Skin Reactions from Radiation Treatments

Skin reactions are a common side effect of radiation treatments. They are caused when repeated doses of radiation pass through the skin. Skin reactions occur within “treatment fields.” Treatment fields are the parts of the body that are treated with radiation. Skin reactions can worsen as more treatments are given. They can continue to worsen for 7-10 days after treatments end. Most skin reactions heal 1-2 weeks after treatments end.

Skin reactions can vary. They can be mild with the skin turning light pink or brown. They can be more severe and look like a sunburn. In some cases, the outer skin peels off to reveal a layer of moist, “weepy” skin. Areas of bleeding, blisters, or crusting can also occur.

The skin within treatment fields can also become tender to the touch. It can become dry and itchy. This is because the oil and sweat glands in the treatment fields can shut down for a short amount of time. Sometimes a mild pinpoint type rash will occur. Repeated treatments can also lead to hair loss. If the total dose given is high enough, the hair loss can be long-term.

What type of skin reaction will I get?
The type of skin reaction that occurs depends on many factors. One factor is the total dose of radiation given. This dose is prescribed by your doctor. Higher total doses more often lead to more severe skin reactions.

The shape and size of the treatment fields will also affect how severe the reaction will be. Small, flat treatment fields (the middle of the chest, for instance) will often have little or no skin reaction. Larger treatment fields with curves (the pelvis and groin, for instance) will often have a more severe reaction. If skin folds are present in the treatment fields, the skin within the folds will have a more severe reaction.

Other factors can play a role in how severe the skin reaction may be. These factors include age (older people have thinner skin), and the type of medicines you take on a daily basis (some cause the skin to thin). Certain types of chemotherapy (chemo) can also make skin reactions worse. Some types of chemo can lead to an acne-like rash. If you are getting chemo during your radiation treatments, talk to your doctor or nurse. He or she can tell you how your chemo may impact the skin reaction.

Other health issues can affect the type of skin reaction that occurs. People with diabetes, kidney disease, or lupus may have more severe skin reactions. If your skin is extra sensitive to soaps, lotions, and perfumes, you may get a more severe reaction. People who smoke or who use excessive amounts of alcohol may also be at risk for a more severe reaction.
Sometimes skin reactions do not occur. This can be because the total treatment dose is small, or the size of the treatment field is small. At other times people who are thought likely to get a severe skin reaction do not get a severe skin reaction. The reasons for this are not fully known.

Your doctor or nurse can advise you on the type of skin reaction you may be likely to get from your treatments. The radiation therapists know a lot about what might happen to your skin from your treatments.

**How do I care for myself and my skin during my treatments?**

There are things you can do to help yourself and your skin during your treatments. These include:

- Handle the skin in treatment fields gently.
- Clean the skin in treatment fields gently.
- Keep yourself well nourished and well hydrated.
- Avoid smoking and excessive amounts of alcohol.
- Get enough rest and sleep.
- Get some mild exercise everyday (walking).

These suggestions may not lessen the severity of your skin reaction, but they may help you to feel better. The last four are considered “good health” habits. Keeping a healthy lifestyle may help you to feel better during your treatments.

Below is a list of recommendations that have traditionally been given to patients getting radiation treatments. If you have questions or concerns about anything in this list, please talk to your doctor or nurse.

**How do I care for the skin in the treatment fields?**

- Common skin irritants include lanolin, perfumes, and dyes. Camphor, menthol, zinc, and aluminum can also cause problems. Alcohol is drying to the skin. You may wish to avoid skin care products that contain large amounts of these items. Your pharmacist, doctor, nurse, or radiation therapist can help you understand product labels.
- Avoid extremes of hot and cold on treated skin as they may cause further damage to the skin. The use of ice packs and heating pads is not recommended.
- Avoid exposing treated skin to direct sunlight. This includes tanning beds.
- You may also wish to avoid swimming pools or hot tubs. They contain harsh chemicals that can dry and irritate the skin.
- Avoid applying any friction to the skin in treatment fields. Try not to rub or scratch your treated skin. Avoid “rough” clothing or clothing that rubs back and forth over treated skin.
- You may find that soft cotton clothing that has been washed in mild baby soap provides comfort to treated skin.
- If you need to reduce chafing or friction within skin folds, use a product called Zeasorb® Absorbent Powder. It can be bought at drug stores. Do not use cornstarch as the starch may “feed” on a normal body flora and lead to a fungal infection. You may also wish to avoid baby powder or other talc products that contain perfumes and dyes.
- Avoid high pressure shower sprays. They may cause further damage to treated skin.
• Do not use tape on treated skin. Removing it can cause damage.
• Tell us if your skin becomes sore or tender to the touch. Your doctor or nurse may advise you to take Tylenol® or ibuprofen for discomfort. If your skin soreness disrupts your sleep, you may want to take one of these at bedtime.
• If you need to shave in areas where your skin is being treated, use an electric, rather than a normal razor.
• If you use a thick, ointment type moisture cream, do not apply it directly onto the skin. Rubbing thick ointments onto treated skin can cause further damage. This damage occurs through a “shearing” of the sweat and oil glands in the skin. Instead, “melt” thick ointments in the palm of your hands. Then, gently pat it onto your skin.
• If your head or scalp area is getting treated, it is okay to wash your hair gently with a mild shampoo. Do not use hair dye or apply permanent wave solutions to your scalp until well after your treatments are finished.

