

"Skin Needling can safely treat depressed acne scar, hypertrophic surgical scar, borders of skin grafts, chicken pox scars, deep facial lines, wrinkles and skin pigmentation "

Hi, my name is Dr Philippa McCaffery.

I am a Cosmetic Physician practising in Sydney, Australia and my practice specialises in non invasive, effective and affordable solutions for everyday skin problems like acne, acne scar, aging skin and sun damage.

I have been performing Skin Needling for 4 years to treat acne scars and deep facial lines. I was trained in the technique of Skin Needling by a French dermatologist, who has been performing Skin Needling for 20 years. I developed the Novaderm Skin Roller range to perform skin needling after 2 years of research and patient trials.

Skin Needling can safely treat depressed acne scar, hypertrophic surgical scar, borders of skin grafts, chicken pox scars, deep facial lines, wrinkles and pigmented skin.

History of Skin Needling

Skin Needling has been performed for many years, using a variety of instruments, to soften depressed scars and deep facial lines.

Dr Philippe Simonin, a Swissfrench dermatologist, published his results in Baran's Cosmetic Dermatology 1994, but his ground breaking technique, which he named **Electroridopuncture (ERP)**, remained largely unknown to the wider medical community. In his study of 600 patients, he examined results for 2 patient groups - one with Skin Aging and the other with Old Scars. He performed 10 treatments on all patients.

In the patient group with Skin Aging, 40% showed significant improvement, 22% moderate improvement and 13% some improvement - as measured by comparative skin imprints. In the patient group with Old Scars, 60% improved with 5-6 treatments. Best results were obtained for old fibrous and depressed scars.

Another pioneer of Skin Needling was Dr Andre Camirand, a Canadian Plastic Surgeon who made a chance observation of improvement in the texture and depression of the scars of some of his facelift patients, who had undergone tattooing for scar camouflage. He experimented with tattooing facelift scars without pigment, and noted improvement in texture and colour. He published an article on his results in JACPS in 1992.

Dr Camirand postulated that hypochromic (depigmented) skin repigmented through the transplantation of melanocytes (pigment producing skin cells) from normal skin into the hypochromic skin during the needling procedure. He also reported flattening of hypertrophic (overgrown) scars. He performed his needling procedures using a high speed tattoo gun, under local anaesthesia and treated each scar to pinpoint bleeding. He repeated the procedure every 2-8 weeks and no side effects or complications were reported.

Making Skin Needling easier

It is possible to obtain good results with ERP for deep depressed scars and deep lines after 10-15 treatment sessions.

However performing ERP is time consuming and requires extreme patience, so during 2003/2004, I worked with an Australian instrument designer to develop an affordable, autoclavable medical skin roller and homecare rollers that could make Skin Needling easier to perform and accessible to every patient who needed it.

Skin Needling can be safely performed on all skin colours and types. There is no risk of postinflammatory hyperpigmentation (depigmentation of the skin as a result of skin trauma) as the melanocytes remain intact, like the dermis, during Skin Needling. This is the major distinguishing safety feature when comparing Skin Needling and other invasive procedures that are used to treat deep line and depressed scars, ie. laser resurfacing, deep chemical peels and dermabrasion.

Other distinguishing safety features of Skin Needling include:

- significantly reduced risk of infection;
- significantly reduced downtime period for healing; and
- significantly reduced comparative cost.

How Skin Needling works

Skin Needling with a skin roller produces hundreds of tiny dermal injuries. Each dermal injury triggers the body's natural wound healing response within the skin, producing and depositing new collagen and elastin in the treatment area. Each successive treatment triggers the production and deposition of new collagen and elastin that progressively in-fill (collagen induction) the depressed scars and deep lines. Collagen induction can continue for up to 12 months after a treatment has been performed.

As the dermal layer produces more collagen and elastin, with successive treatments skin becomes firmer, smoother and more elastic, and the complexion becomes and looks more balanced and healthier. Effectively Skin Needling performs a non surgical facelift.

The hundreds of tiny dermal injuries produced by the skin rollers also act as channels that significantly increase the absorption of skincare creams. For the hair, the skin roller also stimulates blood flow around blood starved hair follicles and gently exfoliates dead skin cells. Used in combination with Minoxidil for hair restoration, the skin roller significantly increases the uptake of Minoxidil reducing the period from when first results are evident from 3 months down to 4-6 weeks.

Conclusion

In my experience, results vary between patients, with some achieving 90%+ improvement in scarring and others less than 50%. However, all patients achieve some improvements.

The most exciting feature of Skin Needling is its safety advantages. Skin Needling can be safely performed on Asian and darker skins, as well as skins that have been previously lasered or had dermabrasion treatments.

Generally, deep ice pick acne scars and deep facial lines will need to be treated by a medical professional using a medical face roller. However, not as deep wider acne scars and other depressed scars, aging, sun damaged and pigmented skin can be treated using homecare rollers.

Skin Needling can be performed for whole face rejuvenation, and when combined with tretinoin and hydroquinone, delivers equivalent results to laser resurfacing with a no risk profile. It can also be regularly repeated as a patient ages to replenish collagen and elastin.