



Patient Education Sheet

Oncology Nursing Society
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How Can I Manage Skin Reactions From Radiation Therapy?

As radiation travels through the skin to treat the tumor, it interferes with skin cells' ability to regenerate, resulting in dry, red, itchy, and sometimes painful skin in the treatment area. Most patients who are receiving radiation will develop radiation skin reactions to some degree.

Here are simple tips and techniques that you can discuss with your healthcare provider to manage skin reactions from radiation therapy.

Most Helpful

- A radiation technique called intensity-modulated radiation therapy (IMRT) reduces skin reaction while still effectively treating a tumor. IMRT uses very small beams of radiation that are precisely directed to a tumor. The precision spares the healthy tissues that surround the tumor, including the skin, from excess radiation.
- Mild and gentle skin care techniques also help prevent and treat skin reactions, according to several clinical trials. Keep the area clean and dry. You should continue to wash your hair and skin with mild, pH-neutral soaps. Wear loose-fitting clothes made of natural fibers, and protect the area from UV exposure. You may also continue to use aluminum-free deodorant; in fact, one study found less skin irritation in patients who used aluminum-free deodorant than in patients who used nothing.

Likely to Be Helpful

- In clinical trials of calendula, patients who used it experienced fewer skin reactions and needed less frequent radiation treatment interruption to manage skin-related side effects.
- Creams or gels containing hyaluronic acid (Ialugen®) or sodium hyaluronate (Radiaplex™) helped heal skin reactions when applied to the radiation treatment area. It was also effective on radiation recall skin reactions. However, a sodium hyaluronate cream called XClair™ had conflicting evidence in clinical trials (see "Not Enough Evidence" section).

Not Enough Evidence

Several topical treatments have been studied, but all of the following creams, gels, and lotions were found to be ineffective at treating skin reaction.

- Aloe vera
- XClair™ sodium hyaluronate cream
- Topical steroids

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- Dexpanthenol cream (Bepanthen®)
- Glutathione and anthocyanin gel (Ray-Gel™)
- Theta cream
- Sucralfate cream
- Lipiderm®
- Anionic polar phospholipid (APP) cream
- Vitamin C/ascorbic acid solution
- Chamomile cream and almond ointment
- Sodium sucrose octasulfate

Four skin dressings were studied for use in skin reaction. Most of the following dressings were effective at reducing skin reactions, but more studies are needed before healthcare providers will start using them regularly.

- Cavilon no-sting barrier films
- Hydrogel and hydrocolloid dressings
- Honey
- Silver leaf dressings

Oral Treatments

- One study found that zinc capsules helped prevent skin reactions, but another study found that they had no helpful effect.
- One glass of red wine per day had a protective effect on the skin in one study. More or less than one glass or not drinking at all had no effect.
- Oral sucralfate did not protect the skin in one study.
- Oral proteolytic enzymes significantly reduced skin reactions in one study.

Not Likely to Be Helpful

- Five clinical trials that studied tromaline and Biafine® found that they did not have any effect against radiation skin reactions.

Not Recommended

- Although gentian violet has been used for radiation skin reactions in the past, the medication has been found to cause cancer in animals. Therefore, it is no longer recommended.

Questions for Your Healthcare Provider

Always consult your healthcare provider before adding any new treatments or other interventions into your routine.