

Το ανθρώπινο δέρμα ομοιόσταση

Δρ. Παναγιώτης Β. Τσακλής

Καθηγητής

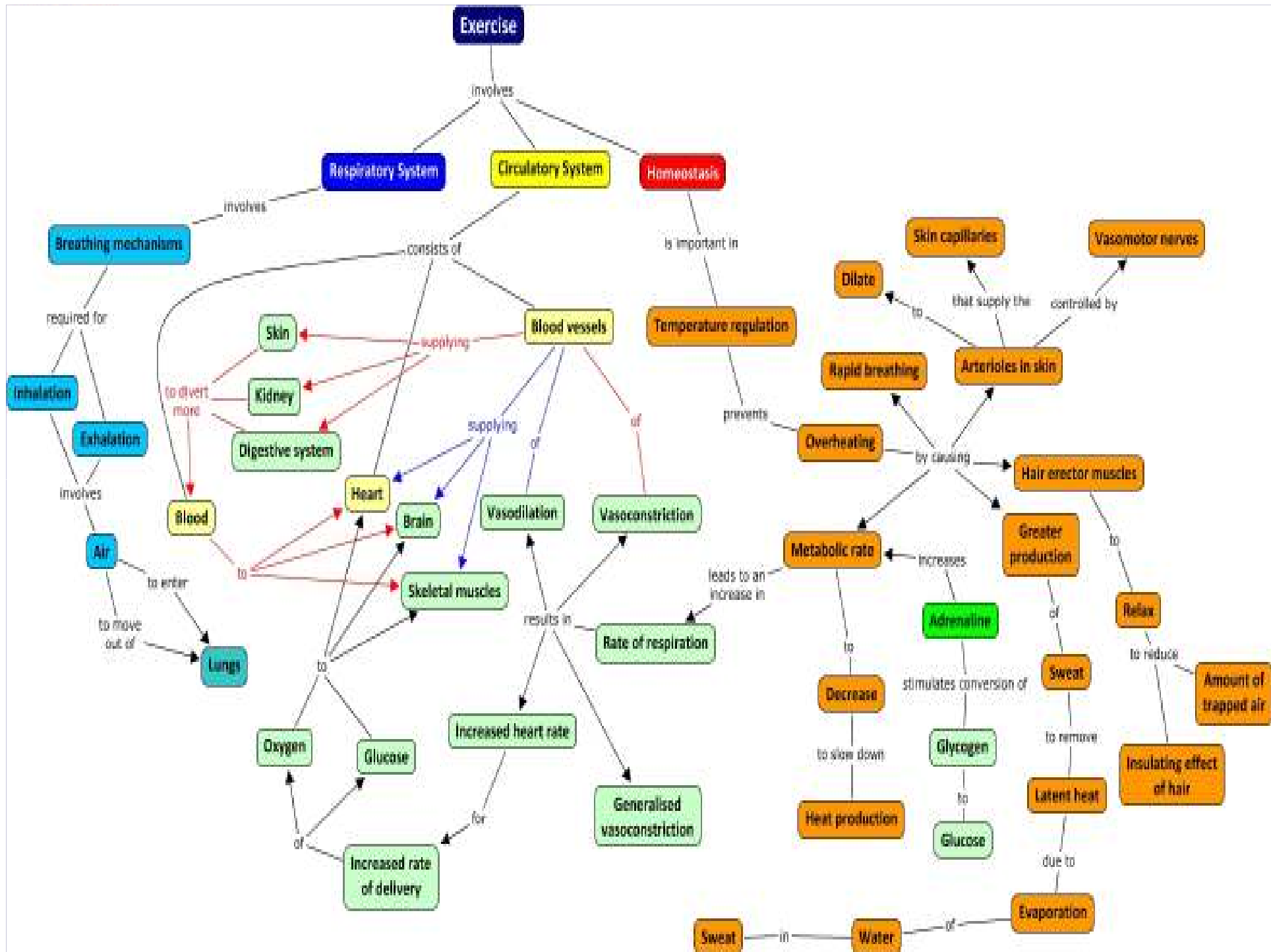
