Multiderm
Owner's Manual

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I. Introduction

There are many types of microdermabraders on the market today. Although most of them are of substantial quality, the process of utilizing a crystal or crystal-free device to exfoliate the skin is becoming outdated.

The Multiderm is a patented, new technology which is revolutionizing the skin care field.

Unlike traditional microdermabraders, the Multiderm does not use particulates or rough, diamond-type edges to exfoliate the skin. Using a revolutionary vibrating stainless steel paddle system, the Multiderm performs a myriad of functions for less than the cost of a standard microdermabrader. The Multiderm exfoliates the epidermis in a massage-like manner to gently remove the stratum corneum, allowing the skin to become smoother and softer. Treatments can be administered over the entire body, including he face, neck, décolleté and back. In addition, the Multiderm is an excellent source of pre-treating a patient prior to performing conventional aesthetic procedures such as removal of unwanted hair, skin rejuvenation, removal of age and brown spots and vascular lesions. Also, by treating a patient with the Multiderm you are able to infuse any type of topical moisturizers or topical anesthetics to enhance the performance of these topicals. Each of these treatments is performed quickly and comfortably. Each paddle is patient specific so the risk of cross contamination is eliminated.

To be able to perform these types of procedures in a manner which is extremely comfortable to the patient, as well as easy for the operator to use, the Multiderm provides an array of different types of treatments which allows the practitioner the ability to provide a superior service to their patient base thereby, increasing the value of their aesthetic business.

Thank you for your purchase of the Multiderm System.

The Staff and Management at Multiderm International.

II. Operation of the Multiderm

1) Insert the patient specific paddle into the handpiece. Turn the handpiece head clockwise until firmly in place.
2) The device is always on. There is no “on/off” button.
3) Select the appropriate setting between face and body.
4) Apply the soft metal side of the paddle to the skin and an up and down motion (see Treatment Protocols, below).
5) Apply non alcoholic based moisturizer to the skin.
6) Remove paddle and clean with regular alcohol prior to placing in paddle case.

III. Treatment Protocols

By utilizing the Multiderm instead of traditional crystal or non-crystal micodermabraders, the length of treatment is shortened dramatically. The entire face, neck and décolleté can be treated in less than 12 minutes, rather than 35-40 minutes for a microdermabrader. No numbing medicine or anesthetic is required for this procedure. No downtime is experienced on the part of the patient. The treatment protocol used by most clinicians is five to six treatments, each treatment spaced one week apart. Beyond the initial block of treatments, an ongoing monthly maintenance program is strongly recommended. All skin types I-VI may be treated using the Multiderm.

The goal of the practitioner is to provide adequate exfoliation of the stratum corneum, coupled with the infusion of an appropriate topical moisturizer to create healthier looking skin.

By utilizing the following protocol the clinician is accomplishing these objectives.

1) Two minutes on the forehead. This allows the patient to become relaxed and enjoy the treatment due to the mild sensation of the Multiderm procedure.
2) Two minutes on the right side of the face.
3) Two minutes on the left side of the face.
4) Two minutes along the vermilion border of the upper lip and the nasal labial fold area. Caution the patient that the vibration of the Multiderm may feel a bit foreign to them for the initial seconds of treatment.
5) Two minutes on the neck.
6) Two minutes on the décolleté.
7) Apply several drops of a moisturizer, approved by the clinician, on the exfoliated areas.
8) Using the infusion paddle without altering the speed and using the same motion, gently infuse the topical into the patient's skin. Perform until the skin is dry.

The treatment is performed without offering any substantial amount of pressure on the handpiece. The paddle is oscillating at a speed of 80 to 140 Hz across the surface of the skin. If the paddle is pressed too firmly on the skin, the hydroplaning effect is reduced as the skin tends to move with the paddle. Thus, the effect of exfoliation is reduced and results are compromised. The paddle should be administered slowly over the treated areas generating a massage-like sensation. Increased relaxation on the par of the patient is produced.

