

Madigan Army Medical Center

Referral Guidelines

Cold Weather Intolerance

Diagnosis/Definition

- Any of a constellation of symptoms, including numbness, tingling or other sensory manifestations, and/or discomfort, generally noted in the hands or feet, that is initiated or aggravated by exposure to cold or damp conditions.
- Digital vasospasm is a normal response to either cooling of the extremities or to generalized hypothermia, and is occasionally associated with sensory changes in the digits.
- An episode of severe frostbite can exacerbate or precipitate this problem.
- Second-degree frostbite is associated with blisters/vesicles, and more severe frostbite causes sub-epidermal tissue loss. Please note that mild frostbite, which has no significant sequelae, resembles sunburn, and is often associated with epidermal peeling after 7-10 days.
- Peeling does not imply severe frostbite.

Initial Diagnosis and Management

- Conservative therapy, to include tobacco avoidance, use of P2 profile, and a trial of nifedipine (30 mg every day), should be tried before making a referral.
- Patients with cold sensitivity should be furnished a P2 profile by their primary care manager; this profile allows the wearing of non-regulation cold weather protective clothing.
- Diagnosis is clinical, and management involves maintaining both total body and extremity warmth in conditions of low ambient temperature.
- Additional history should be obtained regarding joint pain and swelling, skin tightening or thickening, gastroesophageal reflux, rashes, or other end organ problems, as these can be associated with an underlying inflammatory connective tissue disease.
- A history of tobacco use or other vasoconstricting agents should be obtained.
- Beta blockers may exacerbate symptoms.
- An occasional patient will have evidence of Raynaud's disease, which is associated with more prolonged vasospasm after cold exposure and is classically associated with triphasic color changes. With cold exposure, the digits initially become pallid (white), then cyanotic (blue), and finally red as the vasospasm subsides.
- Nearly all patients exhibiting this phenomenon will be sensitive to the cold.
- Initial management is the same as noted above for patients with simple cold sensitivity.
- Patients who exhibit the color changes typical of Raynaud's may benefit from nifedipine. If no improvement is noted after 2 weeks, or if the adverse effects (hypotension and peripheral edema) are more annoying than the cold sensitivity, the nifedipine should be stopped.

Ongoing Management and Objectives

- To maintain comfort during periods of low ambient temperature.
- It must be strongly emphasized to stop all tobacco use, as nicotine enhances digital vasospasm.

Indications for Specialty Care Referral

- Patients with a history of second-degree or greater frostbite, who have cold sensitivity that does not respond to conservative measures, should be referred to the Vascular Clinic.
- Patients who manifest the signs of Raynaud's disease and have cold sensitivity not responsive to conservative measures, should be referred to the Vascular Clinic.
- Patients with history of autoimmune disease, findings suggestive of such, or ischemic complications due to Raynaud's phenomenon, should be referred to the Rheumatology Clinic for evaluation.
- Patients who develop spontaneous fingertip or toe ulcerations from cold injury, that do not heal with 7-10 days of conservative therapy, should be referred to the Vascular Clinic.

Criteria for Return to Primary Care

- Healing of digital ulcerations.
- Demonstration of normal digital pressures, implying no threat of tissue loss.

Last Review for this Guideline: **January 2010**

Referral Guidelines require review every three years.

Maintained by the Madigan Army Medical Center - Quality Services Division
Clinical Practice and Referral Guidelines Administrator