Hanger Burn Mask

Burns create scars both physically and emotionally. Traditionally we have measured successful outcomes of severely burned patients by their rate of survival rather than rehabilitation. Hanger is dedicated to providing exceptional treatment for patients with traumatic burn injures. Today, with innovative technology, advancements in medical procedures and science, we now bridge this gap with a team approach to comprehensive wound care from acute in-patient management, out-patient rehabilitation and reintroduction of the patient to their daily life to help build the patient's self esteem. We look forward to merging our expertise and advancements with each burn rehabilitation team facilitating optimal outcomes for our patients.

There are special challenges associated with treating burn patients, particularly those who suffer from facial burns. Because of their proximity to the eyes, nose, ears and nasal passages, facial burns can present serious visual and pulmonary complications. For patients whose scar tissue extends down the neck, special precautions must be taken to prevent contractures that could ultimately result in impaired breathing or swallowing. Even facial burns that are relatively mild in severity can cause scarring, which may have a significant impact on a person's self perception and wellbeing.

Burn masks are not available at all Hanger patient care centers. To find a location that provides burn masks, please call 877-4Hanger.

What is Scar Tissue?
Scars are defined as a mark left on the skin by the healing of injured tissue. During the normal healing process connective tissue cells (fibroblasts) begin to multiply and repair damage. Scar tissue is formed following a burn injury by connective tissue (non-elastic collagen fibers) that replaces normal soft functional tissue. Management of scar tissue is done through massage, therapeutic exercises, topical silicone therapy, orthotic intervention and other methods.

Who Are the Members of the Rehabilitation Team?
A team approach is essential in creating a successful outcome for the burn-injured patient. The burn rehabilitation team consists of professionals from all points on the health care continuum working together to ensure every patient need has been addressed. For example, physical and occupational therapists work in conjunction with the physician to create the appropriate assistive devices as well as design exercises to increase the patient's strength and flexibility. Orthotists supply positional devices and masks to preserve functionality, promote the healing process and minimize scarring.

What is a Custom Burn Mask?

A custom burn mask is a clear plastic orthosis designed from a model of the patient's face and fit directly against the skin. The total contact design is used to apply direct pressure over the wound site to help prevent significant build up of collagen fibers and realign them in more normal formations.

Custom molded burn masks are also used to protect the wound site from unwanted shear forces that could impair the healing process. The clear plastic design provides a barrier from potential irritants and allows visual inspection of the wound site without removal of the mask.

How is a Burn Mask Made?

Historically the most effective method of creating a custom burn mask entailed applying an alginate or plaster-molding compound directly to the face. This procedure, while very effective, proved to be time consuming, painful for the patient and laden with potential complications. If a second mask is required due to patient changes the casting process had to be repeated.

Thanks to recent advances in medical technology and materials development, there is now a better option for treating patients with severe facial burns. Insignia, a proprietary technology unique to Hanger Prosthetics and Orthotics, is a portable, three-dimensional laser scanning device, which eliminates the need for plaster or alginate molds and the associated discomfort and anxiety It offers multiple benefits to the patient:

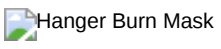
- Insignia creates a digital record of the patient's facial surface that is accurate to within one millimeter.
- Insignia scans take only minutes to complete and can be done practically anywhere, at no additional cost.
- Insignia is painless; the class II laser is non-invasive and does not contact the patient's skin.
- Insignia makes it easy to adjust the mask to a patient's changing condition. Follow-up scans monitor the healing process and can be used to create a new mask, if indicated. Insignia increases the incidence of positive treatment outcomes by dramatically reducing discomfort associated with traditional casting methods.
- Insignia follows a patient's condition over time by providing digital "snapshots" of the recovery process.

Once the facial scan and digital model have been completed, the burn mask is created. Traditionally, masks have been fabricated using clear plastic, which protects the wound site while still allowing visual inspection by a physician. Although plastic masks have proven to be quite effective in patient therapy, there is a new scar-management material called Silon-STS® (silicone thermoplastic splinting) that minimizes and reduces scars and aids in the prevention of hypertrophic scars and keloids from traumatic injuries or surgical procedures. Developed and produced by Bio Med Sciences, Silon-STS was designed specifically for patients with facial burn scars. This unique, patented material unites pressure and silicone therapy into one step. The Silon-IPN technology combines the strength and resilience of "Teflon" with the elastic and therapeutic properties of silicone.

Each of these technologies offers improvements over traditional methods of creating custom burn masks.

- Digital scanning is faster, easier, and more comfortable to the atient.
- Silon-STS's unique material properties aid in scar management and maturation.

Together they have a significant impact on the patient's experience and rehabilitation.



About Burns

Burns are often described by the cause, severity and portion of the body involved and are often referred to by first, second, third and fourth degree burns. While this has been helpful in denoting the type of burn it is not always helpful in determining treatment. The American Burn Association has incorporated an additional assessment scale that aids in estimating the level of care required according to percentage of total body surface area affected and additional factors such as age, thickness, and location. Major burns are denoted by injury that involves greater than 20% of total body surface area for adults, greater than 10% for children and elderly patients, greater than 5% full thickness burn and significant burn injury to the face, eyes, genitalia or joints. Major burns present with swelling and blistering caused by the severe loss of fluid from damaged blood vessels. This scenario causes injury and at times complete destruction of the skin to its full depth. As a result there are several complications that may arise; infection, contractures, significant scar tissue formation, hypertrophic or keloid scarring, and the damaging effect on one's self esteem due to changes in their outward appearance.