patient faces amputation.

Although there is no cure, with prompt and proper care from a board certified vascular surgeon, Raynaud's can be well-managed to ensure your patient remains healthy, with an outstanding quality of life, for many years to come.

Educate your patients about Raynaud's by giving them an informational bookmark when you see a patient who may be at risk. Email your mailing address to vascular.edu.foundation@gmail.com. We'll send you a free packet of 50 bookmarks to help you provide exceptional patient care.



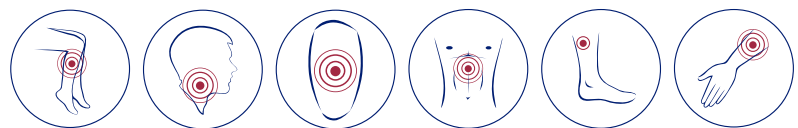
About the author, Dr. Eugene Tanquilut

Award-winning and recognized as a Vitals Top 10 Doctor and a Patient's Choice Doctor, **Dr. Eugene Tanquilut** is board-certified in both vascular and endovascular surgery. He earned Vascular and Endovascular Fellowships at Cleveland Clinic.

Dr. Tanquilut is the President of Vascular Specialists and has participated in numerous research studies, published papers and is a widely-requested speaker.

When you have questions about Raynaud's Syndrome or any vascular condition for your patients, please reach out to Dr. Eugene Tanquilut at 708-305-0248.

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White “Glowing”
Fingers and Swollen
Red Toes -
Is It Raynaud’s
Syndrome?**

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