Following the exfoliation segment of the procedure, conclude the treatment using the infusion (non-metal) side of the paddle. This allows the clinician to drive and massage the topical of their choice more homogeneously into the skin. This creates an optimal environment for topical absorption.

Patients will experience a slight degree of erythema immediately following a Multiderm treatment. This should dissipate within 35-45 minutes after the conclusion of the treatment. Clinicians are strongly advised to instruct patients to apply moisturizers and sunscreen continuously between treatments.

For treatment of other parts of the body such as the back, arms, legs and heels, use the identical method of exfoliation and infusion as described above. The speed may be adjusted to accommodate larger areas of the body such as back and legs.

As always, please do not hesitate to contact Multiderm International if there are any questions.

IV. Indications

- Exfoliation of fine lines and rhytids
- Texture and tone
- Acne scars
- Dryness and oily skin
- Pore size
- Pre-treatment for laser or IPL hair removal
- Pre-treatment for laser or IPL skin rejuvenation
- Pre-treatment for laser or IPL vascular lesions
- Infusion of topical moisturizers
- Infusion of topical anesthetics

V. Safety and Contraindications

In the interest of safety and proper usage, the following precautions should be taken:

1. Always initiate a Multiderm treatment at the appropriate setting. Begin the treatment conservatively noting any ill effects, if any. At no time is the patient to experience any pain. In the event the patient states they are experiencing any degree of pain, the procedure should cease immediately.

2. It is recommended that individuals with the following conditions consult with a physician prior to undergoing any Multiderm treatment:

    - Active herpes simplex
    - Tattoos
    - Skin cancer
    - Eczema
    - Active acne
    - HIV
    - Viral lesions
    - Diabetes
    - Blood thinners
    - Dermatitis
    - Open lesions
    - Pregnancy

Over aggressive treatment of the epidermis will lead to pin-point bleeding from the capillary loops in the superficial dermis. Should this take place, the procedure should cease immediately. As a result a crust may form and exfoliate in 2-4 days. Should this occur, apply a topical antibiotic under the supervision of a physician.

VI. Warranty

Multiderm International warrants the Multiderm to be free from any and all defects in parts, labor and workmanship for a period of one (1) year from the date of installation. This warranty is null and void if the customer attempts to fix, alter, modify or repair the system. Damage to the system due to accident or abuse nullifies the warranty. Should a loaner be required due to any defect in parts, labor or workmanship, one will be provided to the customer at no charge. Throughout the entire warranty period all shipping charges are absorbed by Multiderm International. Beyond the original warranty a one year extended warranty may be purchased by the customer.

Multiderm Serial number_____

VII. Skin Anatomy

From Heather Brannon, MD,
Your Guide to Skin & Beauty.

The skin is an ever-changing organ that contains many specialized cells and structures. The skin functions as a protective barrier that interfaces with a sometimes-hostile environment. It is also very involved in maintaining the proper temperature for the body to function well. It gathers sensory information from the environment, and plays an active role in the immune system protecting us from disease. Understanding how the skin can function in these many ways starts with understanding the structure of the 3 layers of skin - the epidermis, dermis, and subcutaneous tissue.

Epidermis
The epidermis is the outer layer of skin. The thickness of the epidermis varies in different types of skin. It is the thinnest on the eyelids at .05 mm and the thickest on the palms and soles at 1.5 mm.

The epidermis contains 5 layers. From bottom to top the layers are named:

- stratum basale
- stratum spinosum
- stratum granulosum
- stratum licidum
- stratum corneum

The bottom layer, the stratum basale, has cells that are shaped like columns. In this layer the cells divide and push already formed cells into higher layers. As the cells move into the higher layers, they flatten and eventually die.

The top layer of the epidermis, the stratum corneum, is made of dead, flat skin cells that shed about every 2 weeks.

Specialized Epidermal Cells
There are three types of specialized cells in the epidermis.

