



GENTLO: treating Skin of Colour with confidence

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INNOVATIVE FACE AND BODY CLINIC

Dr. Rehanna

Dr. Rehanna Beckhurst

MDS, MBA, MSc, PdDip

- ✓ MDS Riga Stradins University 2003
- ✓ MBA Business School Turiba 2010
- ✓ Facial Aesthetics since 2012
- ✓ PgDip Aesthetics City of London Dental School
- ✓ Level 7 in Aesthetic Non-Surgical Interventions
- ✓ MSc internship University of Bolton
- ✓ PgDip Dermatology RCPI
- ✓ Facial Aesthetics' tutor
- ✓ KOL Church Pharmacy and Beamwave Technologies
- ✓ PCA skin ambassador
- ✓ Co-owner of ifab clinic Devon



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**Gentlo – one device to
address all your skin needs**

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Innovative Combination of **RF and PLASMA**

GENTLO is the first innovative RF device unified with PLASMA technology.

It can maximize the synergy skin treatment effect from the epidermis to the dermis and delivers optimal result such as lifting, tightening and skin revitalization overall.

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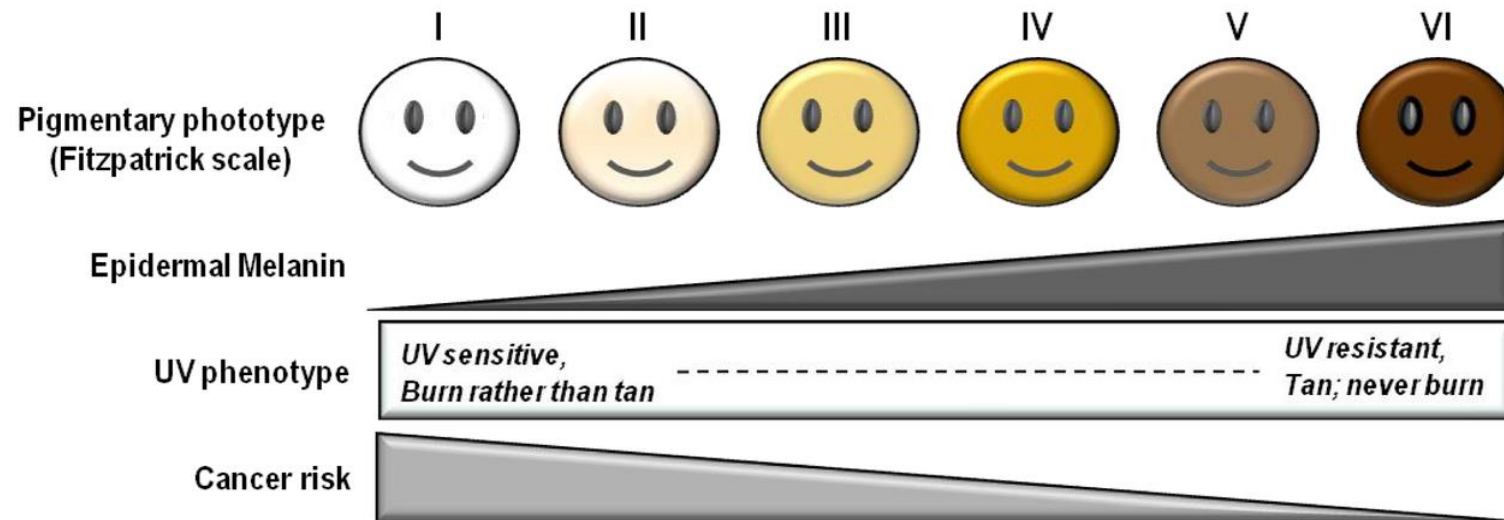
What is skin of colour?

The term skin of color identifies individuals with skin darker than Caucasians, such as Asians, Africans, Native Americans, and Pacific Islanders, East, Middle East, Eastern Europe...




However.... 

Caucasians may also have skin of colour!

Fitzpatrick Scale



Fitzpatrick Scale

Skin type	Image	Ethnic group	Hair colour	Colour of eyes	Skin colour	Tanning ability
Type 1		Albinos, same redheads	red, blond	blue, grey, green	very pale white, pale white with freckles	Burns very easily, never tans
Type 2		People of northern European origin, such as Scandinavians or Celts	blond, red, light brown	blue, grey, green, hazel	pale white	Burns easily, rarely tans
Type 3		People of Mediterranean and Middle East origin	chestnut, dark blond	brown, blue, grey, green, hazel	white, light brown	Sometimes burns, gradually tans

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Fitzpatrick Scale

Skin type	Image	Ethnic group	Hair colour	Colour of eyes	Skin colour	Tanning ability
Type 4		People of East Asian origin, such as Chinese, Japanese and some Indians and Pakistanis	brown, medium brown, dark brown	hazel, brown	medium brown, dark brown	Hardly ever burns, tans very easily
Type 5		People of African origin, South East Asians and some Indians, Pakistanis and Latin	dark brown	brown	dark brown	Really burns, tans easily and quickly darkens
Type 6		People with blue-black skin of African origin, Aborigines and dark-skinned Asians such as Tamils	black	brown	black	Never burns, tans, very dark

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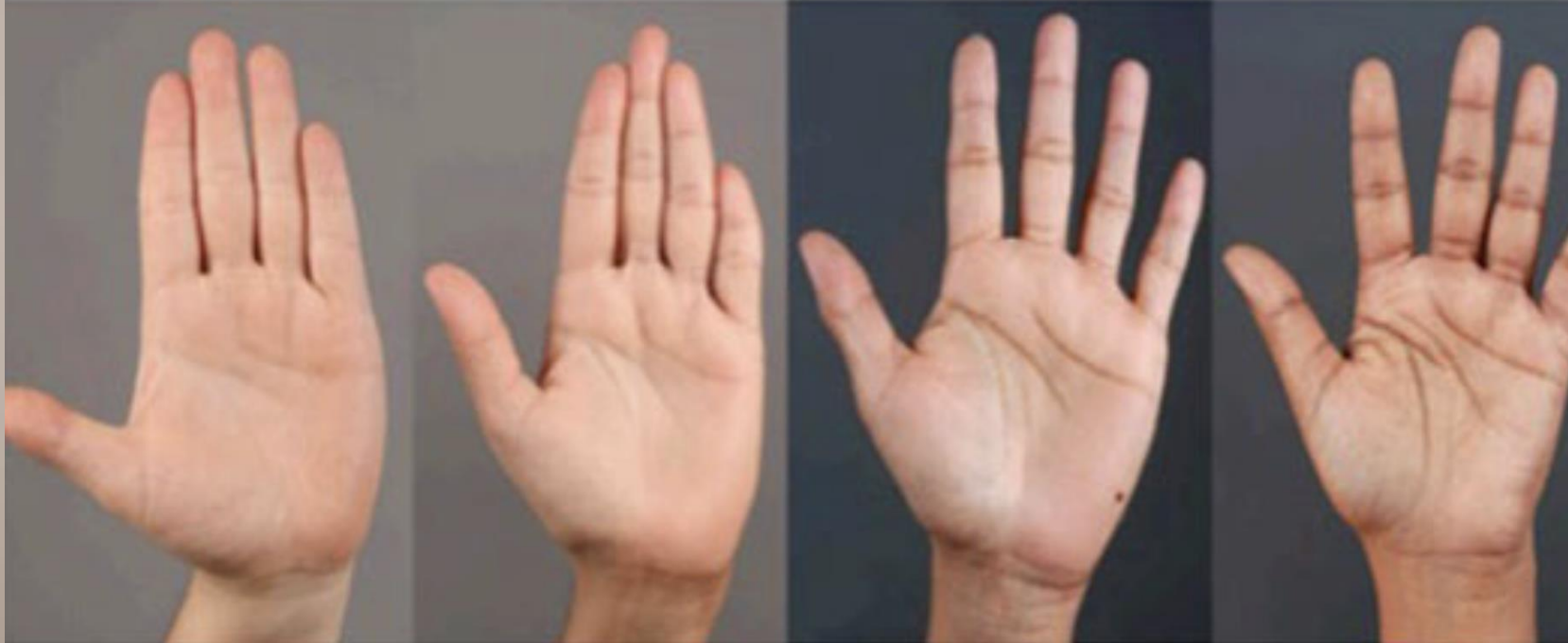
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Can you recognize skin of colour by just looking at it?

