

## Hand Burns

*“Working with a knowledgeable hand therapist can make the difference between success and failure in complex hand surgical cases. The therapist extends the continuum of our care, as well as functioning as coach and trainer for our patients.”*

*Marybeth Ezaki, MD, Past President, American Society for Surgery of the Hand*

### What is a hand burn?

Our hands are at greater risk for burns because they are often handling a variety of objects. Hand burns occur when cells in the skin are injured due to contact with heat, electricity, chemicals or radiation. When a hand is burned, the skin can become very tight, making it hard for a person to use his or her hand normally.



*Example of a burn to the back of the hand*

### What causes a hand burn?

There are four types of hand burns: thermal, electrical, chemical and burns from radiation. Thermal burns are from contact with something very hot like fire, hot water or grease. Electrical burns are from contact with electricity. An example of an electrical burn is when a child sticks a finger in a light socket. Chemical burns are caused by contact with household or industrial chemicals. Radiation burns are caused by the sun, tanning booths, sunlamps or radiation therapy for cancer treatment.

### What are the symptoms of a hand burn?

Hand burns can cause redness, swelling, infection, loss of skin and loss of skin color. If not treated early, hand burns can lead to finger, thumb and wrist tightness. Our skin has layers; the greater the degree of burn means more parts of the skin are injured and the burn is worse. Burns are classified from least amount of damage (first-degree) to the most amount of damage (third- and fourth-degree). When the burn affects the deeper layers of skin, it can become tighter and take longer to heal.

### What is the treatment of a hand burn?

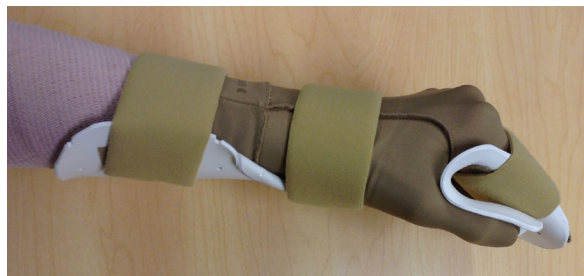
The treatment of a hand burn depends on the severity of the burn. First-degree burns require minimal treatment. Second-, third- and fourth-degree burns will require wound care, possible skin grafts by a hand surgeon and early hand therapy to prevent stiffness of the joints and skin (scarring). The treatment of hand burns has become more advanced as newer wound care bandages assist with healing.



*Photo of healed hand burn and scarring*

### What can a hand therapist do for me?

A patient should be referred to a hand therapist soon after complicated burns. The therapist may make an orthosis to position the hand and will help with cleaning the wounds and applying bandages. As the burn heals, the therapist will help to keep the scars from becoming too tight. Compression garments are often recommended to help control the scarring. Therapy will also include teaching the patient exercises to improve motion in the fingers and strength of the hand.



*Example of orthosis and compression glove for a hand burn*