

Working with the physician to promote skin care

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Why daily care?

- Patient benefits
 - Prevention
 - Correction
 - Protection
 - Maintenance
- Practice benefits
 - Better results
 - Profitability
 - Patient loyalty

Demand for non-prescription skin care

- Growing rapidly
 - The market for dermatological conditions associated with aging and lifestyle is estimated at \$1.8B in 2005 projected to increase by 114% to \$3.9 billion by 2012¹
 - 63% of women ages 35 to 74 use their extra money to upgrade products and services²

(1) Image Dermatology Drug Market, 2005-2012: High Growth Opportunities in Aesthetic Medicine
<<http://www.researchandmarkets.com/reports/28592>>; (2) Alexander, A. (2006). Creating beauty buzz in the boom years. Drug Store News, 10.

Reasons for dispensing

- Convenience: Patients prefer to have a "one-stop shop"
- Results: Will allow patients to maintain procedure results
- Loyalty: Will drive patients back
- Profitability: Increased revenue in conjunction with aesthetic procedures

Doing the numbers

- Profit Margin: Daily Care
 - Retail: \$160
 - Wholesale: \$80
- Converting 2 New Patients Per Day who Repurchase 3x Per Year
 - Potential annual margin: \$103,200

Selecting the appropriate line

- Efficacy
 - Combined with in-office procedure(s)
 - Clinically researched
 - Build trust with patients
 - Stay clinical - the line you choose represents you and your practice
 - Avoid trendy packaging and products
- Education
 - Doctors and staff should be fully educated on ingredients and proper use

Selecting the appropriate line

- Flexibility of Line
 - Customizable systems
 - Unique skin of each patient
 - Consider patient's budget
 - Practicality of daily use
- Customer Support
 - Readily available customer service team
 - Low order quantities
 - Education/training for staff
 - Marketing/merchandising support

Selecting the appropriate line

- Ingredients
 - Results-oriented
 - Actives and delivery vehicle matter
- Patients
 - Consider demographics
 - Consider lifestyles and needs

Effective pre-treatment consultations

- Determine appropriate daily care regimen with detailed patient history
 - Recent treatments or procedures
 - Topical or oral medications
 - Allergies
 - Hereditary background
 - Current skin care products being used
 - Patient's expectations

Effective pre-treatment consultations

- Consent form
 - Clear understanding of post-treatment skin response
 - Opportunity for patient to reveal contraindications
- Before and after photos
 - Help patients see the changes in their skin
 - Marketing purposes for future patients

Effective treatment techniques

- Maintain a clinical environment with daily care products displayed
- Use treatment time to educate and encourage patient compliance
 - Explain each step and product you are using
 - Daily care product recommendations
 - Explain benefits of each product and ingredient
 - Additional treatment recommendations
 - Reiterate importance of post-treatment daily care regimen
 - Stress benefits of recommended treatment cycle

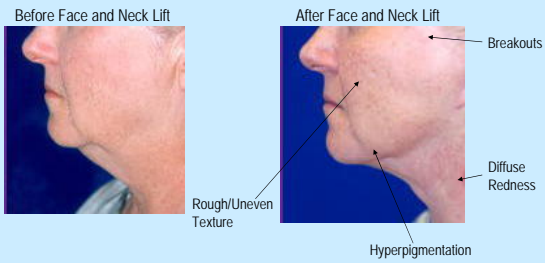
Post-treatment opportunities

- Recommended daily care regimen for maintenance
- Present each product while explaining the benefits, key ingredients, etc.
- Schedule follow-up treatments

At-home daily care pre- and post-surgery

- Psychological effect on patient
- Patient satisfaction with overall result
- Patient involvement
- Healthy skin function aids in the healing process

The need for daily skincare and treatments



Pre- and post-surgery daily care product recommendations

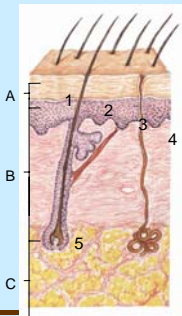
- Prior to non-surgical and surgical procedures
 - Customize a cosmeceutical daily care regimen to focus on the patient's specific skin concerns

Effectively Treating Aging Skin with Cosmeceuticals

- Understand the causes and presentations of aging
- Decrease already present signs of aging
- Effective support to prevent further damage

Histological Changes in Aging Skin

Normal Skin



A. Epidermis

1. Stratum corneum (cornified layer) - Comprised of flattened corneocytes and their natural moisturizing factor (NMF) and lipid bilayers
2. Granular layer
3. Spinous layer
4. Basal layer

B. Dermis:
Contains capillaries, extracellular matrix (ECM), nerves, blood vessels

5. Hair follicle

C. Subcutaneous tissue

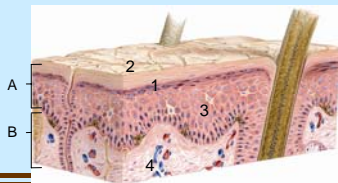
Histological Changes in Aging Skin

A. Epidermis

1. Abnormally functioning stratum corneum with decreased NMF and interruption of lipid bilayer leading to excessive dryness
2. Decreased desquamation resulting in dry flaky surface
3. Granular layer, spinous layer and basal layers

