OVERVIEW OF AESTHETICS: HELPING YOUR PATIENTS PUT THEIR BEST FACE FORWARD

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• No conflict of interest
• Not sponsored by any company to do this talk
• Large purchaser of Allergan (Pfizer, Formerly Activis) and Galderma (Formerly Medicis) products

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OBJECTIVES

• Identify basic anatomy and structures of the skin
• Compare the uses, effects, and differences between botulinum toxin type A and hyaluronic acid and synthetic dermal fillers
• List at least 3 FDA approved aesthetic treatments for the face and body
• Identify the newest treatment options for submental fat including uses for deoxycholic acid
• List topical skin care options including effects, mechanism of action and uses for prescription medications tretinoin and hydroquinone

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TOPICS

• Skin and hair anatomy
• Botox, Dysport
• Dermal fillers
• Laser treatments
• Intense pulsed light (IPL)
• Newest treatments
• Products, prices
• Complications

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SKIN ANATOMY

- Highly specialized structure
- Prevents invasion of microorganisms
- Regulates fluid loss
- Maintains temperature control
- Protects against injury from radiation and electricity
- Provides immunologic surveillance

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SKIN ANATOMY

- Epidermal appendages
- Sebaceous glands
- Hair
- Sweat glands
- Nails

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SKIN ANATOMY

http://hmphysiology.blogspot.com/p/blog-page_10.html
SKIN ANATOMY

• Melanocytes are the primary absorber of ultraviolet light and responsible for pigmentation.
• Scavenges photochemical free radicals
• Exist within in the dermis but are confined to the basal layer of the epidermis
• Transfer melanin to the keratinocytes

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SEBACEOUS GLANDS

• Epithelial lined structures in conjunction with hair follicles - secrete sebum in rich fatty acids
• Moisturizes the skin
• Has antibacterial effect
• Essential for skin resurfacing after injury

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THE EFFECTS OF UV RADIATION EXPOSURE

- Shorter wavelengths are more biologically active (UVA and UVB)
- UV light causes: DNA damage, decreased DNA repair, oxidative damage, altered collagen structure (breakdown, synthesis).

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THE EFFECTS OF UV RADIATION EXPOSURE

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WEAR YOUR SUNSCREEN

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• Anagen- Hair Growth
• Catagen- Regression
• Telogen- Resting
AESTHETICS

Aging and Options
WHAT HAPPENS AS WE AGE?

- Young skin is smooth and elastic
- As we age skin loses volume
- Lines and wrinkles appear
- Decrease in production of HA

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EPIDERMAL AGING

• In youth the epidermis interdigititates with the dermis

• With aging, the interdigititates flatten resulting in: reduced contact between epidermis and dermis, decreased nutrient transfer, increased skin fragility
WHAT CAN BE DONE?

- Sunscreen!
- Neurotoxins
- Intense Pulsed Light (IPL)
- Dermal Fillers
- Submental Fat Reduction
- Laser Skin Resurfacing
- Peels, Microdermabrasion
- Skin Tightening
- Minimally invasive cellulite treatment
- Products

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WHAT ELSE?

• Sclerotherapy (veins)
• Tattoo removal
• Permanent cosmetic tattoos (micropigmentation)
• Light/heat based cellulite treatments
• Surgical procedures

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WHO IS ALLOWED TO PERFORM TREATMENTS?

- RNs, PAs, NPs, and physicians
- All need additional training and experience when performing aesthetic procedures.
- Very little to no aesthetic aspects are taught in medical or nursing schools (yet).
- UCI Extension courses began Summer 2015
HOW DOES THE CONSUMER KNOW WHERE TO START?

• ASK friends.
• RESEARCH the aesthetic office and staff before first visit.
• INQUIRE about the credentials of the clinician.
• Training and experience is key
AESTHETICS

Specific Treatments
NEUROTOXINS

• Onabotulinumtoxin A: Botox®
• Abobotulinumtoxin A: Dysport®
• Incobotulinumtoxin A: Xeomin®
• No reported deaths from cosmetic use
• One of the most studied drugs in the world

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TEMPORARY DERMAL FILLERS

• Hyaluronic acids – Juvederm, Restylane, Lyft (Perlane), Voluma, Belotero, Silk

• Radiesse and Sculptra
  • All of these last much longer than the older collagens
  • Gradually reabsorb into the skin

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HOW ARE FILLERS DIFFERENT FROM NEUROTOXINS?

• Dermal fillers replace volume that is lost with aging.
• Neurotoxins are medications that relax the underlying muscles which cause wrinkles.
LASER SKIN RESURFACING

• Fine lines and wrinkles
• Pore size reduction
• Acne scarring (minimal to moderate results)
• Pigments
• Eye lift

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Fractional photothermolysis involves the delivery of narrow columns of infrared light to the target tissue. In skin, this leads to microscopic columns of thermally damaged tissue (microthermal zones).
Laser penetration into skin

In the range of visible light and near infrared light (400 to 1200 nm), lasers that emit long wavelengths of light penetrate more deeply into the skin than lasers that emit shorter wavelengths of light. Mid-infrared (e.g., Er:YAG) and far-infrared (e.g., CO₂) lasers do not follow this rule. Heavy absorption by water in the skin greatly limits the penetration of these lasers.
Light spectrum and medical laser wavelengths

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LASER HAIR REDUCTION

• Based on hair growth cycles
• Repeated treatments
• 50 - 95% reduction
• Periodic maintenance treatments
• Dark course hair on light skin best result

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INTENSE PULSED LIGHT (IPL) OR PHOTOFACIAL

- Sun damage effects accumulate as we age and are exposed to the sun
- Very popular to “lay out” using baby oil and iodine in the 70s and 80s
- Wrinkles, cancers, red and brown spots appear 10-20 years later
- IPL reverses sun damage and diminishes brown spots, redness, and vessels using light.