Εμβιομηχανικής & Εργονομίας

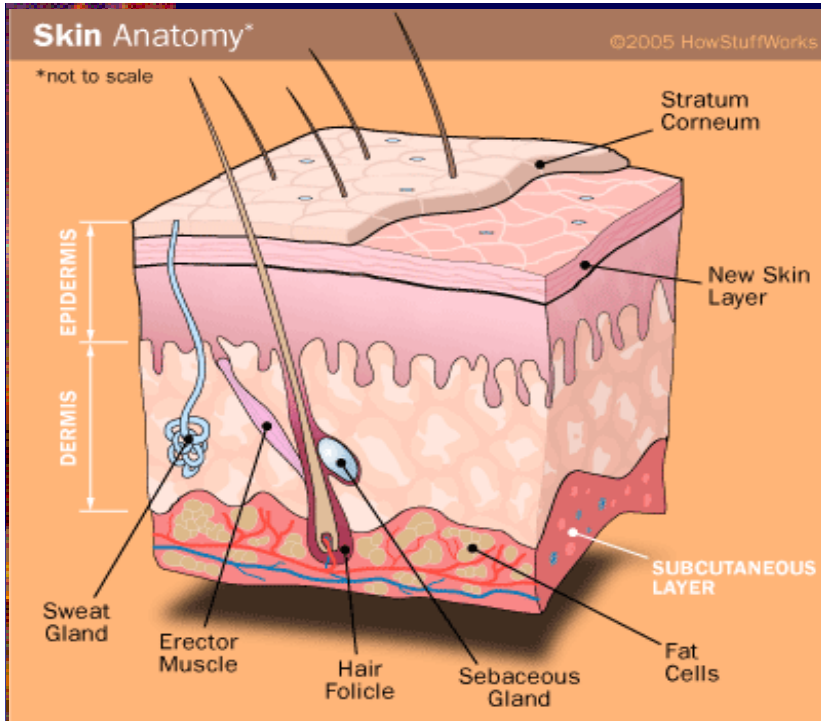
ΤΕΦΑΑ - ΠΘ



*Res. Assoc Department of Molecular Medicine & Surgery