NO

- Visual assessment
- Gather medical history
- Skin's reaction
- Ethnic background

Digital and palmar crease hue test



Skin of Colour: Physiological Differences

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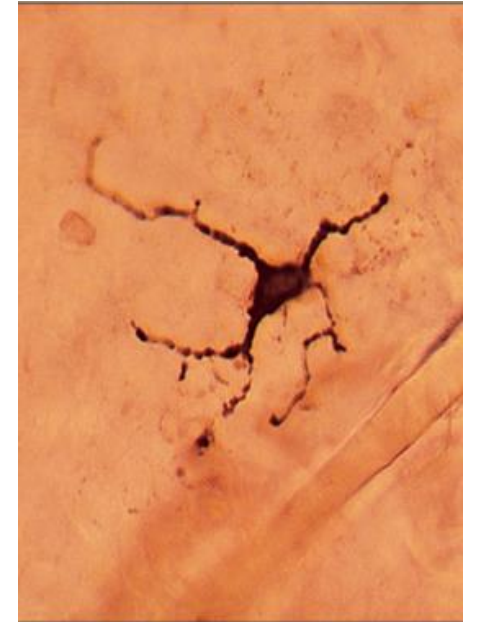
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- Everyone has the same number of melanocytes
- Melanocytes are programmed to produce certain types and amounts of melanin
- **Eumelanin** – Stable, darkens when oxidised by UV light (produces a tan) and protects against UV damage at an SPF 4 to 8. It is dominant in dark skin (Fitzpatrick IV to VI).
- **Pheomelanin** – Unstable, provides little UV protection and breaks down when exposed to UV light resulting in DNA damage. It is present in all skin types (Fitzpatrick I to VI) but is dominant in fair skins.



- Bologna, Jorizzo and Rapini: Dermatology - ww

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Skin of Color: Physiological Differences

- Skin tone determinants
 - The amount and organization of melanin within the melanosomes and keratinocytes
 - Quality and quantity of melanin produced rather than the number of melanocytes



Melanosomes in darkly pigmented skin



Melanosomes in lightly pigmented skin

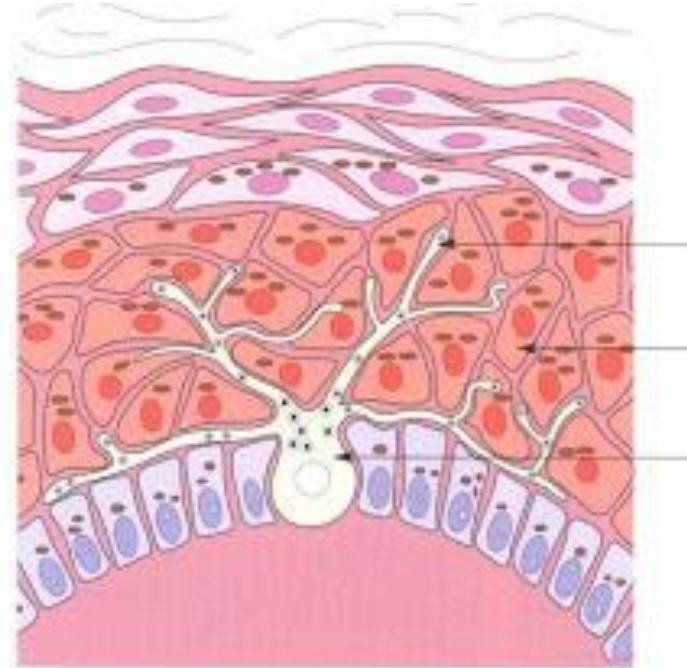
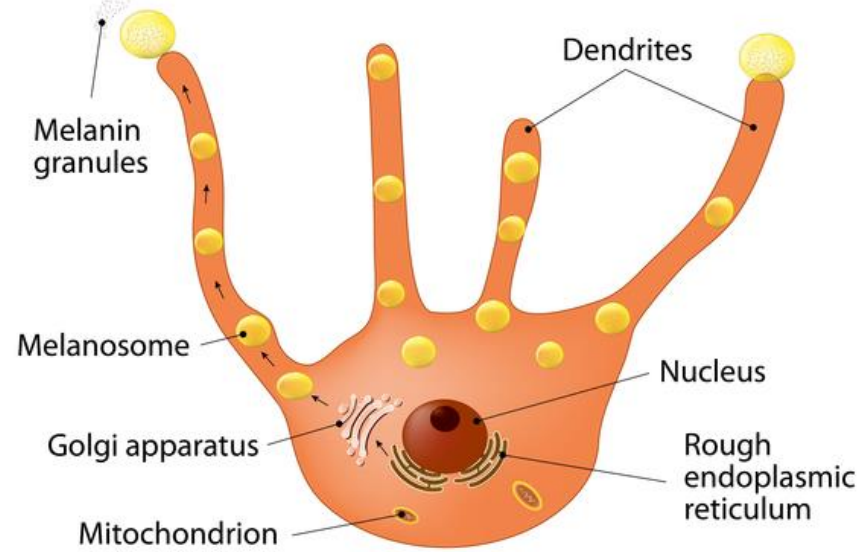
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Skin of Color: Physiological Differences

- Stratum corneum in darker skin contains more layers:
22 layers in SOC, 17 layers in Caucasian
- Melanocytes more active, melanosomes larger, greater distribution
- Transepidermal water loss (TEWL) tends to be greater in African American, Latino and Asian skin than in Caucasian skin
- Impaired barrier function is thought to contribute to sensitivity to topical stimulation
- Dermis is thicker and more compact, fibroblasts are larger and in higher quantities Superficial blood vessels more prominent and dilated
- Larger sebaceous glands, leading to more oil production

