Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

Hand-Foot Syndrome and Hand-Foot Skin Reaction

This information explains hand-foot syndrome and hand-foot skin reaction. It also explains how you can manage and treat symptoms.

What is hand-foot syndrome and hand-foot skin reaction?

Hand-foot syndrome and hand-foot skin reaction affect the skin on the palms of your hands and soles of your feet. Some medications can cause hand foot syndrome and skin reactions.

What are signs and symptoms of hand-foot syndrome and hand-foot skin reaction?

Symptoms of hand-foot syndrome and hand-foot skin reaction can start 3 to 6 weeks after starting chemotherapy. The type of symptoms you have depends on which medication you're taking.

You may have any of the following symptoms on the palms of your hands, soles of your feet, or both:

- Dry, cracked, scaling, or peeling skin on your hands or feet.
- Stinging, tingling, or pain that feels like burning, especially on your fingertips and toes. You may feel this before having any blisters.
- Blistering, more common on the palm of your hand.
- Skin that feels thicker or harder, like what a callus feels like. This is more common on feet than hands.

- Mild or bright redness.
- Swelling.

You may have these symptoms on parts of your body that you put a lot of pressure on. This includes your toe pads, in between your toes, and on the sides of your feet.

Your symptoms can range from mild discomfort to pain. The pain can keep 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 after you finish treatment or when you have a lower dose of chemotherapy. Your skin will start to heal after a few weeks.

What medications can cause hand-foot syndrome and hand-foot skin reaction?

Medications that can cause hand-foot syndrome

The following medications can cause hand-foot syndrome:

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

Medications that can cause 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®)

How to treat hand-foot syndrome and hand-foot skin reactions

Follow these tips to help treat your symptoms of hand-foot syndrome and hand-foot skin reaction.

Talk with your healthcare provider

Tell your healthcare provider as soon as you start to have symptoms. Tell them if you have:

- Diabetes.
- Vascular disease (condition that affects your veins, arteries, or blood flow).
- Peripheral neuropathy (condition that affects your nerves).

These conditions can cause your skin to break down, keep your wounds from healing, and may cause infection.

Take care of your skin

- **Moisturize.** Try a fragrance-free lotion or cream for hand and foot syndrome that has petroleum, such as Urea, Udderly Smooth®, or Eucerin®.
- **Do not break open any blisters.** Apply a petroleum-based ointment, such as Vaseline®, and cover it with a bandage (Band-Aid®).
- **Avoid hot water.** Do not soak your hands and feet in hot water or in a hot tub. Do not take hot baths.

- **Avoid rubbing your hands and feet.** Do not do anything that would make you rub your palms or soles, except for putting on lotion or cream.
- **Soak your hands and feet at least once a day.** Soak them in cool water for 20 to 30 minutes. Then pat them dry and apply a scent-free moisturizer.
- **Avoid certain activities.** For the first 2 months of treatment, try to avoid things that cause friction or make you rub your hands or feet. This includes any strenuous exercise (such as running, jogging or aerobics) or contact sports (such as football or soccer).

Wear the right clothing

- **Wear socks.** Wear thick, soft cotton socks with all your shoes.
- **Wear comfortable shoes.** Add foam-type absorbing soles and shock absorbers to your shoes to relieve pressure points. You can buy them from a retail drug store, such as CVS or Walgreens, or an online retailer like Amazon.
- **Protect your hands.** Wear thick cotton gloves when doing activities outside or in the house. This includes cleaning the house, gardening, or going food shopping.
- **Avoid tight fitting clothing.** Do not wear socks, pantyhose, or shoes that fit too tightly.

Follow your healthcare provider's instructions

Your healthcare provider may prescribe topical medications to treat the area. Topical medications are medications that you put on your skin. They can include:

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

hands or feet.

If your symptoms become severe, talk with your healthcare provider. They 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 are not going away or that are getting worse.
- Any of the following symptoms on the palms of your hands or soles of your feet:
  - 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 questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

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

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