Karolinska Institutet*



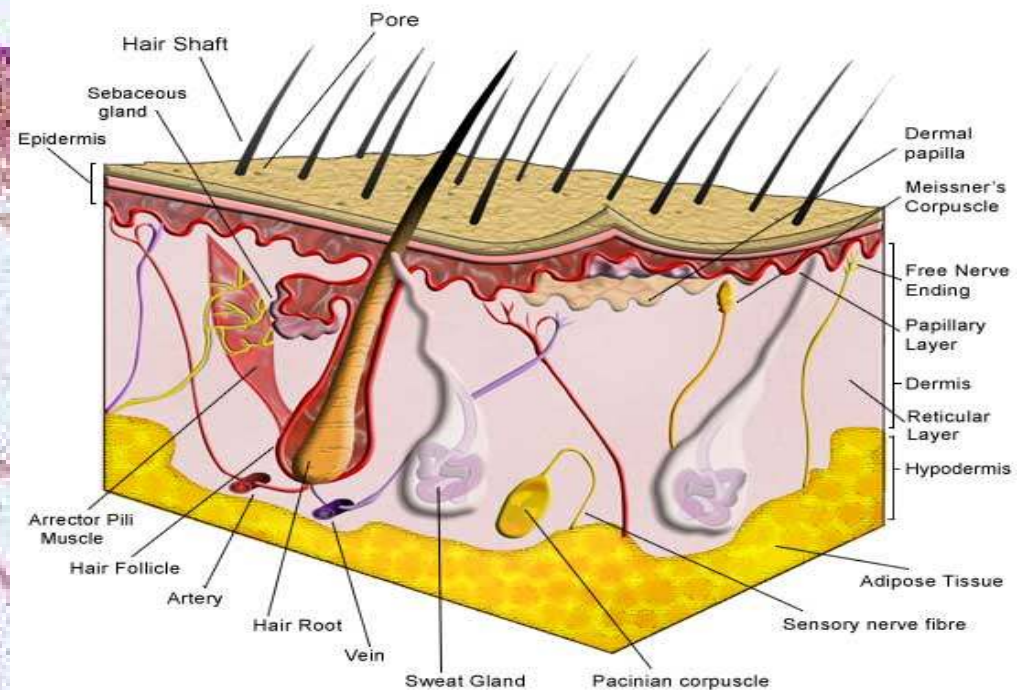
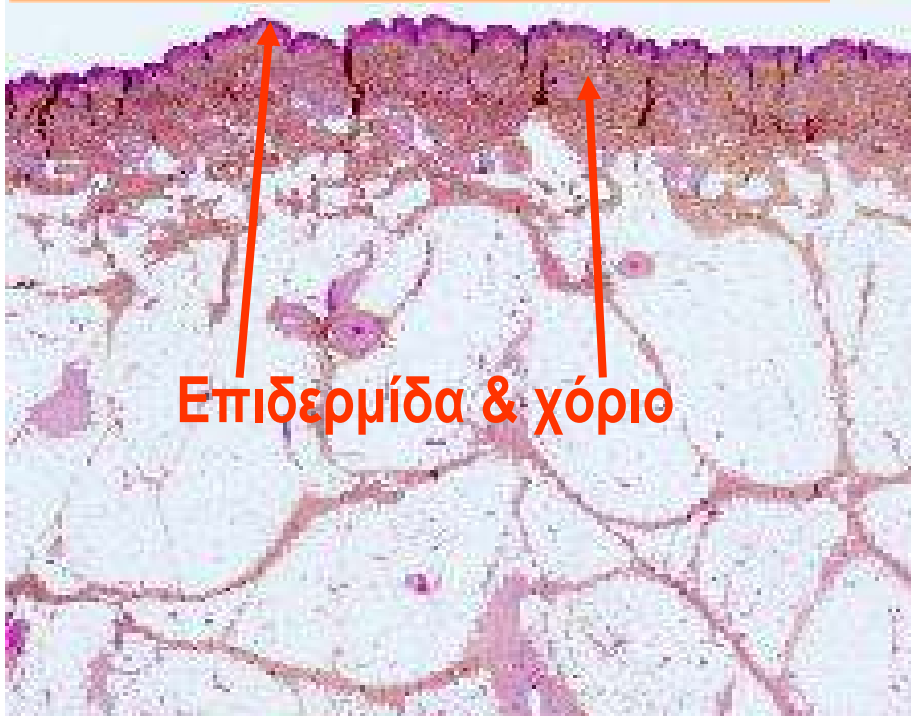