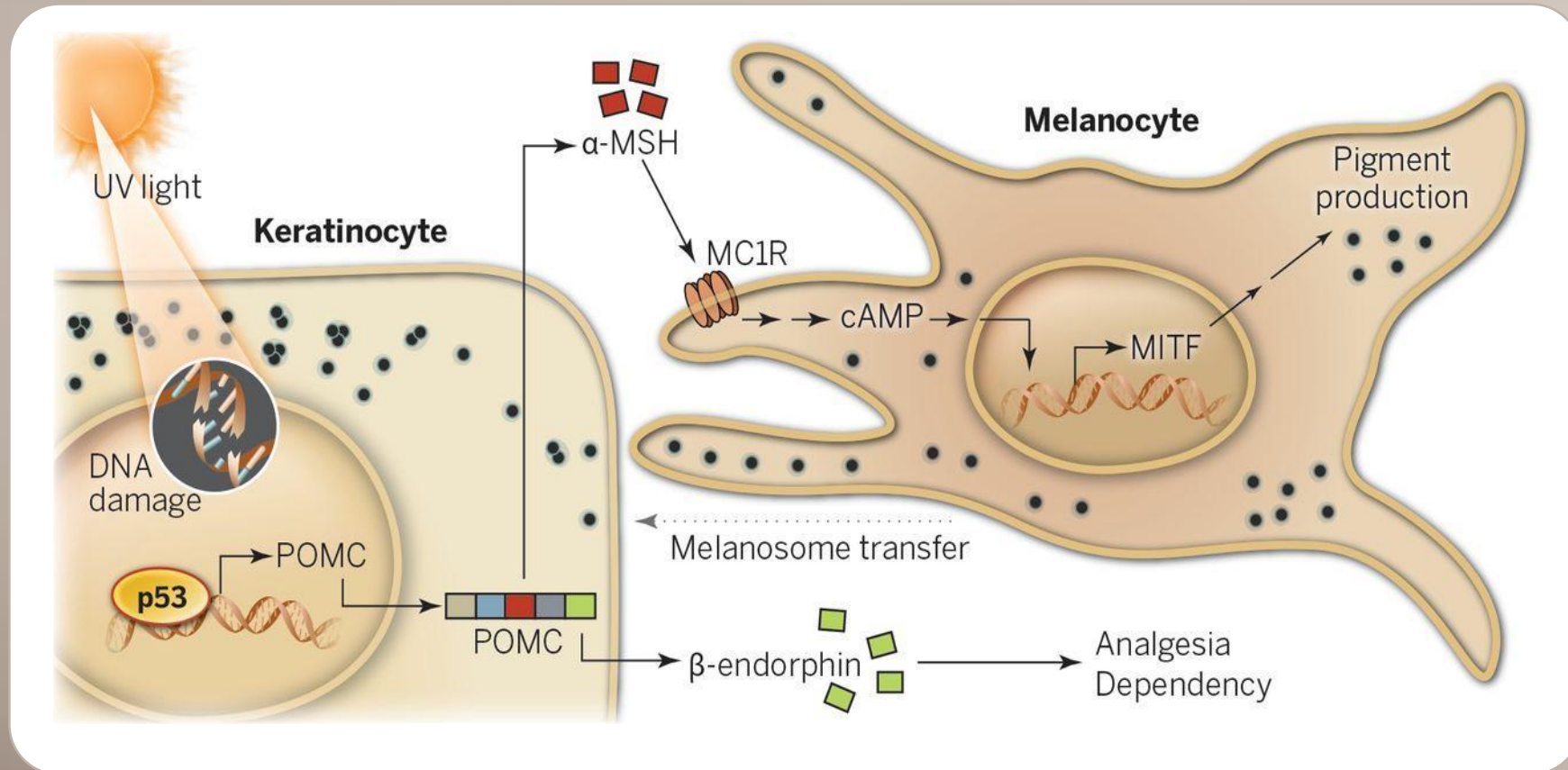
Melanocyte



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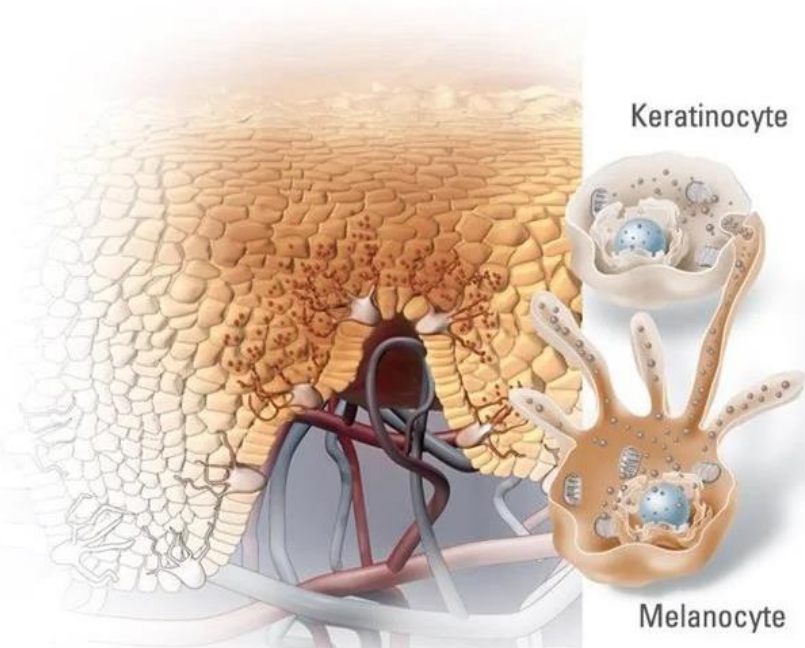
Relationship between a Keratinocyte and Melanocyte



