

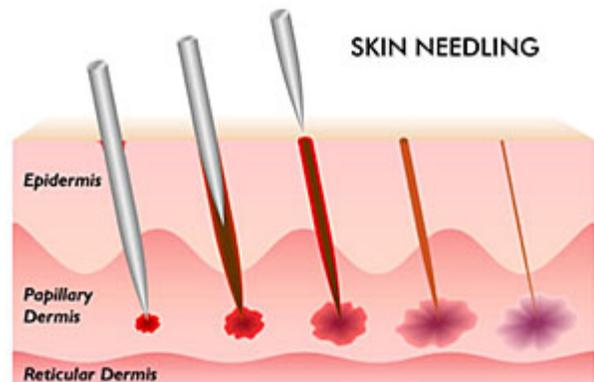
Skin needling for treating wrinkled upper lips and difficult scars. - An alternative to laser resurfacing.

By Dr. Des Fernandes

Welcome to some ideas from Cape Town South Africa. My name is Des Fernandes and I am a plastic surgeon concentrating on head and neck surgery. I might be in the minority position right now, but I believe that we have to look for alternatives to laser re-surfacing of the skin. I'd like to present my 2-year experience of an alternative method to laser re-surfacing and dermabrasion. Those techniques destroy the epidermis in order to create denser fibrosis in the dermis. The technique that I will describe preserves the epidermis, and stimulates collagen deposition in the dermis.

I was impressed by the publication of Camirand to make scars less obvious by using a tattoo gun to "needle abrade" the scars. As I understand it, this technique works because the needles break old collagen strands that are tethering the bed of the scar, and the damage also creates more collagen immediately under the epidermis.

Because the needle only penetrates through the epidermis and does not remove it, the epidermis is only cleft and will rapidly heal. As the skin swells, the holes are closed and the edges of the epidermis are approximated. The needle prick injures the upper 1 - 2 mm of the dermis. This injury, minute as it might seem, does cause some localised damage and bleeding. This will



promote the normal post-traumatic infiltration of fibroblasts and the release of growth factors. Ultimately, collagen is laid down in the papillary and upper reticular dermis. This is an un-important response if we are looking at a single needle prick through the skin. A completely different picture emerges when one has thousands of fine pricks next to each other. The process can become virtually confluent, and as a result, may mimic the results obtained with a laser, but without destroying the epidermis. It may be that with deeper penetration into the dermis, better collagen and elastin deposition will be obtained.

The Technique

I use a tattoo-artist's gun with 4/5 needles in a straight row. The skin must be held tightly and the excursion should be sufficient to penetrate skin. It is usually easier to

work in the Langer's line but I also work in a contrary direction as well.

Healing

The skin is crimson coloured immediately after the treatment but bleeding is minimal and stops pretty soon. After all this is only a pin-prick.! I have treated the skin with granulflex, with Tegaderm or simply leaving the skin exposed and covered only with a vitamin A and antioxidant vitamin gel. My impression is that healing is better when the skin is left exposed and covered with Vitamin A Gel

By day 4 to 5 the skin has returned to a moderate pink flush which is usually easily covered with make-up. The oedema of the face rapidly becomes un-noticeable, though one may notice "water-bags" for up to three months on the malars after treating the lower eyelids. At the same time collagen and elastin are building up and the skin gradually tightens up. The process can be repeated at anytime after the epidermis has healed completely.

The results:

Lips

The second case that I show proved that improvements take time to manifest. She has moderate creases on her upper lip which were treated with needling. Three months after the procedure I thought that the result was inadequate and I suggested that we should repeat the process. However, the patient had to return to her home in Europe and came back to Cape Town only after 9 months. By that time the upper lip had become smoother and a second procedure was not necessary as you can see from the photographs.



Lower eyelid skin

The same process of needling can be used for the lower eyelid. Before the process you can see that there is excess skin whereas after six months there is very little excess skin. The patient has been using a vitamin A and C gel as skin care which I believe enhances the neo-collagen formation.



Indications

I believe the indications are : To restore skin tightness in early skin laxity to avoid laser
Acne scarring Fine wrinkles Scars

Contraindications

Not for type IV, V and VI skin where pigmentation of the scars may occur

Advantages:

cost, Short healing period so less time off work Does not damage the skin. Skin becomes thicker No sun sensitivity Procedure can be done on people with thin skin improves dilated blood vessels. Needs either a general anaesthetic or extensive local anaesthetic and may even be done with simple topical anaesthetic cream

Disadvantages:

Blood aerosol potential exposure may require second or third treatment Over-aggressive needling may cause scarring potential hyperpigmentation

Discussion

I think that needling puncturing of the upper lip skin offers a lot in treating upper lip creases. An important point is that it is simple to do, has minimal side effects and is almost as effective as laser re-surfacing. I think it is important to notice that the skin does not become de-pigmented as seen in laser resurfacing. The longest results that we have are just 2 years old but at this stage I have not noticed any deterioration of those early results. I am sure that with the passage of time, the collagen will gradually be absorbed just the same as for laser and for Phenol peels. To try and minimise this I have advised the patients to use high doses of topical vitamin A and C.

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