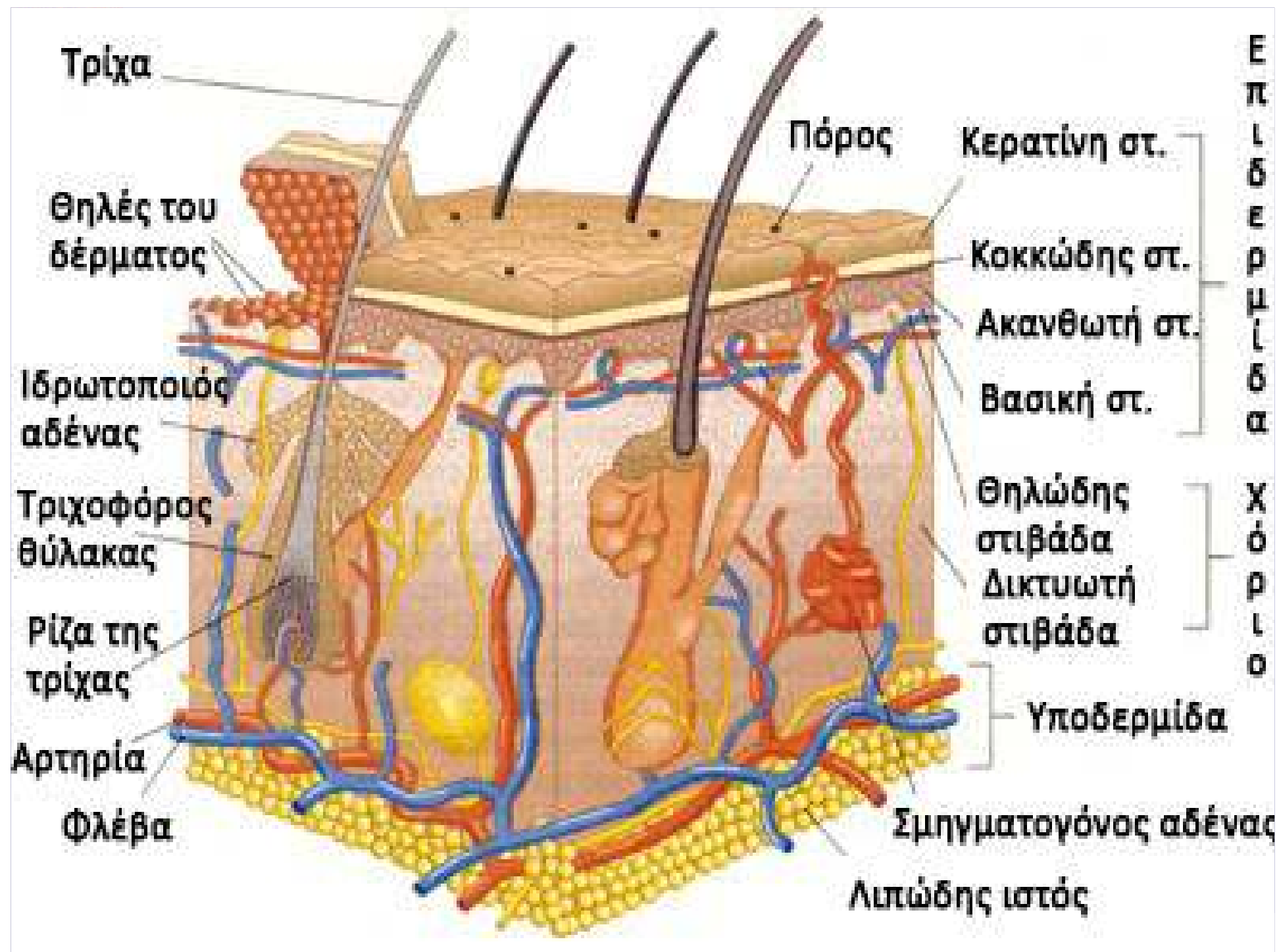


Δέρμα...Δομή και συστατικά

...1.8 m²...16% Βάρους του σώματος

- Θερμορύθμιση
- Μεταβολισμός
- Αισθητικότητα
- Προστασία
- Σύνθεση βιταμίνης D





Τρίχα

Πόρος

Κερατίνη στ.

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Θηλές του
δέρματος

Κοκκώδης στ.

Ακανθωτή στ.

Βασική στ.

