

## SCAR MANAGEMENT

### WHY EARLY INTERVENTION MATTERS

Initiating scar management during the inflammatory and proliferative stages is critical for preventing excessive collagen deposition, keloids, and hypertrophic scarring. The conventional 'watch-and-wait' approach delays treatment into the remodeling stage — when scar tissue is established and less responsive.



Dr. Maryam Safaee is a board-certified dermatologist based in Los Angeles with an extensive background in both medical and cosmetic dermatology. In addition to her dermatology training she has extensive internal medicine training which lends itself to her unique system-level approach to skin care.

*Key evidence: Early initiation of scar management during the inflammatory and proliferative phases is associated with improved scar outcomes, including reduced hypertrophy and more organized collagen compared to delayed treatment.<sup>1</sup>*

### TREATMENT TIMELINE

PHASE / TIMING	CLINICAL ACTIONS
<b>Immediate Post-op</b> Day 0 – Week 2	<ul style="list-style-type: none"> <li>Apply microporous paper tape (Steri-Strips) immediately at wound closure</li> <li>Consider botulinum toxin near high-tension scars to reduce dynamic muscle pull</li> </ul>
<b>Early Post-op</b> Weeks 2-3	<ul style="list-style-type: none"> <li>Begin silicone therapy once epithelialized — choose by site:                             <ul style="list-style-type: none"> <li>Trunk, extremities, and flat sites that tolerate adhesion: sheeting — wear 12–24 hours per day for ≥2–3 months</li> <li>Face and mobile areas: gel — apply twice daily, 1–2 mm beyond margins</li> </ul> </li> </ul>
<b>Active Management</b> Weeks 3-12	<ul style="list-style-type: none"> <li>Continue silicone therapy; gel for face/mobile areas, sheeting for flat sites</li> <li>For large trunk, extremity, or graft scars, compression garments (20–25 mmHg) are a useful adjunct where they fit</li> <li>Begin strict sun protection (SPF 30+) for the first year</li> </ul>
<b>Long-term Maturation</b> Months 3-18	<ul style="list-style-type: none"> <li>Continue silicone — and compression where used — until the scar is soft, pale, and flat</li> <li>Scar massage may reduce pain and pruritus; avoid forceful massage if inflamed</li> <li>Intralesional corticosteroid at first sign of abnormal scarring (erythema, elevation)</li> </ul>

*Dr. Safaee was compensated by Nuance Medical for the research and writing of this white paper. The opinions and analysis expressed herein are strictly those of the author and do not necessarily reflect the views of Nuance Medical.*

## COMBINATION THERAPY

### SILICONE + COMPRESSION + TENSION REDUCTION

- Best combined collagen remodeling profiles
- Continue combination for 12– 18 months until maturation
- Intralesional corticosteroid: decrease collagen synthesis, suppress TGF- $\beta$ ; combine with silicone for synergy

## BEFORE / AFTER



## NUTRITIONAL & HIGH-RISK GUIDANCE

### NUTRITIONAL SUPPORT

#### FOR COLLAGEN SYNTHESIS

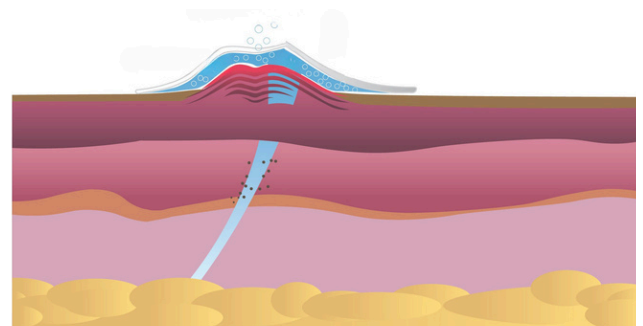
- Protein: 1.25–1.5 g/kg/day
- Vitamin C, zinc, vitamin A: essential cofactors
- Arginine + glutamine supplementation increases collagen synthesis markers

### HIGH-RISK PATIENTS

#### COUNSEL BEFORE PROCEDURES

- Darker skin phototypes (Fitzpatrick III–VI)
- Family history of keloids or prior abnormal scarring
- High-tension sites (sternum, shoulders, jawline)

**WHY SILICONE?** Silicone-based therapies are widely recommended as a first-line treatment for the prevention and management of hypertrophic and keloid scars, with multiple randomized controlled trials and meta-analyses supporting their effectiveness in improving scar appearance.<sup>2</sup>



## SCAR MATURATION: 12–18 MONTHS — Immature scars respond best to treatment



### FOLLOW-UP SCHEDULE:

2 weeks

6 weeks

3 months

6 months

12 months

1. Gold, M. H., McGuire, M., Mustoe, T. A., Pusic, A., Sachdev, M., Waibel, J., & Murcia, C. (2014). Updated international clinical recommendations on scar management: Part 2—Algorithms for scar prevention and treatment. *Dermatologic Surgery*, 40(8), 825–831.

2. Wang, F., Li, X., Wang, X., & Jiang, X. (2020). Efficacy of topical silicone gel in scar management: A systematic review and meta-analysis of randomized controlled trials. *International Wound Journal*, 17(3), 765–773.

In the first days after a procedure, see the *Bruise Management Best Practice Guide* to address any bruising around the treated area.