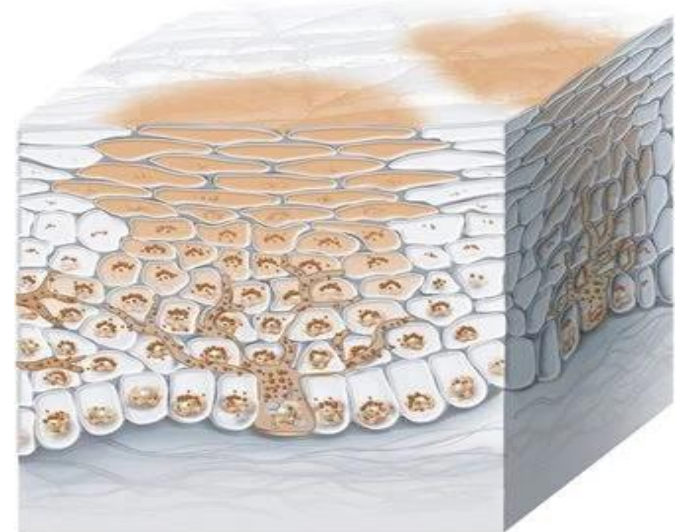
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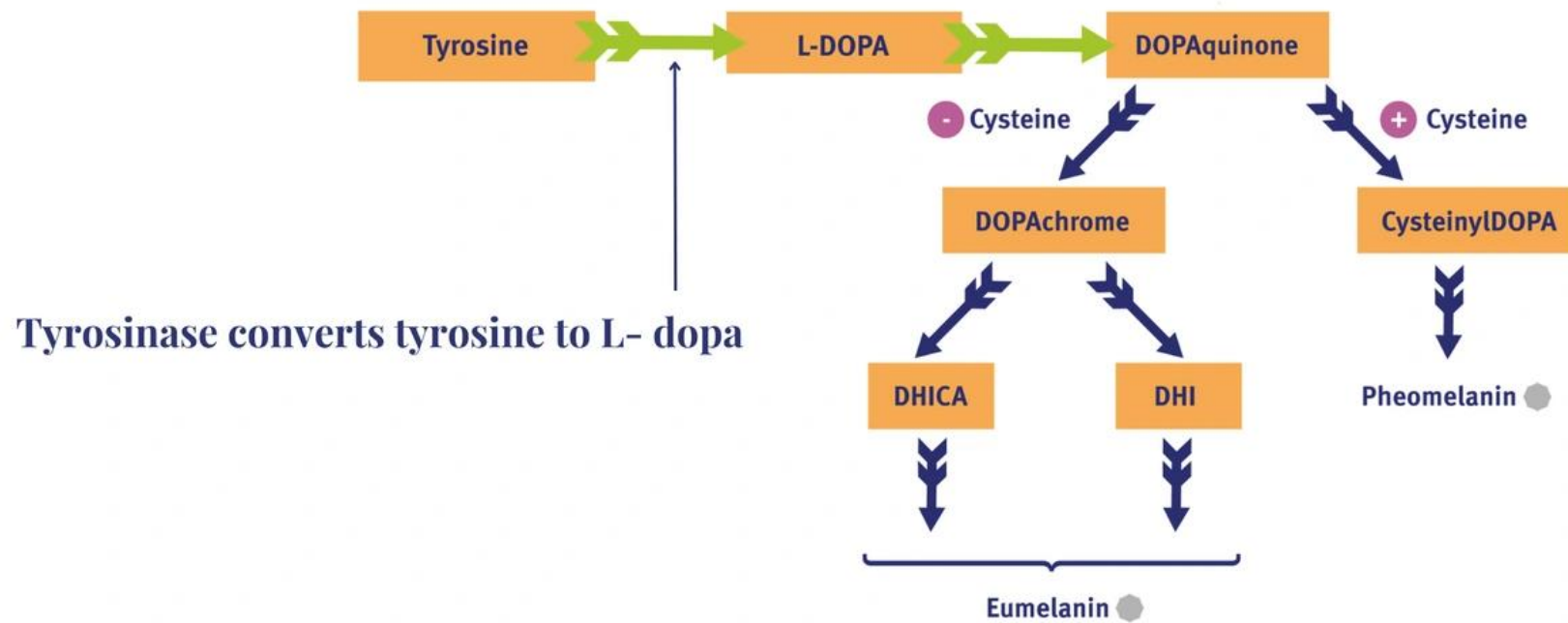
Melanogenesis

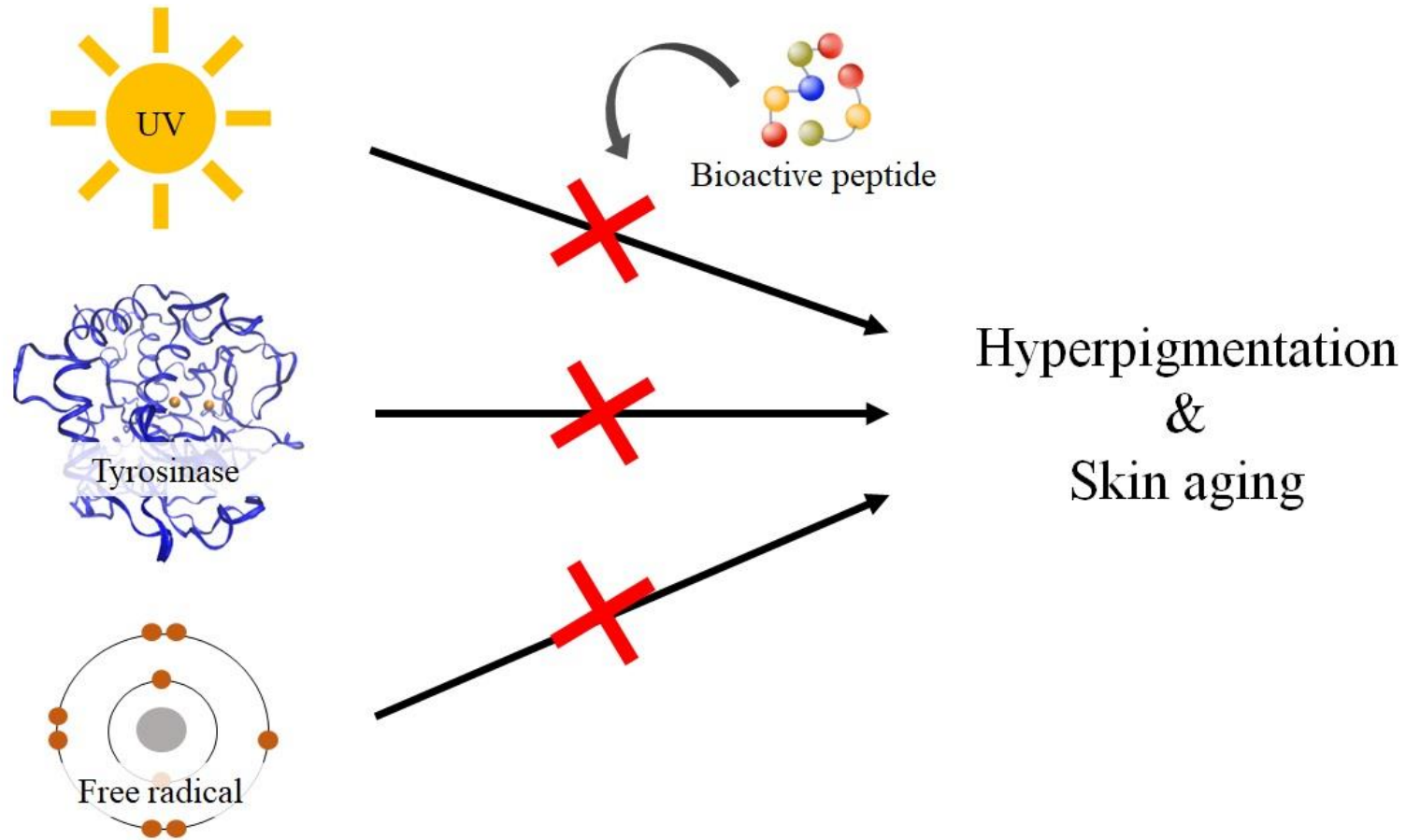


Pigmentation



Melanogenesis





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Antioxidants

Antioxidants are substances that help protect the skin's surface from oxidative damage caused by free radicals and environmental aggressors like UV and pollution.

