

TerranearPMC Safety Share

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Week of October 28, 2019 – Raynaud's Syndrome

It's that time of the year when proactive measures for winter work begins. Any S&H professional that has ever cracked open "Fundamentals of Industrial Hygiene" should recall the section on temperature extremes where the various ailments associated with heat and cold stress are discussed. One condition, Raynaud's Syndrome is brought up. And while this medical condition is technically, not a disorder based solely on exposure to cold weather; its symptoms can be exacerbated by the cold weather. And while Raynaud's Syndrome is relatively rare, all of us can quite easily find ourselves developing the symptoms for which this disease is known. And this typically occurs in cold weather conditions.

Raynaud's (pronounced "ray-NOHZ") disease, also known as Raynaud or Raynaud's phenomenon or syndrome, causes specific areas of our body — such as fingers and toes — to feel numb and cold in response to cold temperatures or stress. In Raynaud's disease, smaller arteries that supply blood to our skin narrow, limiting blood circulation to affected areas (vasospasm).

Women are more likely than men to develop Raynaud's disease. For most people, Raynaud's disease isn't disabling, but it can affect one's quality of life. Signs and symptoms of Raynaud's disease include:

- Cold fingers or toes
- Color changes in the skin in response to cold or stress
- Numb, prickly feeling or stinging pain upon warming or stress relief

During an attack of Raynaud's, affected areas typically turn white. Then, after continued exposure, these areas turn blue and feel cold and numb. As you warm and circulation improves, the affected areas may turn red, throb, tingle or swell. Although Raynaud's most commonly affects the fingers and toes, it can also affect other areas, such as the nose, lips, ears and even nipples. After warming, it can take 15 minutes for normal blood flow to return to the area.

While typical Raynaud's symptoms may manifest without an exposure to cold weather conditions, it is these symptoms for which any person may experience when they are in cold temperatures. Doctors do not completely understand the cause of Raynaud's attacks, but blood vessels in the hands and feet appear to overreact to cold temperatures or stress.

With Raynaud's, arteries to the fingers and toes go into vasospasm when exposed to cold or stress, narrowing your vessels and temporarily limiting blood supply. Over time, these small arteries can thicken slightly, further limiting blood flow.

Cold temperatures are most likely to trigger an attack. This includes, not just being exposed to cold weather, but also to such acts as placing ones' hands in cold water, and even taking something from a freezer.

There are two main types of the condition.

- **Primary Raynaud's.** Also called Raynaud's disease, this most common form isn't the result of an associated medical condition. It can be so mild that many people with primary Raynaud's don't seek treatment. And it can resolve on its own.



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- **Secondary Raynaud's.** Also called Raynaud's phenomenon, this form is caused by an underlying problem. Although secondary Raynaud's is less common than the primary form, it tends to be more serious. Diminished blood circulation to your fingers or toes could cause tissue damage. A completely blocked artery can lead to sores (skin ulcers) or dead tissue (gangrene), both of which can be difficult to treat. Rarely, extreme untreated cases might require removing the affected part of your body (amputation). Signs and symptoms of secondary Raynaud's usually appear around age 40, later than they do for primary Raynaud's.

Causes of secondary Raynaud's include:

- **Connective tissue diseases.** Most people who have a rare disease that leads to hardening and scarring of the skin (scleroderma) have Raynaud's. Other diseases that increase the risk of Raynaud's include lupus, rheumatoid arthritis and Sjogren's syndrome.
- **Diseases of the arteries.** These include a buildup of plaques in blood vessels that feed the heart (atherosclerosis), a disorder in which the blood vessels of the hands and feet become inflamed (Buerger's disease), and a type of high blood pressure that affects the arteries of the lungs (primary pulmonary hypertension).
- **Carpal tunnel syndrome.** This condition involves pressure on a major nerve to your hand, producing numbness and pain in the hand that can make the hand more susceptible to cold temperatures.
- **Repetitive action or vibration.** Typing, playing piano or doing similar movements for long periods and operating vibrating tools, such as jackhammers, can lead to overuse injuries.
- **Smoking.** Smoking constricts blood vessels.
- **Injuries to the hands or feet.** These include wrist fracture, surgery or frostbite.
- **Certain medications.** These include beta blockers, used to treat high blood pressure; migraine medications that contain ergotamine or sumatriptan; attention-deficit/hyperactivity disorder medications; certain chemotherapy agents; and drugs that cause blood vessels to narrow, such as some over-the-counter cold medications.

Risk factors for Raynaud's include:

- **Sex.** More women than men are affected.
- **Age.** Although anyone can develop the condition, primary Raynaud's often begins between the ages of 15 and 30.
- **Climate.** The disorder is also more common in people who live in colder climates.
- **Family history.** A first-degree relative — a parent, sibling or child — having the disease appears to increase your risk of primary Raynaud's.
- **Associated diseases.** These include conditions such as scleroderma and lupus.
- **Certain occupations.** These include jobs that cause repetitive trauma, such as operating tools that vibrate.
- **Exposure to certain substances.** This includes smoking, taking medications that affect the blood vessels and being exposed to certain chemicals, such as vinyl chloride.

Treatment of Raynaud's disease depends on its severity and whether a person has other health conditions. To help prevent Raynaud's attacks, proper warm clothing including gloves, balaclavas, and chemical hand warmers can help protect persons from the many symptoms of Raynaud's.

Until you spread your wings, you'll have no idea how far you can fly.

Napoleon Bonaparte

