

### THE SPECTRUM OF SCAR THERAPY

The ability of our body to heal correctly depends on the formation of collagen tissue. This is the essence of scar tissue. The dilemma becomes: when is this collagen tissue which is part of the normal healing process our friend or our foe? The correct amount of collagen in a scar is normal for strength of healing. Too much collagen or abnormally placed collagen forms an abnormal scar. This can be not only cosmetically unsightly, but present functional problems such as pain, contracture, joint stiffness, vision problems, breathing difficulty and a host of other things related to where the scar is present. Scar formation differs in its type and location and etiology. It can be hypertrophic, keloids, immature, mature, hard, raised, red, or contracted.

Depending on the location and nature and duration of the scar, I usually begin with the least invasive treatment first then progress. Options include:

1. Topical scar therapy. This consists of massaging with creams. I usually recommend TNS Recovery Complex formulated with human growth factors, Coats aloe based gel with Vitamins A and E or E.G.F. The gel stays on the surface and allows for slow and steady penetration right into the scar and not deeper. I instruct patients to rub the scar very vigorously 25 to 50 reps twice a day. The massage is as important as the product itself. This works best if it is started early, about 7-10 days after scar formation, and continued 6-12 weeks.
2. Pressure therapy. This consists of using an occlusive membrane such as a silicone sheet. The theory is that the occlusion creates a special environment that promotes softening and proper healing of the scar. I use this on more severe scars than seen in the above group or scars not responsive to massage therapy. The occlusive sheet should be worn 24 hours a day except when bathing. Improvement is usually seen in two weeks.
3. Injection therapy. Steroids can be injected into the scar to soften the scar. This may thin the skin and lighten the color so extreme caution needs to be used. This also relieves pain in scars when it is present.
4. Radiation therapy. Particularly difficult scars, especially keloids, have been improved by X-ray treatment. This is usually done immediately following surgical excision for best results.
5. Filler therapy. Patients with depressed scars, such as in acne scars, will often benefit with injection with Collagen, Dermalogen, Artecoll, Restylane, NewFill or other such substances. Some new products are becoming available that are long lasting.
6. Dermabrasion. This may be helpful if a scar is raised and red and it will smooth the scar tissue down. It is best if performed in the first six weeks of healing.
7. Laser treatment. Depending on the nature of the scar several laser treatment modalities may be utilized. These include resurfacing which is utilized (like dermabrasion) to smooth the surface. Other lasers may remove some of the red features of certain scars.

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COSMETIC SURGERY

8. Surgical excision. This is utilized in certain situations especially when the scar is very large or wide and there is loose enough skin adjacent to provide a cosmetic and functional improvement. The different procedures include local excision, flaps, tissue rearrangements (Z-plasties) or even skin grafts at times to relieve contractures, such as in burn patients.
9. Surgical Punch and elevate. This is punching out an acne type small depressed scar and elevating it to the surface of the skin and suturing in place. Early after this starts healing dermabrasion is used to further smooth over the area.
10. Surgical punch and suture. Same as above except the scar is removed and the hole is sutured. It is also followed by dermabrasion.