What is the Dermapen?

The Dermapen is an automated-micro needling therapy system that vertically pierces the skin to naturally stimulate collagen and elastin with minimal epidermal damage. This enhances rejuvenation results and is far safer for the client because there is much less epidermal damage.

The Dermapen’s automatic vibrating function increases the effectiveness of treatment by increasing absorption of products, while reducing pain and discomfort.

The Dermapen is just as effective and can be used in combination with fractional lasers, IPL, and chemical peels.
Dermapen® Advantage

- No cross infection - disposable needles
- Speed - faster than manual applications
- Shorter treatment times
- Adjustable needle depth
- Less pain
- Lightweight hand-piece
- Easy to use
- Lower price of consumables
- No side effects
- User independent
Dermapen® Application and Effect

- Skin tightening, lifting and rejuvenation
- Improves acne scars and wound healing
- Improves wrinkles and fine lines
- Minimizes pore size
- Improves stretch marks
- Treats and improves alopecia
How Dermapen® Works

1. Injury

2. Stopping bleeding

3. Inflammation

4. Growth factors emission

5. Fibroblast cell multiplication

6. Collagen and elastin synthesis

- Growth factor emission
- Fibroblast proliferation
- Collagen induction
The Three Phase Mechanism of Action

**PHASE ONE**
- **INJURY**
  - BLEEDING AND PLATELET RELEASE
    - NEUTROPHILS
    - MONOCYTES
  - RELEASE OF GROWTH FACTORS, etc
    - epidermal growth
    - fibroblast chemotaxis
    - fibroblast proliferation
    - matrix production

**PHASE TWO**
- **TISSUE PROLIFERATION**
  - CONTINUED RELEASE OF GROWTH FACTORS FROM FIBROBLASTS, KERATINOCYTES AND MONOCYTES
    - epidermal growth
    - fibroblast proliferation
    - collagen III, IV and I
    - elastin
    - proteoglycans
    - GAG’s
    - angiogenesis

**PHASE THREE**
- **FIBROPLASIA AND TISSUE REMODELING VASCULAR MATURATION**
  - SKIN TIGHTENING
    - COLLAGEN III
    - COLLAGEN I
Micro Needling Depth Chart

Dermapen technology allows unrivaled diversity with a disposable tip that can penetrate from .25mm to 2.5mm during the same treatment.
Micro needling and drug/topical delivery

Micro channels are created for topical absorption
TRADITIONAL APPLICATION VS DERMAPEN THERAPY

**TRADITIONAL APPLICATION**
- UV Rays
- Toxins

**DERMAPEN THERAPY**
- Microneedle Channels

**TRADITIONAL APPLICATION**
- Damaged skin condition
- Nucleus With Healthy DNA

**DERMAPEN THERAPY**
- The penetration channels through the epidermis layer
- Nucleus With Damaged DNA

**CONVENTIONAL COSMETICS**
- Normal cosmetics only target the surface of the skin, 99% have no effect. Molecules are too big to penetrate.

**DERMAPEN TREATMENTS**
- Through the micro channels, the active ingredients with loposomes, infiltrate deeper skin layers.

**CONVENTIONAL COSMETICS**
- Less than 0.01% effective results.

**DERMAPEN TREATMENTS**
- The micro channels are closed within minutes and cell membrane and DNA starts to regenerate.
**LASER RE-SURFACING**

- The laser evaporates the epidermis.
- Epidermis evaporated with 2ND DEGREE BURN.
- Thin epidermis level.
- Duration for healing and formation of a new collagen layer: **About 6 Months**.

**DERMAPEN THERAPY**

- The penetration channels are closed within minutes and hours.
- Epidermis preserved and intact.
- Epidermis is thickened.
- Duration for healing and formation of a new collagen layer: **Maximum 2 Months**.

**Risks:** Burns, long healing process, long light sensitivity, pigment problems, possible scarring.

**Induced Collagen**
Rolling Methods vs. **Dermapen®** Therapy

Rolling methods create unnecessary trauma, are user dependent, risk cross-infection, involve high consumable costs, are too large for small areas and display an undesirable perceived value.

Dermapen’s automated vertical stamping method uses a universal, sterilized and disposable tip providing low consumable costs. The small tip helps treat hard to reach areas, delivers unrivaled collagen induction with 7 speed variability and reduces epidermal damage to limit down-time.
How the Patient Looks After Treatment

There is immediate redness that may last 12 to 24 hours

Pre-treatment

Immediately after full face treatment
Before and After

Keloid scar

Before

Immediately after

4 Weeks after
Before and After

Improved skin tone

Before treatment

After 3 treatments 12 weeks, clear and even skin tone
Before and After

Stretch marks

During first treatment (patient’s right side treated, left side untreated)
Before and After

Dermapen used with other skin tightening lasers
Improved aging spots, fine lines (under the eyes and mouth) and overall tightening

