

## Needle Work: The Low Down On Skin Needling



In 1988, Cape Town became the first place in the world to use cosmetic preparations with vitamin A to fundamentally change the appearance of photoageing.

Prior to this, Kligman had shown that retinoic acid (a medical version of vitamin A) could be used for treating **photoageing**. Cape Town became another world pioneering place in 1996 when skin needling was clinically researched and proved to be the most important way to safely thicken and rejuvenate skin by causing regeneration.

**Needling skin** was initially cast aside by most doctors as a 'less profitable' way to treat skin - while laser-resurfacing dominated the field and drastically thinned thousands of people's skins. Because research in Germany has confirmed and explained the clinical research from Cape Town, skin needling is now becoming the only acknowledged method to rejuvenate skin and refine scars. It is also favourably competing with ablative and minimally ablative procedures.

While the technique may seem new, we actually have **centuries of experience** of needling skin because tattooing has been practiced in both "civilized" and "primitive" cultures all around the world. Needling stands above all other currently used treatments because it has been shown to conclusively regenerate tissue and restore the natural lattice-distribution of collagen of the dermis. **To date, it is the only skin treatment that regenerates elastin.**

***Now, we have to stress one very important point:*** what we are talking about here is skin needling that penetrates through the skin and is painful and causes bleeding. If no bleeding occurs, the treatment won't work. Research work using various length needles since 1996 has shown that the ideal lengths for treating wrinkles and very shallow acne scars are between 1.0 mm and 1.5 mm. **For burn scars and deeper acne scars** it was found that up to 3 mm should be used. The process is called **Collagen Induction Therapy** and this term is used around the world and usually abbreviated to **CIT**.

Unfortunately there is growing disillusionment that bleeding is not essential - and that the same growth factors released from real medical needling will be induced by electrical changes - which are caused by deeper epidermal needling. In earlier research no clinical evidence was found to confirm that.

**For the best results in skin needling**, research has confirmed that the skin should also be treated with vitamin A to get the optimal effects. "Cosmetic" needling instruments assist in skin perfusion of the nutrients and render even better results.

Medical skin needling has a wide list of indications and **can be used on all ages and on all different coloured skins with safety**. For results one has to cause bleeding of the skin. When we prick skin below the epidermis, we also have to prick blood vessels that lie immediately below the epidermis. When the blood vessel is pierced, it starts to bleed and automatically platelets are released to try and stop the bleeding. These powerful little cells contain not only clotting factors, but also growth factors intended to speed up the healing process of the skin and the collagen. The deeper the needle hole, the greater the number of platelets will be released. It is this release of platelets that stimulates the regeneration of tissue, and the degree of improvement is directly related to the amount of bleeding. So for medical needling, the depth of the needle hole and the number of holes are equally important – in fact, the more the better.

To augment the results, experts suggest the use of very low concentration peeling agents which "sterilise" the wound and also seem to promote even more growth factor release.

The results, according to many observers, outrank the results achieved with expensive machines.

**In summary, Skin needling:**

1. Tightens skin laxity and restores normal skin tension in the early stages of ageing. Some patients who are not sure if they want face-lift surgery may be satisfied with simple Percutaneous CIT. The arms, hands, abdomen, thighs, and buttocks can also be treated to give total rejuvenation. In fact this has become the only “anti-ageing full body treatment that we have.
2. Treats fine wrinkles.
3. Reduces Acne scarring.
4. Stretch marks respond well to skin needling even when they have become “silvery” after a long time.
5. Scars are always improved - even if they are white, old scars they can become more skin coloured.
6. Burn scars – both flat and hypertrophic scars can be treated with success.

**Advantages of PCI**

1. PCI does not damage the skin. The epidermis remains intact.
2. Any part of the body may be treated.
3. Skin becomes thicker, which has been repeatedly demonstrated in histological studies.
4. The healing phase is short.
5. Not as expensive as laser resurfacing which thins the skin.
6. The skin does not become sun sensitive.
7. Can be done on people who have had laser resurfacing, or those with very thin skin.
8. It almost never causes hyper-pigmentation in patients with darker skins e.g. African, Indian, Malaysian, Chinese and Mediterranean skins.
9. Telangiectasia may disappear totally.
10. Can be done safely by well trained doctors.
11. The technique of Medical CIT is easy to master and it is useful for smaller areas.
12. Can be done with topical anaesthesia.

This is a simple technique and with the right tool it is easy and fast to puncture any skin thoroughly. While one treatment may not give the smooth appearance as seen with ablative laser re-surfacing, the epidermis is still

normalised. If the result is not sufficient it can be repeated as often as necessary. The technique can be used on areas that are not suitable for peeling or laser re-surfacing.

**Skin Needling induces collagen and elastin induction by employing the body's natural mechanisms that for the first time, as far as we know, produces regeneration of the skin and its matrix. There is no scar formation and the procedure can safely be repeated until the desired effect is achieved. This can even be repeated as often as necessary after face-lift surgery.**

Sources: M. C. Aust, K. Reimers, A. Gohritz et al Percutaneous collagen induction. Scarless skin rejuvenation: fact or fiction? Clinical and Experimental Dermatology 35 (4) 437–439, June 2010. Adapted from article available online from: <http://www.a2magazine.co.za/2013/03/needle-work-low-down-on-skin-needling.html>