- Niacinamide (Vitamin B3)
- L'ascorbic acid (Vitamin C)
- Tocopherol (Vitamin E)
- Hexylresorcinol
- Resveratrol
- Silymarin
- Coenzyme Q10

*full list can be found at Addor FAS. Antioxidants in dermatology. An Bras Dermatol. 2017 May-Jun;92(3):356-362. doi: 10.1590/abd1806-4841.20175697. PMID: 29186248; PMCID: PMC5514576.



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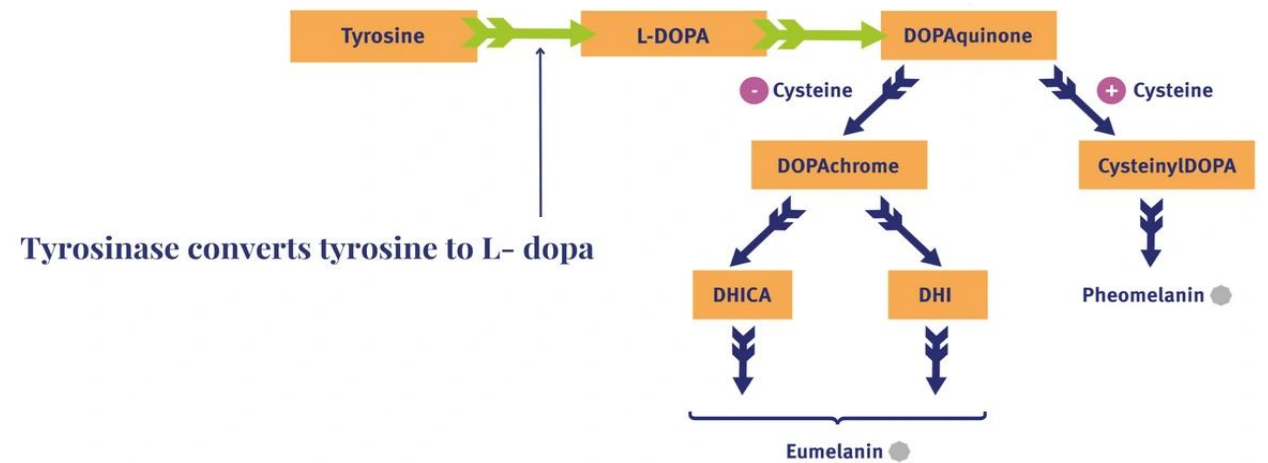
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Tyrosinase inhibitors

1. Kojic Acid
2. Ferulic Acid
3. Quercetin
4. Liquorice extract
5. 4-n-butylresorcinol
6. Mulberry extract
7. Alpha arbutin
8. Retinoids
9. Azelaic acid
10. L-ascorbic Acid
11. Tranexamic acid
12. Hydroquinone



Pigmentation

- Skin pigmentation is a powerful defence against ultraviolet radiation.
- The melanin produced by melanocytes is responsible for the associated darkening of the skin.
- Tyrosinase modulates the melanogenesis process and is a therapeutic target for skin disorders such as hypopigmentation and hyperpigmentation.

Hyperpigmentation

- Photopigmentation - UV-induced (Age spots, sun spots)
- Post-inflammatory
- Melasma

Photo-pigmentation



Post-Inflammatory



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Melasma/Chloasma



Skin of color – other concerns

Dyschromias:

- ~Hyper-, hypopigmentation or combination of the two.
- ~Ochronosis – genetic or exogenous

Hypertrophic and keloid scarring

- ~avoid injectables and microneedling
- ~prevention (UV blocks, avoid skin tension, gentle pressure dressings)
- ~intralesional corticosteroid injections
- ~scar revision surgery (combined with other treatments)
- ~laser, radio- and cryotherapy

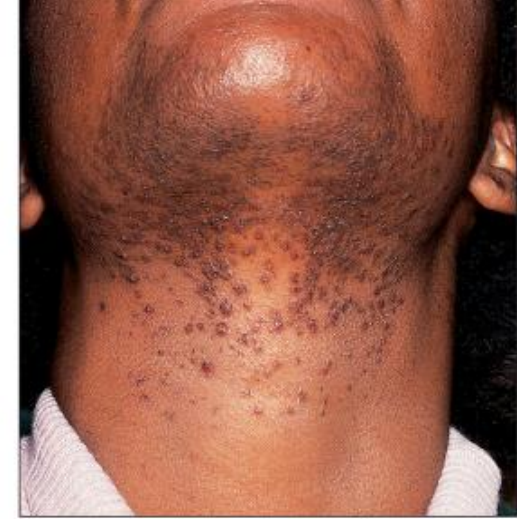
Skin of color – other concerns

- "Ashy" dehydrated skin
- Acne cosmetic
- Dermatositis papulosa nigra
- black colloid milia



Pseudofolliculitis Barbae (PFB)

- Inflammation is caused by the presence of a foreign object in the skin
- PIH in the bearded area caused by irritation from frequent shaving in darker skin tones
- Irritation stimulates the melanocytes
- Seen as erythema in lower Fitzpatrick's



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Pre-treatment

- Improve barrier function
- Antioxidants
- Inhibit melanogenesis
- SPF

Ingredients to introduce Pre-treatment

Kojic acid

- Chelates the copper bound to tyrosinase
- Decreases the number of melanosomes and dendrites

Azelaic acid

- Inhibits tyrosinase
- Induces melanocyte-specific cytotoxicity

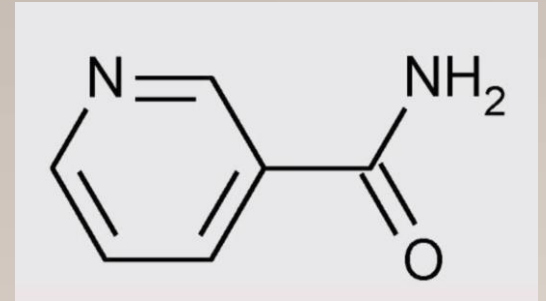
Lactic acid

- Increases exfoliation of melanin-filled keratinocytes
- Suppresses the formation of tyrosinase

Phenylethyl resorcinol

- Prevents the conversion of tyrosine to L-DOPA

Nicotinic acid (also generally known as niacin) = Vitamin B3
niacinamide (also known as nicotinamide) = Vitamin B3



- ✓ Niacinamide is a component of important coenzymes involved in hydrogen transfer: nicotinamide adenine dinucleotide (NAD) and nicotinamide adenine dinucleotide phosphate (NADP).
- ✓ Improves epidermal barrier function, seen as a reduction in trans-epidermal water loss and an improvement in the moisture content of the stratum corneum.
- ✓ Escalates protein synthesis (e.g. keratin), has a stimulating effect on ceramide synthesis, speeds up the differentiation of keratinocytes, and raises intracellular NAP levels, creating a brighter complexion.
- ✓ Antioxidant, anti-inflammatory – reduces redness in acne & rosacea skins.