Ιδρωτοποιός
αδένας

Τριχοφόρος
θύλακας

Θηλώδης
στιβάδα
Δικτυωτή
στιβάδα

Χ
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Ρίζα της
τρίχας

Αρτηρία

Υποδερμίδα

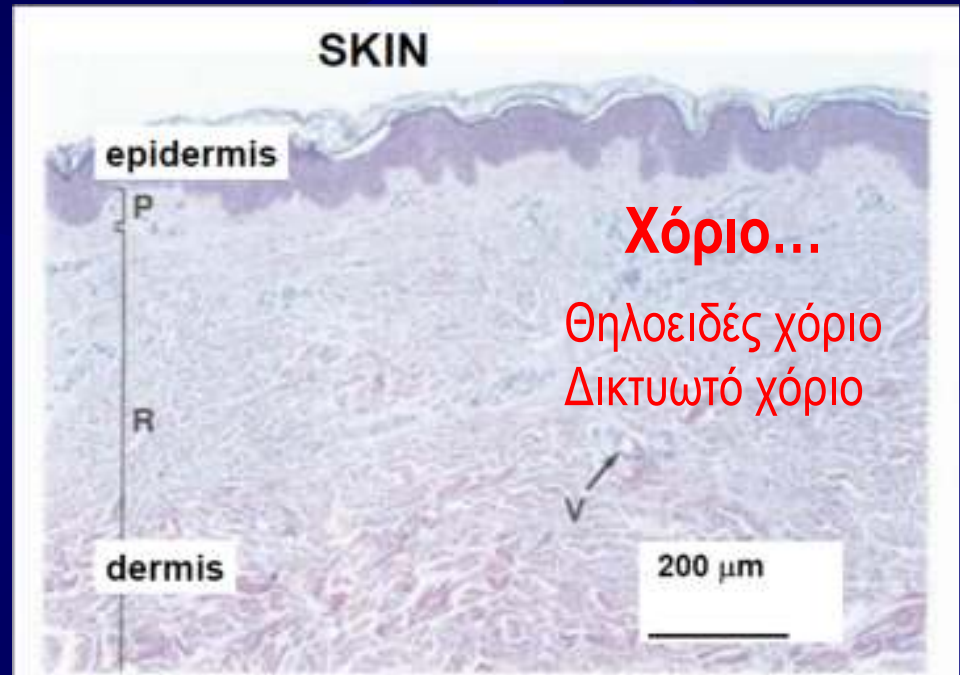
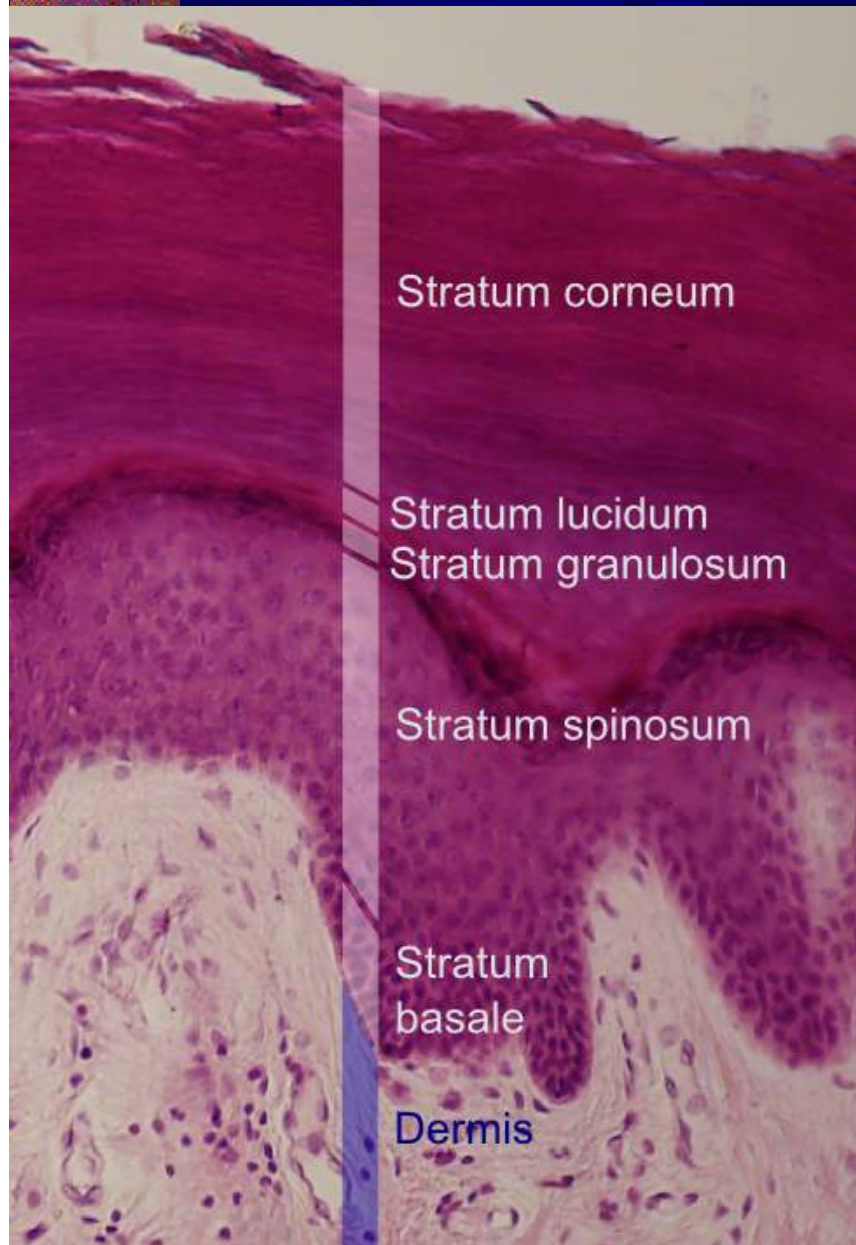
Φλέβα