- The melanocyte produces pigment (melanin)
- The Langerhans' cell is the frontline defense of the immune system in the skin
- The Merkel's cell's function is not clearly known

Dermis
The dermis also varies in thickness depending on the location of the skin. It is .3 mm on the eyelid and 3.0 mm on the back. The dermis is composed of three types of tissue that are present throughout - not in layers. The types of tissue are:

- collagen
- elastic tissue
- reticular fibers

Layers of the Dermis
The two layers of the dermis are the papillary and reticular layers.

- The upper, papillary layer, contains a thin arrangement of collagen fibers.
- The lower, reticular layer, is thicker and made of thick collagen fibers that are arranged parallel to the surface of the skin.

Specialized Dermal Cells
The dermis contains many specialized cells and structures.

- The hair follicles are situated here with the erector pili muscle that attaches to each follicle.
- Sebaceous (oil) glands and apocrine (scent) glands are associated with the follicle.
- This layer also contains eccrine (sweat) glands, but they are not associated with hair follicles.
- Blood vessels and nerves course through this layer. The nerves transmit sensations of pain, itch, and temperature.
- There are also specialized nerve cells called Meissner's and Vater-Pacini corpuscles that transmit the sensations of touch and pressure.

Subcutaneous Tissue
The subcutaneous tissue is a layer of fat and connective tissue that houses larger blood vessels and nerves. This layer is important is the regulation of temperature of the skin itself and the body. The size of this layer varies throughout the body and from person to person.

The skin is a complicated structure with many functions. If any of the structures in the skin are not working properly, a rash or abnormal sensation is the result. The whole specialty of dermatology is devoted to understanding the skin, what can go wrong, and what to do if something does go wrong.

Updated: November 12, 2006

Suggested Reading

Skin Diseases 101The Biology of HairNail Anatomy

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VIII. History of Microdermabrasion

In 2005 microdermabrasion was one of the top 5 aesthetic procedures performed in the United States. There were almost 150,000 microdermabrasion procedures performed, which is an increase of 26% from 2003. It was developed in Italy in 1985 and introduced to American markets in the mid 1990's.

Precursors to Microdermabrasion
The concept of abrading the skin, or removing the upper layers, for skin rejuvenation dates back as far as 1500 BC, when Egyptian physicians used a type of sandpaper to smooth scars.

More recently, in the early 1900's in Germany, Kromayer used rotating wheels and rasps to remove the upper layers of the skin. Because these instruments were human-powered, they were wieldy to use and therefore not used very often.

In the mid 1950's motorized wire brushes replaced their human-powered predecessors and the use of dermabrasion became more commonplace. There were many problems with dermabrasion, including:

- Pain - the procedure had to be performed with anesthesia
- Long downtime - the top layers of the skin had to heal back in and this took weeks
- Scarring - even though dermabrasion was used to treat scarring, it often caused scars to develop
- Wound care - Taking care of the denuded skin was a lengthy and difficult process
- Infection - The risk of infection with abraded skin was high
- Danger to practitioner - The abraded skin particles were aerosolized exposing the practitioner and staff to possible infection

Modern Microdermabrasion
In a response to the risks of dermabrasion, the first microdermabrasion machine was developed in 1985 in Italy by Drs Mattioli and Brutto. This first machine was a "closed-loop" system, meaning the skin that was abraded was returned to a "dirty" container in the machine instead of being aerosolized. Microdermabrasion machines were introduced in America by Mattioli Engineering in the mid-late 1990's, and the production of microdermabrasion machines has exploded.

The FDA has classified microdermabrasion as a Class 1 medical device.

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Zani, Alexandra. "Exfoliation and Peels." *Advanced Professional Skin Care, Medical Edition*. Ed. Peter T. Pugliese, MD. Pennsylvania: The Topical Agent, LLC, 2005. 329-30.

The American Academy of Dermatologic Surgery. "2005 Procedure Survey - Dermasurgery Trends and Statistics" 2005. http://www.asds-net.org/Media/Articles/ASDS2005StatsReport.pdf

IX. Specifications

Case Dimensions

- Approximate size: 10”L x 10”W x 6.5”H
- Approximate weight: 7 lbs.