



Elasto-Gel™

“Treating the world well”

NEWSLETTER

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Case Study: The Effect of Hydrogel Sheet on Hypertrophic Scarring in Burns

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For the last 15 years, the standard prevention and treatment approach of hypertrophic scars has been the application of applying pressure to the treatment area. This treatment requires that the patient be precisely measured for a custom tailored “pressure suit” which fits snugly. The suits are made of elastic-like material with zippers placed in strategic locations to make the suit easy to apply. During the course of treatment, the suit is stretched over bony protrusions, such as the nose, and certain areas of the skin will not receive pressure. To remedy this problem, many therapists apply various products to these concave areas so that the skin benefits from the pressure garment. One of the products that has been used successfully with only limited irritation is silicone gel sheeting. Numerous reports in the literature have shown that areas treated with silicone sheeting have less hypertrophic scarring as compared to areas with pressure alone.

For the last 5 years Southwest Technologies has marketed Elasto-Gel™ sheeting for applications under casts and splints. The main advantage over silicone sheeting is that Elasto-Gel™ is moisture vapor permeable and will absorb moisture from the skin and transpire it to the atmosphere.

Silicone does not allow this moisture vapor exchange. This feature makes Elasto-Gel™ much more comfortable to wear.

Detroit Receiving Hospital has used Elasto-Gel™ under pressure garments for scar treatment for several years with very excellent results.

Burn Wound Protocol

As the burn wound heals, hypertrophic scarring is a major concern. This type of scarring can have a negative effect on both functional abilities and cosmetics. The scar becomes red, raised, hard, and contracts the healing tissue. Historically, pressure has been the only treatment modality. However, we have found that placing Elasto-Gel™ over the burn under the pressure garment has had a dramatic effect on hypertrophic scarring. The burn region never decreases in size, but the quality of the scar changes. It becomes pink and pliable, thins out, and softens.

Use an appropriate size of Elasto-Gel™ to cover the wound and secure with tape, elastic wrap, gauze, or a mesh net or stockinette. It is worn 24 hours each day with removal only for appropriate wound care or personal hygiene. If used consistently, results are visible within two weeks. Elasto-Gel™ can be used for six months to one year on adults with continued results. It may also be worn independent of a pressure device.

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Case Review

MG is a 39 year old gentleman who sustained a 25 percent total body surface area burn on September 28, 1993 after a propane gas tank exploded. The areas of involvement included the face, scalp, bilateral hands, portions of both lower extremities, and back. All areas were second degree in depth except both hands which were third degree. Multiple split-thickness skin grafts were required on both hands initially for wound coverage and later for reconstruction. All other burned areas were allowed to heal by secondary intention.



10-10-93

Bilateral hand grafts display adherent tissue healing well with open wounds clean. Facial wounds are clean and granulating.



Burn Assessment

Elasto-Gel™ was started on both hands and face (in conjunction with pressure devices on the hands) 20 days post burn. It reduced erythema and made the scar more pliable. The strength of the scar continued to contract in the left hand, due to the extensive depth of the burn. Reconstruction was completed on 3/8/94 because functional joints of the hand became involved. Elasto-Gel™ was placed back on the hand ten days postop. Both hands and face continued to improve.

Goals of Elasto-Gel™ Treatment in Burns

1. Promote burn wound healing
2. Promote graft take
3. Maintain soft tissue/skin length and pliability
4. Decrease possibility of hypertrophic scar
5. Manage hypertrophic scar by promoting pink, flat, and supple scar



6-1-94

The burn areas now show pink supple changes. Both hands and face have flat, pleable scars seven months postburn. Results continue to be seen using Elasto-Gel™



Continuing Education

The following chart summarizes the use of Elasto-Gel™ for several conditions. This protocol was developed by Amelia M. Jones, OTR.

DIAGNOSIS	WHEN TO USE	HOW TO USE (all should be used 24 hrs. a day; remove for washing only)	WHY DOES IT WORK	TIME BEFORE RESULTS	PRECAUTIONS
Burn Scar (any depth of burn)	When last open wound is size of dime	<ul style="list-style-type: none"> • tape on • use under pressure garment • under Coban™ • under Tubigrip™ 	<ul style="list-style-type: none"> • decreased vascularization to scar thereby flattening it • softens scar (old), allowing movement if by a joint 	Two weeks wear for up to one year (more for children). Results seen in 1-2 weeks wear; for up to 1 year (more for children)	<ol style="list-style-type: none"> 1. Stop if dermatologic reaction occurs 2. Stop if vascular supply to wound is compromised 3. Should not come in contact with other liquids such as bleach 4. Do not wear while undergoing radiation
Keloids	When scar is hard	<ul style="list-style-type: none"> • tape on, or • with pressure garment or pressure devices 	<ul style="list-style-type: none"> • not known; flattens and softens keloids 	Seen within 2 weeks; wear until resolved	
Hand Trauma	When scar or soft tissue is hard, red or raised	<ul style="list-style-type: none"> • under cast or splint • under glove or tape on • under pressure glove or garment 	<ul style="list-style-type: none"> • decreased vascularization to soft tissue and scar; flattens, softens and allows increased active motion near joints 	Results are seen within 2 weeks; wear until resolved	
Mastectomy or Breast Reductions	When all sutures are out	<ul style="list-style-type: none"> • under bra • under pressure post-op dressings 	<ul style="list-style-type: none"> • flattens and softens scar • increases comfort in bra post-op 	Results in 1 week; wear until desired result up to 2 months	
Liposuctions	3-5 days post-op	<ul style="list-style-type: none"> • under pressure garments or post-op dressings 	<ul style="list-style-type: none"> • aids in maintaining contour effects 	Results in 1 week; maintain for 6 weeks	
Digital or Limb Amputations	When all wounds are healed	<ul style="list-style-type: none"> • under Coban™ • under stump shrinker • while in prosthesis 	<ul style="list-style-type: none"> • helps mold stumps • aids in comfort of prosthesis wearing • acts as shock absorber 	Results in 1 week; wear for comfort as long as patient wishes	



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