

ITCH RELIEF FOR HEALING BURN SCARS

Author: Alliya Qazi and Victor C. Joe

Bug bites, rashes, dry skin—most people can identify with the relief that comes from scratching a bothersome itch. Most can also relate to the annoying feeling when you just can't reach that itchy area in the middle of your back. However, fewer people can identify with the problem of chronic or long-lasting itching. Much more than a nuisance, the long-term post-burn itch can be a very troubling issue that interferes with sleep, activities of daily living, and overall quality of life.

ITCHY BURNS SCARS

Itching, also known as pruritus, is unfortunately quite common following burn injuries. Several studies have shown more than 90% of burn patients experience pruritus initially.¹ While the percentage of individuals who report itching does decrease over time,² a large number of people still continue to experience itching long after their initial injury. In one study, more than 40% of patients reported long-term itching for an average of 7 years following their burn.

Several factors that are associated with post-burn itching have been identified. These include a high percentage of total body surface area (TBSA) burns and a high percent of TBSA grafted.¹ Certain characteristics of the wound, such as dry skin and raised or thick scars, are more associated with itching.

Furthermore, certain external factors, such as heat and sweating, have worsened itching.² One study demonstrated a greater intensity of itching in skin-grafted wounds for up to 3 months, but this difference went away by 12 months.² Other factors, such as age and gender, are less clear, with different studies showing mixed results regarding their roles in itching.^{3,4}

WHY DOES ITCHING OCCUR?

While we have learned a lot about why itching occurs, a complete understanding of post-burn itching is still lacking. A compound called histamine is one of the main factors involved in the sensation of itching. Histamine is released by mast cells, immune cells in the skin.

Mast cells can be activated to release histamine by several factors, including activity, heat, and manipulation of the wound, along with several other chemicals that are present in our bodies. Histamine activates histamine receptors, and the stimulus is then transmitted from particular nerve endings (C fibers) to the brain via specific pathways in the spinal cord.

Interestingly, the sensations of pain and itch share these same pathways. Whether you perceive pain or itching depends on the intensity of the initial stimulus. A superficial stimulus will be perceived as itching, while a deeper stimulus can be perceived as pain. Overall, many signals and pathways are involved in pruritus, and there is evidence that post-burn itch is unique in itself, which makes treating it quite complex.

WHAT ELSE CAN I DO BUT SCRATCH?

There is no doubt that the sensation of itching causes us to scratch reflexively. Nor would anyone question the immediate relief that scratching brings. However, scratching is an impractical long-term solution and has consequences, not the least of which is the potential for damaging the skin itself.

ORAL MEDICATIONS

Oral antihistamines are the first-line treatment for itching. The most commonly used are the H1-blockers: diphenhydramine (Benadryl), hydroxyzine (Atarax, Vistaril), and chlorpheniramine (Chlor-Trimeton). No difference has been shown between these three.³ While they are the primary treatment for pruritus, unfortunately, antihistamines do not provide complete relief for the majority of patients.⁴

As described earlier, pain and pruritus share common nerve pathways. Studies have examined itch relief with medications traditionally aimed at some of the receptors and pathways involved with pain. So far, one of the most promising is gabapentin (Neurontin), a drug that has been used to treat both seizures and nerve-related pain.

While the exact mechanism of gabapentin is unknown, it is thought to block some of the channels that are involved with transmitting signals for pain and itch perception. It has been shown to reduce burn-related itching, with the most common side effect being drowsiness. Other medications that have some promise for itch relief include a drug called naltrexone (which acts on receptors involved with pain perception) and antidepressants.

TOPICAL AGENTS

Moisturizers, or emollients, are another mainstay of treatment for itching. Small studies have shown moisturizers to decrease the duration of itching and to help with dry skin, which is one of the factors associated with increased pruritus. The various lotions and moisturizers available are too numerous to mention.

Multiple other topical agents have been shown to decrease itching. Cooling agents, such as menthol or camphor, can help to mask the sensation of pruritus. However, they provide only temporary relief and are not suited for long-term treatment.

Studies have shown that colloidal oatmeal can decrease itching, used in moisturizers or bath products. Topical silicone gel has been shown to help as well. Capsaicin, an active compound found in chili peppers, has been used to combat itching, but studies have not shown it to be much more effective than a placebo. As with any treatment, a discussion with your healthcare provider is important in determining your recommended treatment.

ALTERNATIVE THERAPIES

When it comes to the treatment of itching, it's not all about medications and topical treatments. Another treatment for the post-burn itch is massage, which multiple studies have shown improves pruritus. Some have advocated massage with moisturizers as part of any regimen for itching.

Ultraviolet (UV) phototherapy has also been shown to improve pruritus. Treatment with lasers, a therapy gaining interest for the treatment of scars, also has great potential for itching. There are modalities that are used by therapists to treat other musculoskeletal or skin conditions that can be considered for burn-related itching as well. For example, small studies show positive effects with the use of TENS (transcutaneous electrical nerve stimulation), special dressings such as Unna's boots (commonly used in the treatment of venous stasis ulcers of the legs), and psychosomatic therapies, such as biofeedback.

Mind-body practices like meditation may also provide an alternative to traditional treatments. If standard treatments are not adequate to control your itch, you can ask your doctor or therapist about these potential therapies.

A PERSONALIZED PLAN OF TREATMENT

Itching is a common problem following a burn injury, and unfortunately, it can negatively affect the quality of life of many burn survivors for years after injury. How and why itching occurs after burns is extremely complex and not entirely understood. Therefore, no single treatment works to alleviate symptoms completely. Despite the availability of a myriad of oral, topical, and other treatments, finding a regimen that is effective for any particular individual can be difficult. If you struggle with post-burn itching, you must have ongoing discussions with your health care provider to work together to find treatments that work for you.

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Alliya Qazi, MD, is a resident in the general surgery residency program at the UC Irvine Medical Center. Her surgical training includes working with Dr. Victor Joe at UC Irvine Health Regional Burn Center. She graduated from the University of Rochester School of Medicine and Dentistry in Rochester, New York.