L-ascorbic acid (vitamin C) 20%

- ✓ Interrupts the binding of copper to tyrosinase
- ✓ Converts DOPAquinone back to L-DOPA, preventing melanin formation

Tocopherol (vitamin E) 5%

- ✓ Strengthens skin barrier and reduces inflammation
- ✓ Synergy with vitamin C

Hexylresorcinol

- ✓ Inhibits melanosome transfer

Retinol

- Inhibits melanosomes from being transferred from the melanocytes into the keratinocytes

Our skin is a barrier...

- 500 Dalton rule
- Delivery system
- Active ingredient concentration...

Combination treatments

Chemical Peel (Epidermis)

- Helps with breakdown of hyperpigmentation
- Generation of new epidermis to remove superficial textural concerns at the epidermal level

Energy device (Dermis)

- Breakdown of hyperpigmentation at the dermal level
- Breakdown of hyper-vasculature in the skin affected by melasma
- Promotion of collagen remodeling in dermal layer to promote skin tightening and diminish laxity

Which technology is best?

Factors to always consider:

- ablative/non ablative?
- heat/no heat?
- how much downtime?
- goals of skin care products/regimen
- cost of treatment/budget

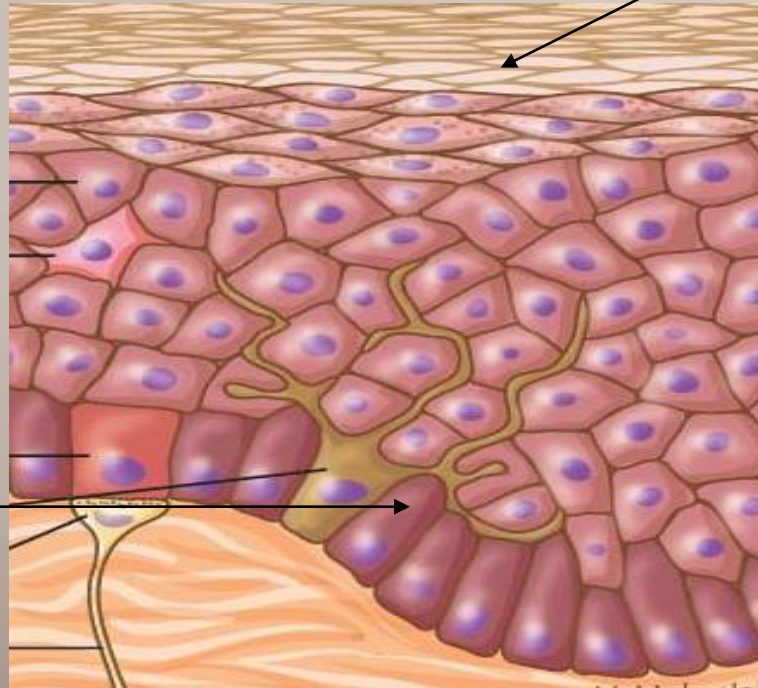
Mesotherapy

Trans-epidermal drug delivery

- Cosmetic procedure for facial rejuvenation, developed in 1950s, France
- Shallow injections of vitamin, enzyme, hormone, and plant extract mixture, targeted to specific skin concerns
- Nourish and rejuvenate skin, stimulate collagen production, improve skin texture and complexion

Plasma Technology

The cell membrane potential allows greater absorption of topical solutions, whilst sterilizing and boosting the regeneration of the skin cells.



Arc is produced between the tip of the plasma hand piece and surface of the skin

Plasma Technology

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Needle-free approach



Vs



Results



Inflammatory acne

Treatment: Plasma
technology
(Plasonic, Gentlo)

- 1 treatment
- 2 passes
- Meso

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Results



Inflammatory acne

Treatment: Plasma
technology
(Plasonic, Gentlo)

- 1 treatment
- 2 passes
- Meso

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Results



Dull skin, enlarged pores

Treatment: Plasma technology
(Plasonic, Gentlo)

- 2 treatments 3 weeks apart
- 2 passes
- Meso

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Dark under-eye circles
Treatment: Plasma
technology
(Plasonic, Gentlo)

- Pluryal Mesoline
Shine with Plasma
- 2 treatments 3
weeks apart

Results



Dark under-eye circles
Treatment: Plasma
technology
(Plasonic, Gentlo)

- Pluryal Mesoline
Shine with Plasma
- 2 treatments 3
weeks apart

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Results



Dark under-eye circles
Treatment: Plasma
technology
(Plasonic, Gentlo)

- Pluryal Mesoline Shine with Plasma
- 2 treatments 3 weeks apart
- PCA skin ideal complex eye cream

Radiofrequency microneedling

Radiofrequency (RF) is a nonionizing electromagnetic radiation that has been used in medicine for nearly 100 years. In contrast to most lasers that target specific chromophores, RF is chromophore-independent. This allows significantly higher penetration into the skin and safe treatment of darker skin types.*

Microneedling fractional RF (MFRF) uses extra sharp microneedles to heat the depths of the dermis, promoting dermal collagen remodelling. Previous studies have demonstrated the efficacy of microneedle RF devices for skin collagen induction, wrinkle and scarring reduction.**