5 weeks after one treatment, YAG and EMAX fractional and Dermapen treatment
Before and After

Active acne and scarring

Pre-treatment

6 days after first treatment
Before and After

Improves acne scars

Before

( 5 sessions, every 4 weeks. )

After
Before and After

Improves acne scars and minimizes pore size

Before

After

(5 sessions, every 4 weeks.)
Study On Burn Wound

Management of hypertrophic scar after burn wound using micro needling procedure

Sang kayo Kim, M. D., Jon mo Park, M. D., Young ho Jang, M. D., Yong hon. Son, M. D.,
Jib young Bae¹), Chang so Lee²) · Green burn hospital, Diego

Purpose: Hypertrophic scars after burn wound management remains a difficult problem for many burn surgeons despite of new treatment option is developed. Microneedling procedure is new modality on scar management in our burn center. It breaks the scar tissue which consists of dense collagen fibers and rearranges. Microneedling is stamp shaped and it contains 2.1 mm length multiple stainless steel needles.

Method: 5 patients(4:adult.1:child) were selected and received micro needling 8 to 12 times every 2 weeks with or without Triamcinolone injection. The scar was passed by the micro needling 3 to 4 times making 200 to 300 holes on the scar area(㎠). Skin biopsy was done every 4 times after needling. Two adult patient received micro needling under local anesthesia and other three patients received it under volatile induction anesthesia. Hypertrophic scar is estimated Vancouverer Scar Scale (VSS) score and scar depth evaluation using Sonography and pathologic report.

Result: Clinically improvement was shown that VSS score were noted and scar height was thinning on Sonography at 4 patients.(3 adult and child). Pathologic report reveal collagen fiber was rearranged and even distributed with regular parallel on all patients.
Received micro needling 8 to 12 times every 2 weeks with or without Triamcinolone injection. The scar was passed by the micro needling 3 to 4 times during each treatment and it makes 200 to 300 holes on the scar area ($cm^2$). Skin biopsy was done every 4 times after needling. **Result:** Clinically improvement was shown that VSS score were noted and scar height was thinning on Sonography. Pathologic report reveal collagen fiber was rearranged and even distributed.
Before and After

Burn wound

Before treatment

Month 2

Month 3

Month 4
Before and After

Surgical scar

Camirand and Doucet, Aesthetic Plast Surg 1997;21:48-51 Micro needling Study
Before and After

Breast augmentation scar

Fig. 5. (A) Breast augmentation scar seen following chronic purulent discharge had healed. (B) Two months after needle dermabrasion. (C) Six months after needle dermabrasion.

Camirand and Doucet, Aesthetic Plast Surg 1997;21:48-51 Micro needling Study
Before and After

Lip wrinkles

Figure 1. This 57-year-old patient is shown before and 3 months after lip needling.

Figure 2. This 58-year-old patient is shown before and 9 months after two lip-needling treatments.

Figure 3. This 65-year-old patient is shown before and 2 weeks after lip needling.

Results may vary. Treatments at 1.0mm or greater.
Testimonials

MEDICAL SPA

"I have a specific client, Mallory, that came into our clinic with noticeably deep acne scarring on her checks. We tried 3 deep skin resurfacing treatments with the Erbium YAG laser, one deep skin resurfacing with the CO2 laser and multiple treatments of aggressive peels. Those are just the treatments our clinic has performed on her. She has had multiple treatments at other clinics, I am just unaware of details of those treatments. After all of that, she still had noticeable deep scarring. I knew if anyone was going to see any results with the Dermapen, I wanted it to be Mallory.

I was happy she was willing to come in and let me try the treatment on her. After just one treatment she was calling me asking when she could be treated again. After all of the treatments she has done in the past, all it took was one treatment for her to see a difference. It was amazing to me. After 4 treatments, I will say I can still see mild acne scars, but I am confident that with a few more treatments Mallory will continue to be even more satisfied, as will I.

It has been amazing to do a treatment and send a client away not worried about what they are going to look like the next day or when they will call you asking questions if what they are going through is normal or not. Mallory has been so pleased to do the treatment and go back to regular life, no down time, no time off work, no looking scary (all the things we hate to worry about!)

I am excited to start offering the Dermapen to the clients of our clinic and continue to improve the way people feel about the way they look! Thanks, Dermapen!"

Kylene M. - Master Aesthetician and Spa Director
Employee at Elase Medical Spa - Salt Lake City, Utah

COSMETIC DERMATOLOGY

I believe the Dermapen to be an excellent addition to any dermatological or aesthetic medical practice. Micro-needling is an established treatment modality with known benefits. The unique Dermapen automatic micro-needling device adds new versatility with adjustable needling depth, treatment intensity, increased efficiency and the option to focus treatments on troubled areas. The device may also enhance the delivery of medical and cosmeceutical products to a more effective level in the skin. I see the Dermapen as a primary or adjunctive treatment for skin rejuvenation, scars, skin texture, fine wrinkles, and abnormal pigmentation. I also believe the Dermapen will potentially improve the outcome of many of my laser procedures. I have personally experienced the benefits of the Dermapen.