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IPL CANDIDATE

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NON-INVASIVE SKIN TIGHTENING

• Many devices i.e Thermage®, Ulthera®, Exilis®
• Ultrasound
• Radiofrequency
• Laser
• Cryolypolosis (Coolsculpt®)
• Combinations

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NEWEST TREATMENTS
Deoxycholic acid and Cellfina®
WHAT IS KYBELLA?

kybella™
(deoxycholic acid) injection

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DEOXYCHOLIC ACID (KYBELLA®)

- Submental fat reduction
- Permanent
- Must choose appropriate candidates
WHAT CAN YOU EXPECT?

- Discomfort during treatment
- Burning sensation for about 3 minutes after treatment
- Possibility of Bruising
- Numbness
- Swelling
- Repeat treatments 4 – 6 weeks apart

**RENEWED CONFIDENCE!**

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• Cellulite procedure
• One treatment
• Local anesthetic
• Approximately 45 minutes
• No down time
• Results in 3 days
• Long lasting (beyond 2 years)

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PRODUCTS AND TOPICAL TREATMENTS

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PEELS AND MICRODERMABRASION

• Superficial, moderate, and deep peels
• ViPeel, TCA, Phenol, Glycolic, Salicylic and others
• Peels rejuvenate the skin through exfoliation (peeling) old skin and revealing fresh, more even, youthful skin.
• Microdermabrasion - superficial treatment, stimulates triggers that stimulate collagen production, good once a month

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Topical Agents for Anti-Aging

- Tretinoin - (Retin-A®)
- Hydroquinone
- Glycolic Acid
- “Natural” Agents
  - Kojic acid
  - Vit C and E
  - Azelaic acid
  - Many others

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TREATING PHOTODAMAGE: TOPICAL AGENTS

- Topical tretinoin and hydroquinone
- Tretinoin increases thickness of superficial skin layers, hydroquinone blocks conversion of tyrosinase leading to pigments
- Reduces pigmentary changes and roughness
- Increases collagen synthesis
- Claims that other agents decrease photodamage are not well substantiated

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EYELASHES

• Long, thick, dark lashes are more youthful
• Mascara is the biggest selling cosmetic
• Eyelash extensions or stick-on
• FDA approved 2009 bimatoprost (Latisse®)

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MINIMALLY INVASIVE COSMETIC PROCEDURES

• Total performed in 2014 NOT including surgical procedures:

• 13,900,000

Source: (2016) American Society of Plastic Surgeons®

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2014 TOP FIVE MINIMALLY INVASIVE WOMEN

- Botulinum toxin type A **6,262,695** (6%)*
- Soft tissue fillers **2,191,380** (3%)*
- Chemical peel **1,151,430** (-8%)*
- Laser hair removal hair **921,230** (4%)*
- Microdermabrasion **724,620** (8%)*

*Percent change from 2013
Source: American Society of Plastic Surgeons® (2016)

Haney, 2016
2014 TOP FIVE MINIMALLY INVASIVE MEN

- Botulinum toxin type A 410,913 (7%)*
- Laser hair removal 190,816 (0%)*
- Microdermabrasion 157,285 (-12%)*
- Chemical peel 98,629 (4%)*
- Fillers 92,949 (-3%)*

*Percent change from 2013

Source: American Society of Plastic Surgeons® (2016)
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2014 STATISTICS

• 92% of all procedures are done by women
• 8% of all procedures are done by men
• Region with the most treatments are Mountain/Pacific at 4,556,898 (29%)

Source: American Society of Plastic Surgeons® (2015)

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BALLPARK COST

- **BOTOX®**
  - $10-16 per unit or per area;
  - ex. forehead $350

- **DYSPORT®**
  - $4 per unit (use 2.5 times amount d/t formulation)

- **Microdermabrasion** - $100-180

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BALLPARK COST

- **Laser Hair Removal**
  - Depends on area i.e. Full Legs $300 - 600; Underarms $50 - 100

- **Skin Tightening** - $400 – 2500

- **IPL** - $140 - 400

- **Laser Skin Resurfacing** - Face, $1500 - 4000

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Hyaluronic Acid Fillers

- Restylane®: $475 – 600
- Silk®: $550 – 750
- Juvederm®: $450 – 800
- Perlane®: $500 – 750
- Voluma®: $700 – 1200
- Belotero®: $500 – 750

Synthetic Fillers

- Sculptra®, Radiesse®: $700 – $1200

Balla Park Cost

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BUSINESS ASPECTS

• Augments current practice
• Employed vs. owner
• Costly to set up practice
• Profitable
• Training and experience
• State regulatory environment

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COMPLICATIONS

• Aesthetics is a true medical discipline with potential for serious complications
• Semi-permanent and permanent scarring from burns or vascular compromise
• Disruptive to patient appearance in addition to potential for infection and other health issues

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IPL BURN LEFT ARM DAY 10

Courtesy Beth Haney, DNP, FNP-C
IPL BURN LEFT ARM DAY 18

COURTESY Beth Haney, DNP, FNP-C

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VASCULAR COMPROMISE

Courtesy Donna Wilson, RN

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QUESTIONS?

Thank you for letting me share!
RESOURCES


• Haney, B. (2012). Be You-T-Full: Looking Your Best With Botox, Lasers, and Other Magical Cosmetic Treatments