

## Palmar-Plantar Erythrodysesthesia (Hand-Foot Syndrome)

### ■ What is palmar-plantar erythrodysesthesia?

Palmar-plantar erythrodysesthesia is a side effect of some cancer treatments, such as chemotherapy and targeted therapy. It is also called hand-foot syndrome. Palmar-plantar erythrodysesthesia causes redness, swelling, blisters, and pain on the palms of the hands and the soles of the feet. Less commonly, palmar-plantar erythrodysesthesia appears on other areas of the skin, such as the knees or elbows.

### ■ What causes palmar-plantar erythrodysesthesia?

Some cancer drugs affect the growth of skin cells or small blood vessels in the hands and feet. Palmar-plantar erythrodysesthesia happens when a drug leaks out of the blood vessels and damages the surrounding tissues. Some drugs are more likely to cause palmar-plantar erythrodysesthesia than others. They include certain types of chemotherapy and targeted therapy. However, not everyone treated with these types of medications develops palmar-plantar erythrodysesthesia.

### ■ What are the symptoms of palmar-plantar erythrodysesthesia?

Mild or moderate symptoms of palmar-plantar erythrodysesthesia can include redness similar to a sunburn, swelling, tightness, and a tingling or burning feeling. Your skin may also feel tender or sensitive to touch. You could also develop thick calluses and blisters on your palms or soles. Severe symptoms can include cracked, flaking, or peeling skin, as well as blisters, ulcers, or sores on the skin. Severe pain and difficulty walking or using your hands can sometimes occur.

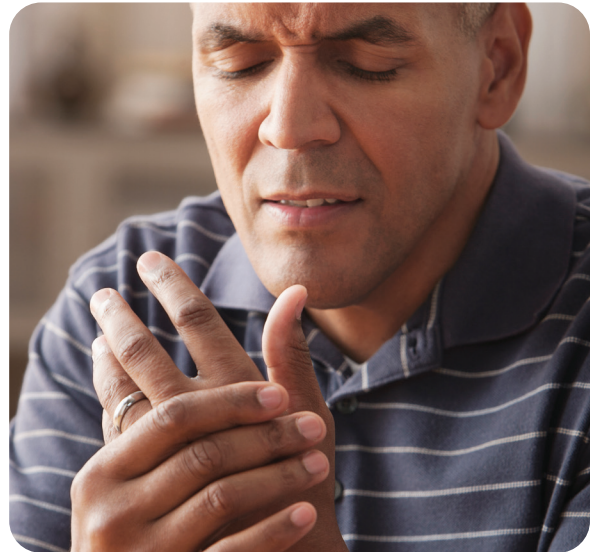
Palmar-plantar erythrodysesthesia symptoms usually appear 2 to 3 months after chemotherapy starts. With targeted therapy, symptoms are often worse during the first 6 weeks of treatment. The severity of palmar-plantar erythrodysesthesia is different for everyone. Even people taking the same drug for the same type of cancer may not have the same symptoms.

### ■ How is palmar-plantar erythrodysesthesia treated?

If you are receiving a treatment known to cause palmar-plantar erythrodysesthesia, your doctor may recommend strategies to prevent this condition by keeping your hands and feet moisturized. When certain types of chemotherapy are given, ice packs may be placed under the hands and feet in an effort to prevent palmar-plantar erythrodysesthesia.

If the condition does arise, your doctor may recommend over-the-counter or prescription-strength moisturizing exfoliant cream that contains urea, salicylic acid, or ammonium lactate. Your doctor may also recommend inflammation-reducing medications that you apply gently to the skin. These include prescription-strength corticosteroid creams. Pain relievers in cream or patch form can be used on painful areas of the palms or soles. Nonsteroidal anti-inflammatory drugs (NSAIDs) can also reduce pain and inflammation caused by palmar-plantar erythrodysesthesia.

If palmar-plantar erythrodysesthesia occurs during chemotherapy, your doctor may lower your chemotherapy dose or change your treatment schedule. Your doctor may also suggest temporarily stopping chemotherapy until your symptoms get better.



# Ways to prevent or manage palmar-plantar erythrodysesthesia

These tips may help prevent palmar-plantar erythrodysesthesia or keep symptoms from worsening.

- Limit the use of hot water on your hands and feet.
- Take cool showers or baths; pat skin dry.
- Cool your hands and feet with ice packs, cool water, or wet towels for 15 to 20 minutes at a time.
- Avoid heat sources, such as direct sun or saunas.
- Avoid activities that cause force or rubbing on the skin.
- Avoid harsh chemicals in household cleaners and laundry detergents.
- Wear rubber gloves with a liner when doing household cleaning.
- Do not use tools that press your hand against a hard surface.
- Keep your hands moist with skin care creams, applied gently.
- Do not rub or massage your skin.
- Wear loose-fitting clothes and shoes.
- Do not walk barefoot; use soft slippers and thick socks.
- Have a podiatrist remove thick calluses and thick nails before cancer treatment starts.
- Moisturize at night and then wear cotton gloves and/or socks.

## Questions to ask the health care team

Regular communication is important for making informed decisions about your health care. It can be helpful to bring someone along to your appointments to take notes. Consider asking your health care team the following questions:

- ▶ Does my cancer treatment put me at risk for developing palmar-plantar erythrodysesthesia?
- ▶ What are my treatment options for palmar-plantar erythrodysesthesia?
- ▶ What are the risks and benefits of each option?
- ▶ What should I do if my symptoms worsen?
- ▶ Should I see a dermatologist to help with my symptoms?
- ▶ Would you recommend switching to a lower dose of chemotherapy or changing my chemotherapy schedule?
- ▶ Would you recommend temporarily stopping chemotherapy?
- ▶ What other steps can I take to prevent or manage palmar-plantar erythrodysesthesia?
- ▶ Should I see a podiatrist before cancer treatment starts?
- ▶ If I have a question or problem, who should I call?

**Find more information on palmar-plantar erythrodysesthesia and other side effects at [www.cancer.net/sideeffects](http://www.cancer.net/sideeffects). For a digital list of questions, download Cancer.Net's free mobile app at [www.cancer.net/app](http://www.cancer.net/app).**

## Words to know

**Analgesic:** A medication that relieves pain.

**Chemotherapy:** The use of drugs to destroy cancer cells.

**Non-opioid pain relievers:** Pain relievers that are prescribed for mild or moderate pain, such as nonsteroidal anti-inflammatory drugs (ibuprofen and others) and acetaminophen.

**Oral medication:** A medication taken by mouth.

**Over-the-counter drug:** A medication that can be bought without a prescription.

**Podiatrist:** A doctor who specializes in conditions of the feet.

**Prescription medication:** A medication that is only available from a pharmacy with written instructions from a doctor, nurse practitioner, or physician assistant.

**Side effects:** Problems or feelings that medicine or other treatment causes. For example, palmar-plantar erythrodysesthesia can be a side effect of chemotherapy or targeted therapy.

**Supportive care:** The relief of side effects; also called palliative care.

**Targeted therapy:** Treatment that targets specific genes or proteins that contribute to tumor growth.

**Topical medication:** Medication applied to the top of the skin.

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