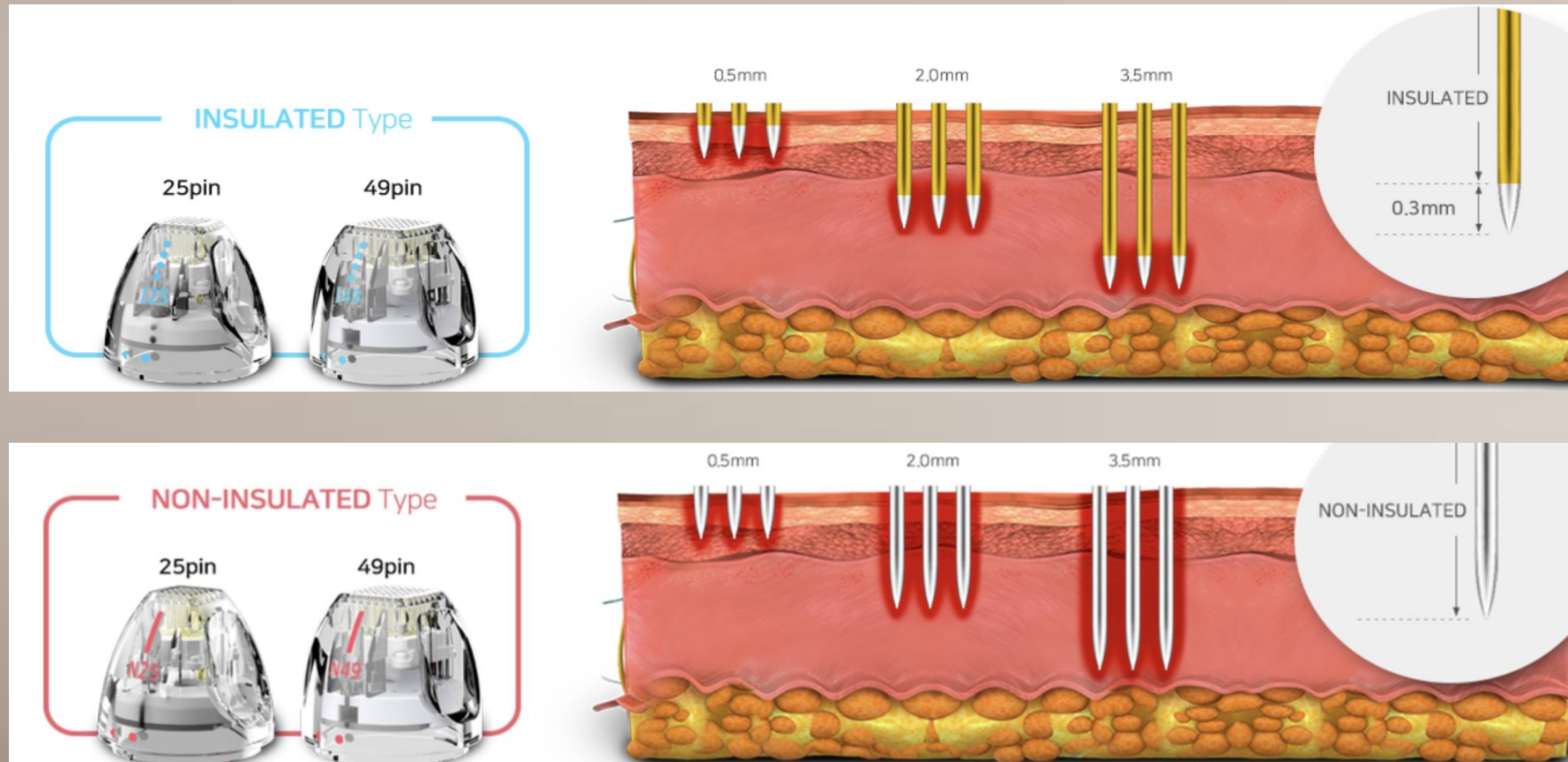
**Elawar and Dahan, 2018*

*** Naeni et al, 2016, Sobhi et al, 2019, Afifi et al, 2020*

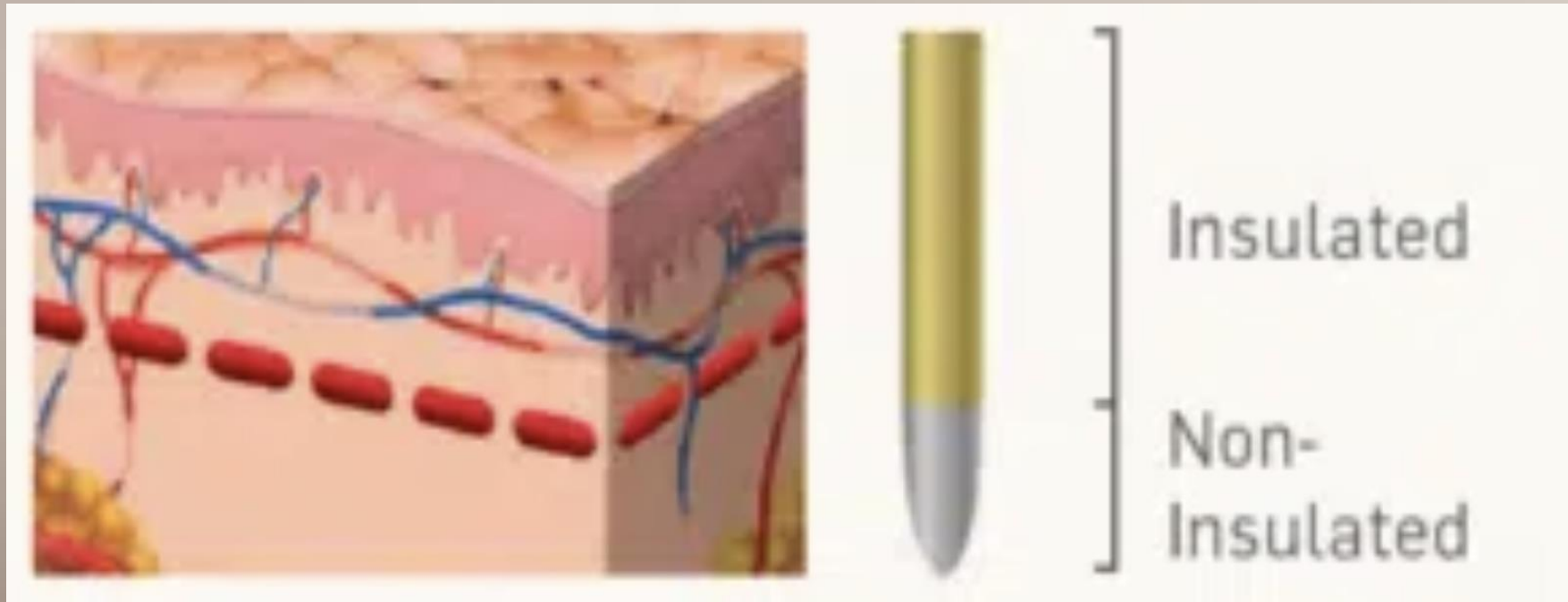
'Injury and repair'

