

**Why Skin Needling is the Ultimate Skin Rejuvenation Method**

In the past few years the skin rejuvenation industry has created many heat based treatment modalities and at times using very intense heat. These treatments when used frequently can be more abusive to the skin as opposed to beneficial. Many approaches are focused on targeting the fibroblast and they often do this at the expense of the keratinocyte and melanocyte which are both very important to healthy skin. A true skin rejuvenation program needs to address all three cells (melanocyte, fibroblast and Keratinocyte). Medical Skin Needling does is a true rejuvenation treatment because it recognizes that all these cells are essential to healthy, youthful skin. Medical Skin Needling does not harm or injure one cell in hopes of optimizing the function of another. It is safe treatment that only improves skin health.

The medical esthetics world is so focused on the fibroblast cell that it is neglecting the other cells and this is causing serious damage. The keratinocyte is responsible for releasing several key growth factors that orchestrate underlying cell turnover to facilitate ideal skin rejuvenation. The keratinocyte is in the epidermal layer. Medical Skin Needling keeps the epidermis completely intact because it recognizes the importance of the epidermis and the role it plays in skin health. The more aggressive and ablative heat based methods use heat to remove the epidermis compromising the wound healing response by destroying the essential growth factors.

Medical Skin Needling promotes the release of growth factors, the key two being EGF (Epidermal Growth Factor) and TGF-B3. EGF plays a role in preventing the epidermis from thinning which happens as we age. Aggressive ablative heat based treatments thin the epidermis. Medical Skin Needling is working with the keratinocyte, nurturing it allowing it to function and preserving and utilizing the growth factors. Ablative heat based lasers remove the epidermis as opposed to preserving it. Heat damages growth factors. Medical Skin Needling is a mechanical based treatment that does not use any heat so the epidermis is not burned off and growth factors are not destroyed by heat.

**Ideal Skin Rejuvenation Treatments should:**

1. Optimize cell function
2. Preserve integrity of the epidermis
3. Strengthen dermal/epidermal junction
4. Release epidermal growth factor (EGF)
5. Increase natural collagen transforming growth factor(TGF-B3)
6. Induce regenerative healing (scarless wound healing). (not citrical healing like lasers do, also known as scar wound healing)

**Preserve the integrity of the epidermis:**

Your epidermis provides a natural barrier against pathogens and protection against environmental influences such as UVR and free radicals caused by pollution. Improving the density of the epidermis is important to skin health and makes no sense to compromise it in anyway. You want to preserve it and Medical Skin Needling does that.

The melanocytes are often the second cell to be destroyed in the line of fire when aggressively targeting the fibroblast. These are the first cells to show signs of damage in the aging process. The epidermis loses 10 to 20% functioning melanocytes every 10 years and once lost they cannot be replaced. These cells are extremely susceptible to heat injury employed by many anti-aging treatments. Damaged melanocytes result in hypo or hyper pigmentation. Medical Skin Needling eliminates the risk of destroying the melanocyte through heat injury and instead optimizes cell function of all three cells.

The fibroblasts are responsible for making collagen, elastin and gags. As mentioned earlier the medical esthetics industry has been focusing on injury to stimulate the fibroblast using heat based ablative modalities. Ablative treatments cause thinning of the epidermis. The heat employed by these treatments coagulates and inactivates the essential growth factors needed to repair the wound. Plus the resulting healing is scar wound healing not scarless wound healing. If you are to look at a burn victim it is obvious that resulting collagen is not normal. It is scar collagen (TGF-B1 and B2 etc.) Heat based treatments result in citrachel healing scar collagen. Medical Skin Needling being a non-ablative, non heat based rather mechanical treatment results in regenerative healing and natural collagen (TGF B3). TGF B3 is the most amazing growth factor and it is yet to be used in skincare but one day hopefully they will find a way. Medical Skin Needling stimulates the release of this incredible growth factor.

When the keratinocyte is functioning optimally it will be denser, and more compact, increasing normal barrier function. This reduces trans-epidermal water loss. The oil bi-layers will also be minimizing trans-epidermal water loss and prevent lipids from aggregating resulting in milia. Normal keratinization results in normal desquamation and a smooth appearance.
Pigment uptake by the keratinocyte will be normal with resulting even color from even distribution. Improved keratinocyte cellular memory also leads to a stronger innate immune system, with efficient langerhan cells.

Medical Skin Needling promotes angiogenesis. Angiogenesis is a normal and vital process in growth and development, as well as in wound healing. Heat based treatments destroy the vasculature in that region. A strong vascular network is essential to skin nourishment and when it is destroyed the skin suffers from starvation.

Skin health is optimized by regulating cell function. Provide the cell with the essential building blocks they require through:

1. Oral nutrition and supplements
2. Topical creams, and supportive skin treatments.
3. Medical Skin Needling and the SKN Spin – Exfoliates / Penetrates and causes the release of Growth factors (substances that cause the cells to differentiate, proliferate and grow) and Cytokines (signaling molecules released by cells to communicate with other cells.)

**Epidermal Cell requirements for optimal function**

The outermost layer of our skin is called the stratum corneum consists of dead skin cells called corneocytes. These dead cells (corneocytes) are embedded in a lipid mixture consisting of ceramides, cholesterol, and fatty acids. These three types of lipids are so important to healthy, great looking skin. Loss of these skin lipids results in an increased water loss and increased penetration of harmful compounds. This results in dry, unbalanced, dull looking and unhealthy skin. When your skin is deficient in these lipids it can increase the signs of aging in the skin, breakdown the barrier causing skin conditions like rosacea, eczema, psoriasis, and serious dehydration. The After Glow Serum contains all these essential lipids with no fillers or essential oils. It is 100% active pure oils.

A leading cause of epidermal dysfunction and one of the leading skin issues that the majority of people have is EFA deficiency. Yet this condition is never taught in esthetics school and rarely discussed. Any loss of the EFA will alter the health of the keratinocyte and the barrier function. That is why using the SKN Spin and an oil like After Glow that contains all the essential lipids the skin is made up of is so powerful and an extremely safe skin rejuvenation method. The SKN Spin is the most effective and diverse skin rejuvenation tool on the market.

**Healthy skin requires the following for collagen synthesis:**

- Vitamin A
- Vitamin C (e.g. Magnesium Ascorbyl Phosphate, L-Ascorbic Acid),
- key amino acids (proline & glycine),
- bioflavonoids,
- growth factors, 
- selenium, silicon allied with magnesium and calcium,
- copper peptides
- essential fatty acids (for cell function and membranes).

Aging of the body results in poor absorption of ingested skin nutrients. We cannot absorb enough nutrients through our digestive system to reach our skin. We must be applying topical nutrients otherwise our skin will be malnourished. The epidermis is a natural barrier and has always limited success of penetration. Enlarging the pathways through the skin with the SKN Spin allows up to 80 percent more nutrients to penetrate and has proven to be safe and effective.