Severe Burns and Wound Care

Our surgeons provide 24-hour, on-call response to burn injuries with all area hospitals. Following are recommendations for treatment prior to hospital transfers:

Indications for Admission to a Burn Unit

- Any burn over 10 percent Total Body Surface Area (TBSA)
- Burns of the face, hands, feet and perineum
- Electrical or chemical burns
- Smoke inhalation or respiratory symptoms
- Severe frostbite with potentially threatened tissue viability

Major Burns -- Initial Care and Transfer

Start with the basics of standard trauma care, then plan for an immediate medical transfer:

- 1. Check to see if there are any other injuries.
- 2. Establish IV access with fluids per the Parkland Formula (see below).
- 3. Initiate pain control with an IV and morphine.
- 4. Insert a Foley catheter.
- 5. Apply a moist saline and gauze dressing over the burn wound. Use a dry dressing to avoid hypothermia.
- 6. Intubation if there has been significant smoke inhalation.
- 7. Finally, arrange to transfer the patient immediately to a medical facility.

Parkland Formula: 4cc x weight in kilograms x percent (%) burn of TBSA. Give half within the first eight hours making sure to use a lactated-ringers solution or normal saline.

Small Burns

Most small burns can be cared for locally and heal without an operation. In general, we recommend that clear blisters only be opened and drained. Most patients do well using Silvadene and gauze dressings twice a day. Treat facial burns with topical Bacitracin and avoid dressings.

It is important to be aware that small third-degree burns that are leathery and insensate generally do better with surgical excision and closure or grafting. It is also important to recognize that any second-degree burn that has not completely re-epithelialized in two weeks should be considered for grafting.

A delay in healing indicates that it is a deep second-degree burn that could result in substantial scarring and/or contracture.







Ashley was just five years old when her life was suddenly changed forever. She was caught in a gasoline fire and suffered severe, life-threatening burns.

Ashley was admitted to our service at Essentia Health-Duluth Burn Center with deep burns to 65 percent of her body. She required emergency escharotomies to release circumferential burns of her chest, legs and right arm.

Her condition was critical for several weeks, but after four major skin grafting surgeries and seven weeks of intensive care in the Burn Center, she was finally able to go home.

We have followed Ashley ever since. She has undergone nine additional reconstructive surgeries to improve both function and appearance.

Ashley is pursuing a medical career and plans to devote herself to working in a burn unit. She wants to serve as an example to children facing some of the enges she overcame. She is an

same challenges she overcame. She is an inspirational young woman whom we have come to admire.

"I can move better than before. My legs have more flexibility and it is easier to walk. These procedures have been very effective...they have made me happier and my scars look better than ever!" ~ Ashley