B. Dermis

4. Hyperpermeable and dilated capillaries causing visible surface telangiectasias



Changes in Aging Skin

- Changes in hydration
 - Reduction of the skin's natural moisturizing factor (NMF)
 - Increase in transepidermal water loss (TEWL)
 - Increased dryness – due to the cessation of estrogen production

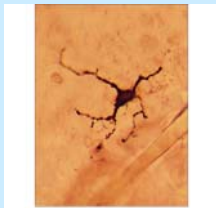
Changes in Aging Skin

- Changes in skin thickness
 - Thickening of the stratum corneum leading to a decrease in desquamation
 - Reduction in glycosaminoglycans (GAGs) leading to a thinning of the dermis
 - The dermis thins by an average of 20% in the elderly

Source: *Dermatology in General Medicine*, New York, McGraw-Hill, 1999, p. 1697-1706; *Dermatological Surgery* 1997;23:689-694

Changes in Aging Skin

- Hormonal Changes
 - Increase in the formation and distribution of melanosomes to keratinocytes
 - Increased branching of melanocytic dendrites
 - Increase in tyrosinase activity due to androgen dominance during menopause



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Source: *Cosmetic Dermatology* 2005;18:703-706

Changes in Aging Skin

- Solar lentigines



- Melasma



Changes in Aging Skin

- Changes in vascularity

- Increase in capillary hyperpermeability and dilation
- Increase in visible surface redness
- Decrease in overall vascular function



Source: *Skin & Aging*, 2004;12:56-60

Changes in Aging Skin

- Changes to the extracellular matrix (ECM)

- Cultured skin fibroblasts have shown a decrease in the rate of collagen synthesis
- Increase in matrix metalloproteinases (MMP) production and activity
- Elastic fibers become fragmented with small cysts and lacunae, especially at the dermal-epidermal junction



Sources: *Experimental Gerontology* 1994;29:37-53; *Dermatology* 1995;191:19-24

Matrix Metalloproteinases

- Non-functional proteins and protein fragments should be broken down and eliminated
- Excess amounts of collagenase, hyaluronase and elastase enzymes are responsible for the break down of functioning proteins
- MMP production and activity are increased by many external factors:
 - Aging
 - Stress
 - UV exposure
 - Environmental pollutants
 - Smoking
 - Inflammation

Extrinsic Contributor to Aging Skin

Photoaging



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Broad-spectrum Sunscreens

- Effective system support
 - UVA Protection
 - > Avobenzone
 - > Ecamsule
 - > Titanium Dioxide
 - > Zinc Oxide
 - UVB Protection
 - > Cinnamates (e.g. oxybenzone, octinoxate)
 - > Salicylates (e.g. octisalate)
 - > Titanium Dioxide

Matrix Metalloproteinase Inhibitors (MMPi)

- Effective system support

- Resveratrol
- Soy Proteins
- Epigallocatechin Gallate (EGCG)
- Ascorbic Acid (Vitamin C)
- Vitamin A
- Vitamin E
- Aloe Vera
- Bisabolol

Matrix Metalloproteinase Inhibitors

- Aloe Vera
 - In vivo topical application during wound healing has demonstrated increased hyaluronic acid levels by 11% and increased cell growth by 26%
- EGCG
 - Provides antioxidant benefits 75 times greater than vitamin E and 100 times more than vitamin C
 - In vitro testing showed EGCG triggered aged keratinocytes to generate biological energy and synthesize DNA

Sources: *Journal of Ethnopharmacology* 1998;59:179-186 OREAO, University of Kansas, Lawrence, KS 66045, Arab *The Journal of Pharmacology and Experimental Therapeutics* 2003;306:29-34

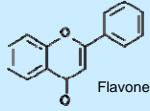
Matrix Metalloproteinase Inhibitors

- L-Ascorbic Acid
 - In vitro studies have demonstrated:
 - Vitamin C is important for the proper function of the protocollagen hydroxylase

Annals of Surgery, Harvard Medical School, 1941;77:6-790

Polyphenols

- Polyphenols are a type of antioxidant containing a polyphenolic substructure
- Down-regulate reactive oxygen species (ROS) formation
- Provide anti-inflammatory action
- Demonstrate a slowing of the process of skin wrinkling



Source: *Journal of Cancer Biology and Therapy* 2005;4: 468-473; *British Journal Pharmacology* 1998; 123: 565-573

Polyphenols

- There are more than 8,000 polyphenols that have been identified in the plant kingdom
 - Catechins
 - Oleuropeins
 - Anthocyanidins and Proanthocyanidins
 - Phytoalexins
 - Isoflavones
 - Flavanoids

