Hand-Foot Syndrome and Hand-Foot Skin Reaction

This information describes the symptoms of hand-foot syndrome and hand-foot skin reaction and how you can manage them.

Hand-foot syndrome and hand-foot skin reaction are conditions that affect the skin on the palms of your hands and the soles of your feet. Some chemotherapy medications can cause these conditions.

Medications That Can Cause Reactions

Hand-foot syndrome

The following medications may cause hand-foot syndrome.

- Capecitabine (Xeloda®)
- Doxorubicin (Adriamycin®)
- Fluorouracil (5-FU®)
- Liposomal doxorubicin (Doxil®)
- Cytarabine (Cytosar-U®)

Hand-foot skin reaction

The following medications may cause hand-foot skin reaction:

- Sorafenib (Nexavar®)
- Sunitinib (Sutent®)
- Cabozantinib (Cometriq®)
- Regorafenib (Stivarga®)
- Axitinib (Inlyta®)
- Pazopanib (Votrient®)
- Vandetanib (Caprelsa®)
- Vemurafenib (Zelboraf®)
- Dabrafenib (Tafinlar®)

**Symptoms**

Symptoms of hand-foot syndrome and hand-foot skin reaction can begin 3 to 6 weeks after starting chemotherapy. Depending on which medication you’re taking, you may have any of the following symptoms on your palm of your hands and soles of your feet:

- Stinging, tingling, or pain that feels like burning, especially on your fingertips and toes
- Dry, cracked, scaling, or peeling skin
- Thickened skin, similar to what a callus looks like
- Mild or bright redness
- Swelling
- Blistering

Symptoms of hand-foot skin reaction usually appear on parts of your body that you put a lot of pressure on, such as on toe pads, in between the toes, and the sides of the feet.

The symptoms of hand-foot syndrome and hand-foot skin reaction can range from mild discomfort to a painful sensation that can prevent you from doing your usual activities. It may be hard to pick up small things such as a pen or a fork. You may have trouble buttoning your clothing. Some people have trouble walking.

Symptoms usually go away when the dose of chemotherapy is lowered or
treatment is stopped. Your skin will begin to heal after a few weeks.

Managing Your Symptoms

Tell your healthcare provider as soon as you begin to have symptoms. Make sure you tell your doctor if you have diabetes, vascular disease, or peripheral neuropathy. These conditions can cause your skin to break down, keep your wounds from healing, and may cause infection.

Follow these tips to help you manage your symptoms.

Do not

- **Break open any blisters.** Apply a petroleum-based ointment, such as Vaseline®, and cover it with a bandage (Band-Aid®).
- Soak your hands and feet in hot water or in a hot tub.
- Take hot baths.
- Wear socks, pantyhose, or shoes that fit too tightly.
- Do anything that would make you rub your palms or soles, except for putting on lotion or cream.

Do

- Wear thick, soft cotton socks with all your shoes. Also, add foam-type absorbing soles and shock absorbers to relieve pressure points in your shoes.
- Wear thick cotton gloves when doing activities outside or in the house, such as cleaning the house, gardening, or going food shopping.
- Keep your hands and feet well moisturized. Soak them in cool water for 20 to 30 minutes, pat them dry, and then apply a fragrance-free moisturizer such as Eucerin®. Do this at least once a day.
- Try a fragrance-free lotion or cream that contains petroleum, such as:
  - Urea
  - Kerasal® One Step Exfoliating Foot Moisturizer Therapy™
If you’re 18 and over, you can also use the following products. Don’t use these if you’re under 18.

- Salicylic acid
- CeraVe® SA

Your doctor may prescribe topical medications to treat the area. Topical medications are medications that you put on your skin. These medications may include:

- Steroids
- Moisturizers
- Medications that remove extra skin
- Anti-microbial medications (medications that kill germs)
- Pain medications
- Liquid bandage, such as Dermabond®, to close any open skin on your hands or feet

If your symptoms become severe, your doctor may prescribe oral medications (medications you take by mouth) for pain control or swelling.

When to Call Your Healthcare Provider

Call your healthcare provider if you have any of the following:

- A fever of 100.4 °F (38 °C) or higher
- Chills
- Symptoms that aren’t going away or that are getting worse
- Any of the following symptoms on the skin of your palms or soles:
  - Skin that is hard, warm, or hot to the touch
  - Bright yellow or green drainage
  - Bleeding
- Bad smell coming from your palms or soles
- Increasing redness or swelling
- Increasing pain or discomfort

- Any questions or unexpected problems

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.