How do I clean the skin in the treatment fields?
• Gently wash the skin in treatment fields. Use warm water alone, or warm water with a mild soap (Dove®).
• Try to avoid washing any of the plastic dressings or short-lived marks placed on your skin by the therapists.
• Wash your treated skin with your hands or a soft washcloth. If you use soap, be sure to fully rinse it off. Pat your skin dry with a soft clean towel. You can also let it air dry.

• Breast patients: It is okay to use a non-aluminum antiperspirant or deodorant on your treated side.

Here is a partial list of mild soaps that you can use.
Aveeno®
Dove®
Basis®
Neutrogena®
Cetaphil®
Ivory®
Value Rite® skin cleanser

What should I know about creams and lotions?
Keeping treated skin clean, soft, and moist by using creams and lotions is endorsed by most radiation doctors. Your skin will most likely feel softer and suppler with the use of creams and lotions. Using creams and lotions will not reduce how severe your skin reaction becomes. Creams and lotions may help your skin to feel more comfortable. You may use a skin cream or lotion up to 1-2 hours before your treatment.

Because skin reactions from radiation treatments are common, researchers persist in trying to find ways to prevent them or lessen their severity. Many studies have been done with a wide range of skin care products. Many more will most likely be done. Other studies have looked at oral agents or wound dressings. Thus far, there is little data to show that any one product works better than another. You should use what works for you.

There are many skin care products on the market. You can keep using your normal products on your treated skin if they do not cause burning, tingling, itching, or a rash. If burning, tingling, itching, or a rash begins, stop using these products. You may then want to switch to products that are
made for sensitive skin. Use products that do not contain any alcohol or perfumes. A list of recommended skin care products are listed below.

- Aloe Vesta®
- Aveeno®
- Aquaphor
- Biafine®
- Calendula cream
- Cavilon™
- Curél®
- Elta® Lite lotion
- Lubriderm®
- Petroleum Jelly
- ProShield® Plus Skin Protectant
- Neutrogena®
- VaniCream®
- Vaseline Intensive Care lotion

**What should I do for itchy skin?**
Sometimes the skin in treatment fields becomes itchy. Again, this is because oil and sweat glands can “turn off” for a period of time. If this happens, talk to your doctor, nurse, or radiation therapist. He or she will be able to help you with this.

**What should I do if my skin becomes “weepy” or if bleeding or blisters occur?**
Talk to your doctor, nurse. He or she may want you to use a germ-killing ointment. You may also be given special dressings to use. These will help your skin to heal and may be soothing.

**How do I keep myself well-nourished and well-hydrated?**
During your treatments, it is vital to eat well and drink plenty of fluids. Your body needs nutrients and water to repair treated skin and tissues. Patients who eat well and drink lots of fluids tend to feel better than patients who do not. Your doctor and nurse can help you to find ways to maintain your food and fluid intake. Family members can also help.

**May I keep smoking?**
Smoking is not considered a good health practice. There is some research to suggest that people who smoke during their radiation treatments have poorer outcomes than people who do not smoke. If you are a smoker, please cut back, or better yet, quit smoking completely. If you need help with this, speak to your doctor or nurse. He or she will help you get in touch with to the supports you need.

**What about alcohol use?**
In general, people getting radiation treatments should try to avoid large amounts of alcohol. There is some research to suggest that people who drink alcohol during their radiation treatments have poorer outcomes than people who do not drink alcohol. If you think you may have a problem with alcohol, talk to your doctor or nurse. He or she will help you get in touch with to the supports you need.

**How much sleep do I need?**
It is vital to get enough rest and sleep during your treatments. Your body needs sleep in order to repair normal tissues. If you are not sleeping well, let your doctor or nurse know. The doctor may be able to prescribe something. The nurse may be able to suggest ways to get better sleep. If you have chronic problems with sleeping, you should talk to your primary care doctor. Getting enough “good sleep” is a key factor in staying healthy.

**How do I care for my skin after treatments end?**
Most skin reactions will appear to fully heal 1-2 weeks after treatments end. But the deeper parts of your skin and tissues will need more time to fully heal. In some cases, the skin in treatment fields can change over time. The skin can toughen, darken, or form brown scaly spots or broken blood vessels.
This can happen weeks to months after treatments end.

You should continue to clean, moisturizing, and handling your treated skin gently for at least six months after your treatments end. When outdoors, always use a good sunscreen (SPF 30 or higher) on treated skin. Treated skin is at a higher risk for developing a certain kind of skin cancer.

Your treated skin may also remain dry and itchy. You may need to continue using creams or lotions. You may also find that your treated skin is more sensitive. You may need to use soaps and lotions made for sensitive skin. You should also continue to protect your treated skin from hot and cold extremes; friction, or other kinds of stress.

If your treated skin persists in being a problem, talk to your Radiation Doctor or Nurse. He or she will help you to form a long-term plan to manage your treated skin.

The Spanish version of this Health Facts for You is #7098

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person’s health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 6/2017. University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#4621