

## Raynaud's Phenomenon after Cancer Treatment

### What is Raynaud's Phenomenon?

Raynaud's is a condition that may cause some areas of your body to feel numb and cool in response to cold temperatures or stress. Raynaud's causes occasional narrowing of blood vessels, limiting blood flow for brief periods of time. This is called a vasospasm. During periods of vasospasm, the skin is deprived of oxygen and may become pale and then turn a bluish color. As the blood vessels relax and blood flow resumes, the skin may become red. The hands and feet are most affected, but Raynaud's may also involve the nose, lips, cheeks, and earlobes.

### Symptoms

- Changes in skin color (often from white to blue to red)
- Changes in skin temperature (affected areas feel cooler)
- Numbness or prickly feeling in the fingers (not thumbs) and toes
- Occasional episodes of pain (described as throbbing) and swelling

### What happens during an attack?

For most people, cold temperature or stress triggers an attack. Typically, when the body is exposed to cold, the hands and feet lose heat rapidly. To conserve heat, the body reduces blood flow near the skin surface and moves it deeper in the body. For people with Raynaud's, this normal response is exaggerated by sudden spasms of the small blood vessels that supply blood to the fingers and toes. This greatly reduces the blood supply to the hands and feet, causing changes in the skin color and temperature. The first sign is often pallor (or whiteness), in response to the spasm. The skin may then appear blue (cyanotic) and feel numb or cold, because of a lack of oxygen-rich blood. Finally, the skin may turn red and become swollen, as the small blood vessels relax and dilate, and blood flow returns. Commonly, throbbing and tingling may occur in the fingers and toes as the attack ends. Raynaud's attacks can last from seconds to hours.

### Who is at risk?

Childhood cancer survivors who received treatment with vinblastine or vincristine sometimes develop Raynaud's.

### Prevention

Raynaud's is usually a chronic condition that you may need to manage for life. Some people may see improvement slowly over several years. Prevention of attacks is key:

- **Dress warmly when outdoors.**
- **Take precautions indoors.** Wear socks. Avoid drafts (i.e. refrigerator or freezer). Wear mittens when handling cold items. Use the air conditioner sparingly. Use insulated drinking glasses.
- **Avoid putting unprotected hands in cold water.**
- **Do not use tobacco or drugs as such as cocaine.** Nicotine and cocaine constrict blood vessels and causes the skin temperature to drop, which may lead to an attack.
- **Exercise.** Regular exercise can enhance circulation and help control stress.
- **Manage stress.** Since stress is often a trigger for Raynaud's attacks, managing stress may help make the attacks shorter and less frequent.

## Treatment

Treatment is directed at reducing the number and severity of attacks to prevent tissue damage. People with Raynaud's should follow all the above recommendations for preventing attacks. In addition, if attacks are triggered by exposure to cold, placing the affected body part in warm water may help to stop symptoms. Other treatment methods include medications and biofeedback.

## Medications

Medications that help to dilate blood vessels and promote circulation are sometimes prescribed for management of severe symptoms.

Certain prescription medications can sometimes make symptoms worse. These include birth control pills and some heart and blood pressure medicines. If you are taking any of these medications and are having symptoms of Raynaud's, consult with your healthcare provider regarding possible alternatives.

Certain over-the-counter cold or diet pills can make symptoms worse and should be avoided. These include drugs that contain pseudoephedrine (such as Actifed® and Sudafed®).

## Biofeedback

Using your mind to control stress and body temperature may help to decrease the severity and frequency of attacks. This may include guided imagery and/or deep breathing exercises. A psychologist may be helpful in designing a biofeedback program that meets your needs.

---

Written by Susan V. Shannon, RN, MSN, CPNP, CPON®, Miller Children's and Women's Hospital Long Beach, Long Beach, CA.

Reviewed by Kayla L. Foster, MD, MPH; Beth Fisher, DNP, APRN, CPNP; and Melissa Acquazzino, MD, MS

Additional health information for childhood cancer survivors is available at  
[www.survivorshipguidelines.org](http://www.survivorshipguidelines.org)

**Note:** Throughout this *Health Links* series, the term "childhood cancer" is used to designate pediatric cancers that may occur during childhood, adolescence, or young adulthood. Health Links are designed to provide health information for survivors of pediatric cancer, regardless of whether the cancer occurred during childhood, adolescence, or young adulthood.

### Disclaimer and Notice of Proprietary Rights

**Introduction to Late Effects Guidelines and Health Links:** *The Long-Term Follow-Up Guidelines for Survivors of Childhood, Adolescent, and Young Adult Cancers* and accompanying *Health Links* were developed by the Children's Oncology Group as a collaborative effort of the Late Effects Committee and Nursing Discipline and are maintained and updated by the Children's Oncology Group's Long-Term Follow-Up Guidelines Core Committee and its associated Task Forces.

**To cancer patients (if children, their parents or legal guardians):** Please seek the advice of a physician or other qualified health provider with any questions you may have regarding a medical condition and do not rely on the Informational Content. The Children's Oncology Group is a research organization and does not provide individualized medical care or treatment.

**To physicians and other healthcare providers:** The Informational Content is not intended to replace your independent clinical judgment, medical advice, or to exclude other legitimate criteria for screening, health counseling, or intervention for specific complications of childhood cancer treatment. Neither is the Informational Content intended to exclude other reasonable alternative follow-up procedures. The Informational Content is provided as a courtesy, but not intended as a sole source of guidance in the evaluation of childhood cancer survivors. The Children's Oncology Group recognizes that specific patient care decisions are the prerogative of the patient, family, and healthcare provider.

No endorsement of any specific tests, products, or procedures is made by Informational Content, the Children's Oncology Group, or affiliated party or member of the Children's Oncology Group.

**No Claim to Accuracy or Completeness:** While the Children's Oncology Group has made every attempt to assure that the Informational Content is accurate and complete as of the date of publication, no warranty or representation, express or implied, is made as to the accuracy, reliability, completeness, relevance, or timeliness of such Informational Content.

**No Liability on Part of Children's Oncology Group and Related Parties/Agreement to Indemnify and Hold Harmless the Children's Oncology Group and Related Parties:** No liability is assumed by the Children's Oncology Group or any affiliated party or member thereof for damage resulting from the use, review, or access of the Informational Content. You agree to the following terms of indemnification: (i) "Indemnified Parties" include authors and contributors to the Informational Content, all officers, directors, representatives, employees, agents, and members of the Children's Oncology Group and affiliated organizations; (ii) by using, reviewing, or accessing the Informational Content, you agree, at your own expense, to indemnify, defend and hold harmless Indemnified Parties from any and all losses, liabilities, or damages (including attorneys' fees and costs) resulting from any and all claims, causes of action, suits, proceedings, or demands related to or arising out of use, review or access of the Informational Content.

**Proprietary Rights:** The Informational Content is subject to protection under the copyright law and other intellectual property law in the United States and worldwide. The Children's Oncology Group retains exclusive copyright and other right, title, and interest to the Informational Content and claims all intellectual property rights available under law. You hereby agree to help the Children's Oncology Group secure all copyright and intellectual property rights for the benefit of the Children's Oncology Group by taking additional action at a later time, action which could include signing consents and legal documents and limiting dissemination or reproduction of Informational Content.