Σμηγματογόνος αδένας

Λιπώδης ιστός

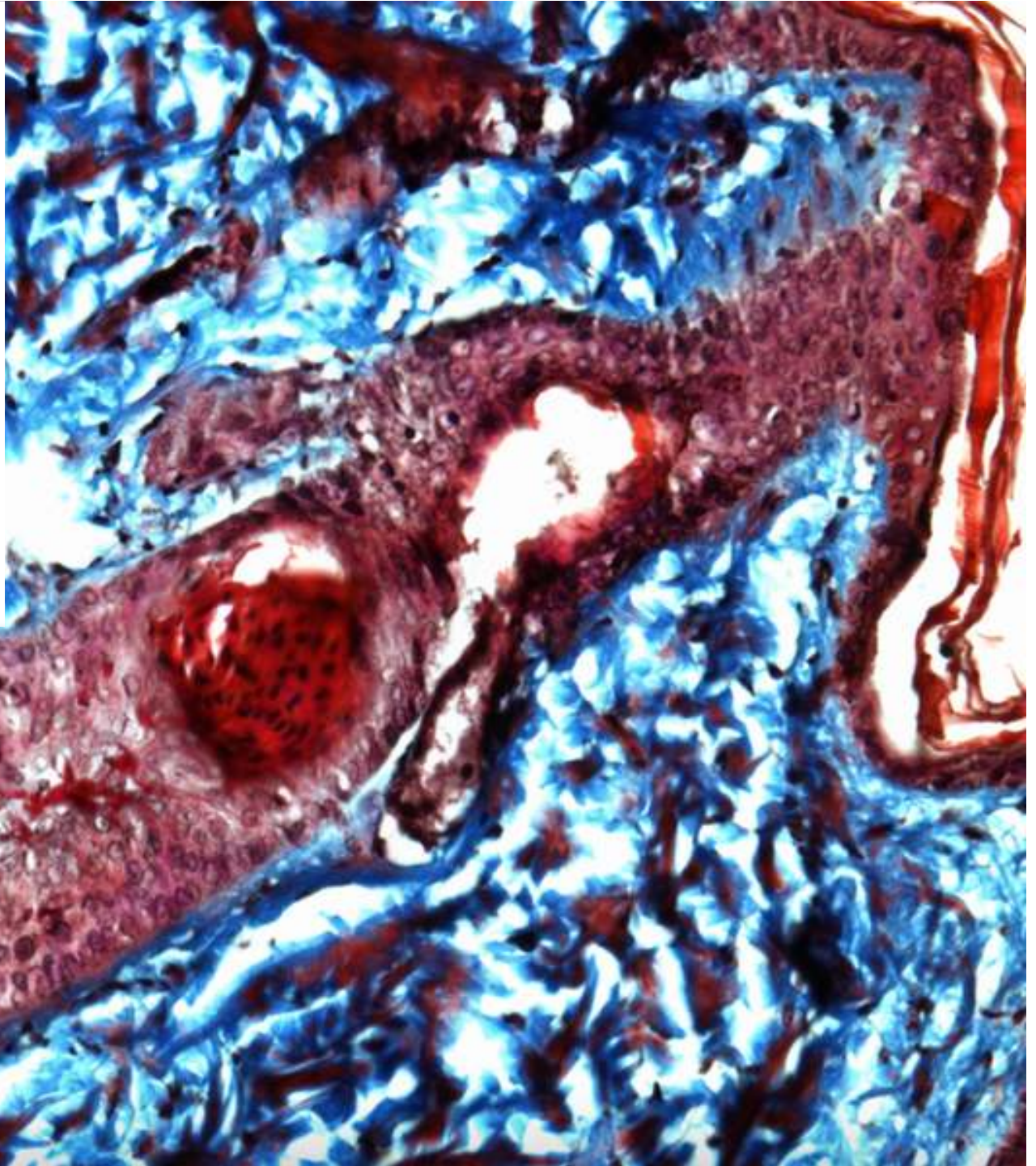
Επιδερμίδα

Κερατινοκύτταρα και μελανοκύτταρα 15-30 ημέρες