Polyphenols

- Effective system support
 - Teas
 - Catechins, anthocyanidins and proanthocyanidins
 - Grapes
 - Anthocyanidins and phytoalexins
 - Olives
 - Oleuropein, flavonoids
 - Soy
 - Isoflavones
 - Cherries
 - Anthocyanidins
 - Citrus fruits
 - Flavonoids

Essential Fatty Acids

- Beneficial Cosmeceutical Ingredients
 - Essential Fatty Acids : Omega 3 and 6
 - In vitro studies on burn wounds in rats have demonstrated
 - Essential fatty acid deficient (EFAD) rats had not completely healed at 120 days post burn. Controls healed by 21 days
 - EFAD disturbs wound healing in the skin due to an impaired collagen metabolism and decreased hydroxyproline content in the wound area

Sources: *Chirurgisches Forum für Experimentelle und Klinische Forschung*, 1979;243-245; *Journal of Pediatric Surgery*, 1980;15:505-508

Essential Fatty Acids

- Research shows that certain types of essential fatty acids (EFA) are used by epidermal cells to make different types of prostaglandin hormones.
 - Prostaglandin series-2 makes the skin dry, rough and/or scaly, whereas prostaglandin series-1 and series-3 make the skin soft, smooth and moist.
 - The key building block for prostaglandin series-1 is gamma-linolenic acid (GLA)
 - Omega-3 fats have been shown to promote the formation of prostaglandin series-3

Sources: *American Journal of Clinical Nutrition* 2000;71:361-366; *Acta Dermatovenereologica Croatica* 2001;9:291-298; *J Environ Pathol Toxicol Oncol*, 2002;21(2):183-91.

Essential Fatty Acids

- Skin cells that exhibit a high concentration of arachidonic acid (omega-6) are more prone to undergo cancerous and inflammatory changes upon exposure to ultraviolet light than skin cells with higher concentrations of omega-3 fats
- Certain conditions (diabetes, eczema) have exhibited a defect in the delta-6 desaturase enzyme that converts linoleic acid to GLA (omega-6)

Sources: *The Encyclopedia of Nutritional Supplements*. Prima Publishing, 1996, p. 249-278; *Encyclopedia of Natural Medicine*, revised 2nd edition. Prima Publishing, 1998, p.448-454

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Essential Fatty Acids

- Effective system support
 - Omega-3
 - Alpha-linolenic acid (ALA)
 - Eicosapentaenoic (EPA)
 - Docosahexaenoic acid (DHA)
 - Omega-6
 - Linoleic acid
 - Gamma-linolenic acid (GLA)
 - Arachidonic acid

Essential Fatty Acids

- Effective system support
 - Omega-3
 - Alpha-linolenic acid (ALA)
 - Eicosapentaenoic (EPA)
 - Docosahexaenoic acid (DHA)
 - Omega-6
 - Linoleic acid
 - Gamma-linolenic acid (GLA)
 - Arachidonic acid

Essential Fatty Acids

- Sources of omega-3 fatty acids
 - Flax/linseed oil
 - Fish oils
 - Borage oil
 - Soybean oil
 - Red and brown algae
 - Wheat germ oil and wheat protein
 - Rose hip seed oil

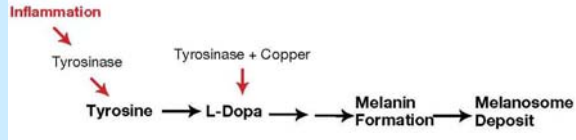
Essential Fatty Acids

- Sources of omega-6 fatty acids
 - Sunflower oil
 - Evening primrose oil
 - Borage oil
 - Soybean oil
 - Rose hip seed oil
 - Apricot seed oil
 - Grape seed oil

Tyrosinase Inhibitors

- Effective system support
 - Hydroquinone
 - Kojic Acid
 - Azelaic Acid
 - L-arbutin
 - Licorice extract
 - L-ascorbic acid
 - Rumex crispus
 - Lactic acid

Tyrosinase Inhibitors



Peptides

- Daily care products
 - Collagen-building and wrinkle-preventing peptides
 - > Matrixyl® (palmitoyl pentapeptide-4)
 - > Matrixyl™ 3000 (palmitoyl oligopeptide and palmitoyl tetrapeptide-7)
 - > Argireline® (acetyl hexapeptide-8)

Other Good Stuff

- Potent Specialty Products Designed to Promote Healthy Skin Function
 - Retinoids
 - Epidermal growth factors
 - Anti-inflammatory agents
 - Glycosaminoglycans
 - Humectants
 - Occlusives

Hydrators

- Occlusives that seal in maximum hydration
 - Shea butter
 - Olive, evening primrose and borage oils
 - Wheat proteins
- Humectants that draw in water
 - Hyaluronic acid
 - Sodium PCA
 - Glycerin

Combination Therapy for Age Control

- Skincare is the simplest to add to a existing practice
- Improve the results of other modalities
 - Decrease healing time and enhance results of surgical procedures
 - Reduce complications and enhance results of chemical peels
 - Prolong the visible effects of injectable fillers
 - Increase benefits of laser and IPL treatments
 - Increase satisfaction

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