Mark B. Taylor, MD
Owner of Gateway Aesthetic Institute & Laser Center - Salt Lake City, Utah

PLASTIC SURGERY

I had this treatment done last week and it was great!! Very minimal pain and discomfort. My skin felt incredible after, it looked and felt tighter and the tone was noticeably more even all over. I love how, depending on your skin concerns, you can put specific serums on and the Dermapen penetrates the product into different layers of the epidermis and dermis getting the ultimate efficacy of the product. Loved it!! Can’t wait for my next treatment!

Amelia M. - Master Aesthetician / Admin
Employee at Utah Eye and Facial Plastic Surgery
How to Operate

• Plug in adaptor to the hand piece
• Put sterilized needle into the top of the hand piece
• Choose needle depth
  (Adjust the depth of needle by turning the adjustment ring)
• Turn on speed level ring (Face 1~4, Body 5~7)
• Begin treatment
Order of Treatment

- Clean face
- Apply numbing cream to treatment area and leave on for 30 minutes
- Remove numbing cream thoroughly
- Apply antiseptic wipe to treatment area
- Apply hyaluron product to treatment area
- Begin treatment
1. Divide the face into five parts: forehead, left and right cheeks, nose, upper lip and chin

2. Apply hyaluronic/topical on the area to be treated

3. Make three passes to each area – vertical, horizontal and small circles

4. After treating each section, wipe any bleeding

5. Treat the other areas as described above, steps 2 through 4

6. After the entire face is treated, cover with a cooling mask if desired
Speed

- Level 1: 25~30Time/sec
- Level 2: 35~40Time/sec
- Level 3: 45~50Time/sec
- Level 4: 55~60Time/sec
- Level 5: 65~70Time/sec
- Level 6: 75~80Time/sec
- Level 7: 85~90Time/sec

Depth

<table>
<thead>
<tr>
<th>REGION</th>
<th>THIN SKIN</th>
<th>THICK SKIN</th>
</tr>
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<tbody>
<tr>
<td>Forehead</td>
<td>0.25 - 0.5mm</td>
<td>0.5 – 0.75mm</td>
</tr>
<tr>
<td>Between Eyebrow</td>
<td>0.25 - 0.5mm</td>
<td>0.5 – 1.0mm</td>
</tr>
<tr>
<td>Nose</td>
<td>0.25mm</td>
<td>0.5mm</td>
</tr>
<tr>
<td>Eye Area</td>
<td>0.25mm</td>
<td>0.25 – 0.5mm</td>
</tr>
<tr>
<td>Cheek Bone</td>
<td>0.5mm</td>
<td>0.5 – 1.0mm</td>
</tr>
<tr>
<td>Cheek and Chin</td>
<td>0.5 – 1.0mm</td>
<td>1.0 - 2.0mm</td>
</tr>
<tr>
<td>Upper Lip</td>
<td>0.25mm</td>
<td>0.25 – 0.75mm</td>
</tr>
<tr>
<td>Facial Scarring</td>
<td>1.0 - 1.25mm</td>
<td>1.5 – 2.0mm</td>
</tr>
<tr>
<td>Stretch Mark</td>
<td>1.5 - 2.0mm</td>
<td>1.5 - 2.0mm</td>
</tr>
<tr>
<td>Surgical &amp; Burn Scars</td>
<td>2.0 – 2.5mm</td>
<td></td>
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</tbody>
</table>
Starter Kit

Hand-piece

Dermapen®
Fractional Micro Needle System
HA-BOOST and Consumables

- **Hyaluron/B5 GEL**
- **Needles (30PCS/Box)**

HA-BOOST prevents the appearance of aging and the look of fine lines and wrinkles by hydrating and stimulating collagen and elastin formation.
## Specifications

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<thead>
<tr>
<th>Name</th>
<th>Dermapen</th>
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<tbody>
<tr>
<td>Function</td>
<td>FRACTIONAL MICRO NEEDLING DEVICE</td>
</tr>
<tr>
<td>Input power</td>
<td>5V=1000mA, 12VA</td>
</tr>
<tr>
<td>Adapter</td>
<td>AC100~240V, 50-60Hz</td>
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<tr>
<td>Dimensions</td>
<td>Hand piece 20<em>20</em>140 (mm)</td>
</tr>
<tr>
<td>Weight</td>
<td>Total /555g, Hand piece/82g</td>
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<tr>
<td>Depth</td>
<td>0.25, 0.5, 1.0, 1.5, 2.0, 2.5(mm)</td>
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