

How Microneedling Can Improve Acupuncture Facial Rejuvenation

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Lets start by exposing a major myth. It has become a common advertising claim in recent years that AFR works mainly by increasing collagen production. This is in fact not true. Collagen induction only plays a very small role in the function of AFR. Microneedling has been widely researched by both the pharmaceutical and cosmetic industries. Their large research budgets have allowed us to learn a lot more about the way in which needles can increase collagen induction naturally in the skin.

There are some important points we need to understand straight away. Even when using much longer needles, collagen induction only takes place up to a depth of 0.6mm into the skin.¹ Penetration any deeper than this, although it may improve other results, will not increase the production of collagen. Collagen produced through needling in fact attaches to the border of the dermis and epidermis in the papillary layer of the dermis itself.

A single treatment with a micro needle roller containing 192 micro needles can increase collagen production in the skin by an average of 206%.¹ An average treatment may roll over the skin between 15 to 20 times in each area. When the roller is rolled across the skin 15 times, it produces an average of 215 punctures per square centimetre.² When you consider that a normal Acupuncture Facial Rejuvenation (AFR) treatment will only use one or maybe two punctures per square centimetre, then AFR in fact must be inducing very little collagen overall in comparison.

If AFR solely worked through collagen induction, then it would look a very poor competitor to cosmetic treatments such as micro needling. Many AFR practitioners explain that AFR balances the *qi* and *yin* and *yang* in the body and so improves the appearance this way. This is certainly true in my experience and I have studied many systems where every line and every blemish on the face represents a specific disorder of the organs. By reducing the line or blemish, you improve the functioning of the organ and by treating the organ you benefit the line or sign of aging on the face.

A more scientific explanation of AFRs results is useful for our understanding and benefits the industry as a whole. I would suggest that AFR works through at least three mechanisms. It benefits the internal organs to improve the appearance (I include needling specific acupuncture points on the face in this section for simplicity), this is the main TCM explanation, it induces a small amount of collagen and importantly it separates the damaged collagen that comprises a wrinkle, scar or blemish from the healthy underlying tissue.

In the Western cosmetic industry, this last mechanism is called subscision and was only really discovered in 2006.³ Basically, the experiment involved placing a tri-beveled syringe under a depressed scar and manipulating the syringe so that the scar quite literally pops up. It is commonly used on large acne scars in conjunction with microneedling.

Those of you who are paying attention will no doubt have noticed how similar this technique sounds to the old Chinese method of assisting scars called "circling the dragon." I would suggest that when threading or other AFR techniques are used to needle through or under lines and wrinkles, we are in fact also inducing this reaction. The way wrinkles often rise up for a short period after treatment demonstrating inflammation under the line or wrinkle would support this idea.

From the passages above we have established several things:

- AFR clearly works in multiple ways rather than simple collagen induction.
- If collagen production was the only goal, then microneedling would be the most effective treatment.

We have spent a lot of time discussing AFR now we turn to microneedling. What are the advantages and disadvantages of microneedling compared to AFR. There is no doubt that microneedling cannot provide the constitutional benefits that AFR can. It can also not penetrate deeply enough to lift or raise up scars and wrinkles in the same way as AFR. What it can do is increase the body's own natural collagen induction to completely resurface the external layers of the skin. It can also increase transdermal absorption of products through the skin in some cases by up to 10,000 times.⁴

The dramatic increase in collagen induction is extremely useful for providing a fresh new layer to tired looking skin. More importantly, by causing the micro trauma in the surface of the skin, it naturally produces a group of enzymes called collagenase which break down the old and misaligned collagen present in wrinkles, scars and stretch marks. It replaces this collagen with a new smooth matrix of collagen dramatically improving the appearance. In addition to skin punch biopsy research mentioned above, this has been repeatedly shown through patient surveys with over 80% of patients reporting improvements in burn scars and a 60-80% improvement in wrinkles, stretch marks and sagging skin after micro needling.^{5,6}

Increasing transdermal absorption is also extremely useful. Originally researched extensively by the pharmaceutical industry as an alternative method of drug delivery, it is now used extensively in the cosmetic industry to improve the results of anti aging treatments through the delivery of powerful skin rejuvenators. So what are the differences in application between the two treatments and how can we and our patients benefit from combining them?

In modern practice, both have a large number of similarities. The skin preparation and aftercare serums that are used can be almost identical. When choosing these serums you have to be slightly more careful with micro needling than AFR as it will be absorbed in greater quantities due to the higher number of punctures. Microneedling provides a wonderful opportunity to absorb large quantities of proven safe topical anti aging herbs such as ginseng and white tea.

Aftercare is slightly different. AFR contains a slightly higher risk of bruising as the needles penetrate deeper into the skin. On the other hand, microneedling leaves the skin more inflamed and slightly increases photosensitivity so sunlight should be avoided for around 24 hours or longer if using more aggressive medical microneedling. Microneedling will also leave the skin slightly drier as some of the fluids of the skin also escape through the increased micro punctures.

The next obvious question is how can you combine the two treatments in clinic to get the best results from both with the least side effects. Combining the treatments is very effective when done properly. Below I have outlined some of the key points to perform this effectively:

- Book at least one treatment a week or two treatments every second week is even better.
- Perform AFR first based on the patients constitution and individual diagnosis.
- Wait at least two days and then perform microneedling.
- When performing microneedling, make sure to continue your constitutional treatment by using distal points. Make sure to use several in the feet to reduce the blood pressure risks of extensive blood rising to the face.
- In the second week only, perform AFR. It is better to leave two week gaps between microneedling treatments to allow the enzyme collagenase (discussed above) to peak and subside before performing the next treatment.
- Continue this for 12 weeks if possible.
- After performing the microneedling treatment, make sure to apply a very good quality serum that is safe with the increased absorption. I recommend green tea oil based products as it is extremely safe and the oil better combats the dryness induced by microneedling.

It is important to explain when discussing results with the patient that collagen induction does not even begin to take place for at least 48 hours and continues to improve for six months after treatment. This is a treatment with long term benefits which will compliment the improvements you can make in the patients internal organ function.

To conclude microneedling can prove a valuable asset to any clinic performing AFR. The extensive research can also help us better explain our treatments to a customer base more versed in scientific understanding than TCM. Ultimately, the two treatments can be used synergistically to improve results and widen the customer base and services available in your clinic.

References

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