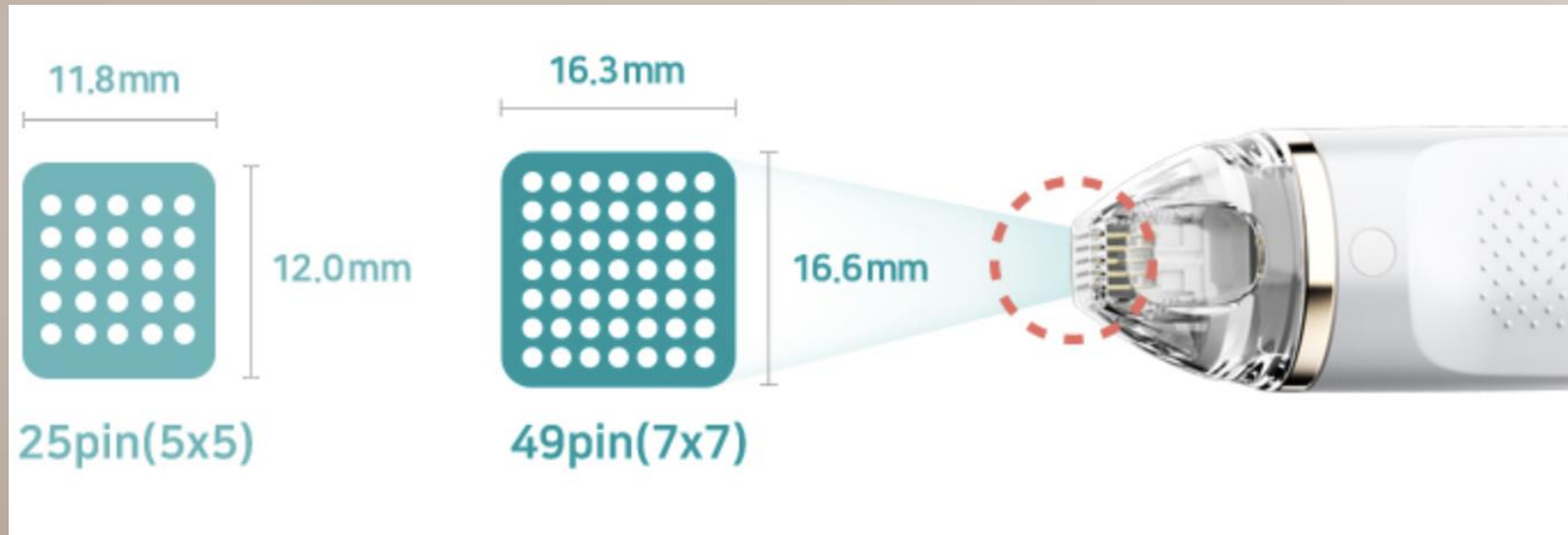
- Puncturing of the skin at uniform depths within the dermis with multiple fine needles, resulting in a controlled cutaneous injury, which triggers wound healing and percutaneous induction of collagen and elastin.
- Insulated needles deliver RF energy at dermal level, RF caused resistance in the tissues creates friction which leads to heat, typically controlled between 40 and 43 degrees Celsius, resulting in a dermal injury.
- This activates fibroblasts, stimulating cutaneous collagen, elastin and HA production
- Can be used for transdermal drug delivery (antioxidants and tyrosinase inhibitors)

Insulated and non-insulated needles



Insulated needles deliver RF only at the tip in the dermis, that way bypassing basale membrane with melanocytes

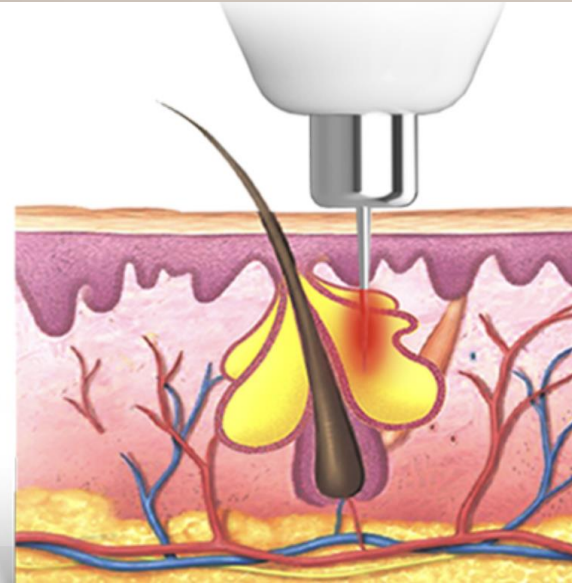
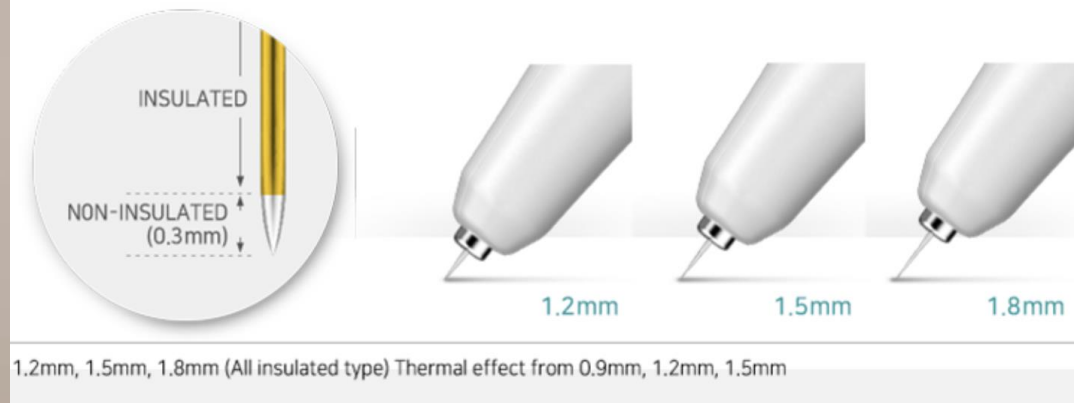




Single needle RF

Selective sebaceous glands destruction

RF Needle selectively destroys sebaceous glands
No damaging the epidermis, Treating acne fundamentally, Preventing recurrence





- Minimal discomfort for patients
- Minimal downtime
- No PIH
- Safe for all skin types (using correct protocols)
- Over 96% patient satisfaction
- Great alternative for ablative resurfacing treatments
- Great alternative for mesotherapy
- Skin tightening, acne scars, skin resurfacing, subcutaneous adiposal remodeling

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- 35-year-old female
- Fitzpatrick IV
- Main concern: deep post acne scars
- 4 sessions of
Gentlo RF MN with Pluryal
Mesoline Refresh
- RF energy output 50%, depth
1.5mm, insulated needles
49pin

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- 29-year-old female
- Fitzpatrick III
- Main concern: active acne and scars
- 3 sessions of
Gentlo RF MN with
Pluryal
Mesoline Clear and
Refresh
- RF energy output 50%,
depth 1.5mm, insulated
needles 49pin

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- 29-year-old female
- Fitzpatrick III
- Main concern: acne scarring
- 4 sessions of Gentlo RF MN with mesotherapy
- RF energy output 60%, depth 1.5mm, insulated needles 49pin

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- 59-year-old female
- Fitzpatrick III
- Main concern: skin ageing
- 3 sessions of Gentlo RF MN with mesotherapy
- RF energy output 60%, depth 0.8-2.5mm, insulated needles 49pin

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- Patient is a 39-year-old male
- Fitzpatrick IV
- No medical conditions or allergies
- Rapid muscle mass gain (bodybuilding)
- Main concern: striae on shoulders
- Treated with 2 sessions of fractional RF microneedling
- RF energy output 40%
- Depth 1.8 mm
- Insulated needles were used, Pluryal mesoline Refresh

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Before



After



- 59-year-old female
- Fitzpatrick III
- Main concern: skin ageing
- 3 sessions of Gentlo RF MN with mesotherapy
- RF energy output 60%, depth 0.8-1.5mm, insulated needles 49pin

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Before



After



- 59-year-old female
- Fitzpatrick III
- Main concern: skin ageing
- 3 sessions of Gentlo RF MN with mesotherapy
- RF energy output 60%, depth 0.8-1.5mm, insulated needles 49pin

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What treatments did this patient have?

???

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In summary

- Prepare skin
- Avoid aggressive treatments/minimize trauma
- Fractional non-ablative devices & lower energy output
- Longer interval between treatments & may need more sessions
- Aftercare/protect the skin

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Q & A

Thank you!

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