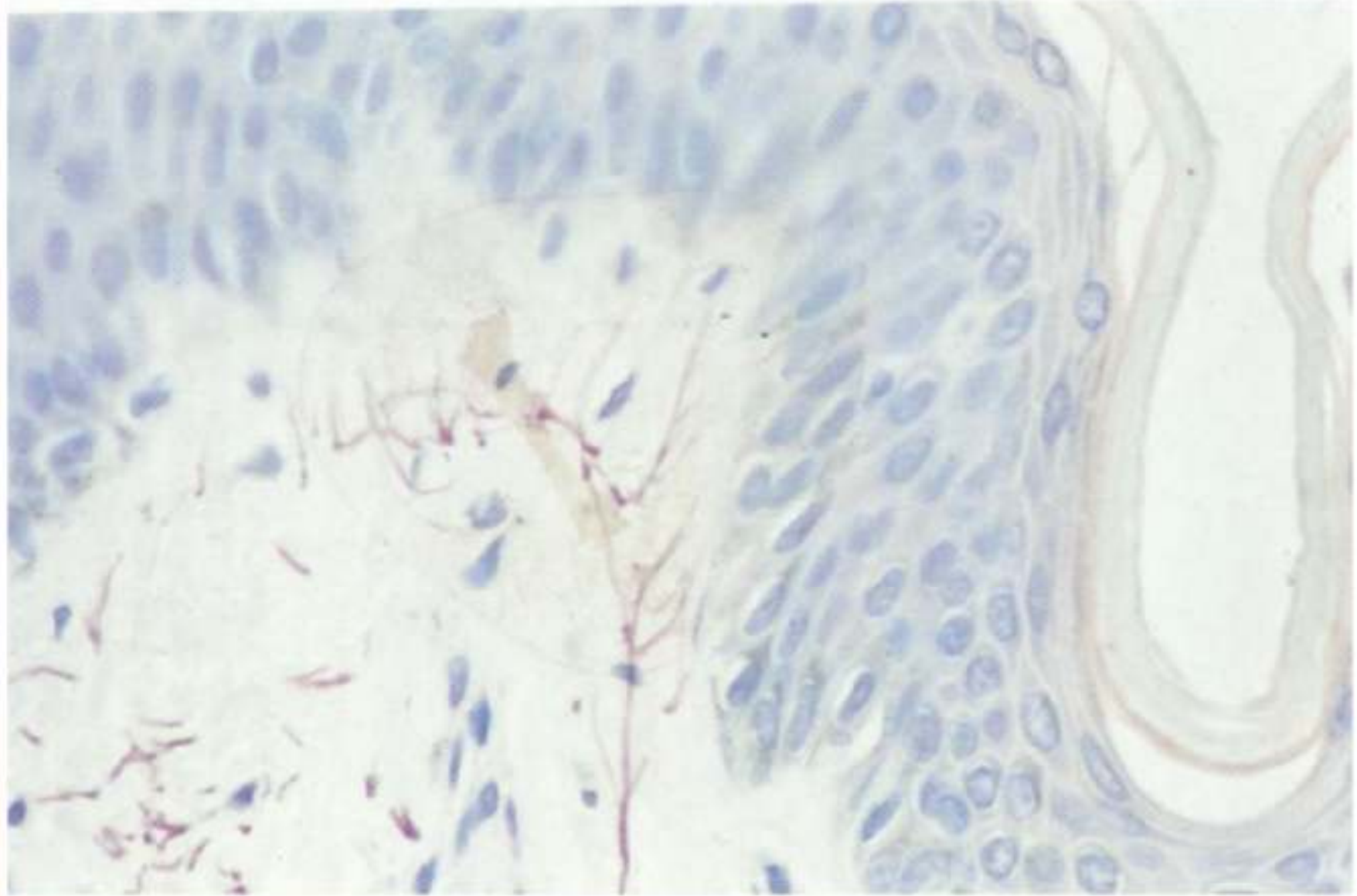


A hair follicle is a cylinder of epidermal cells that have tunneled inside the dermis



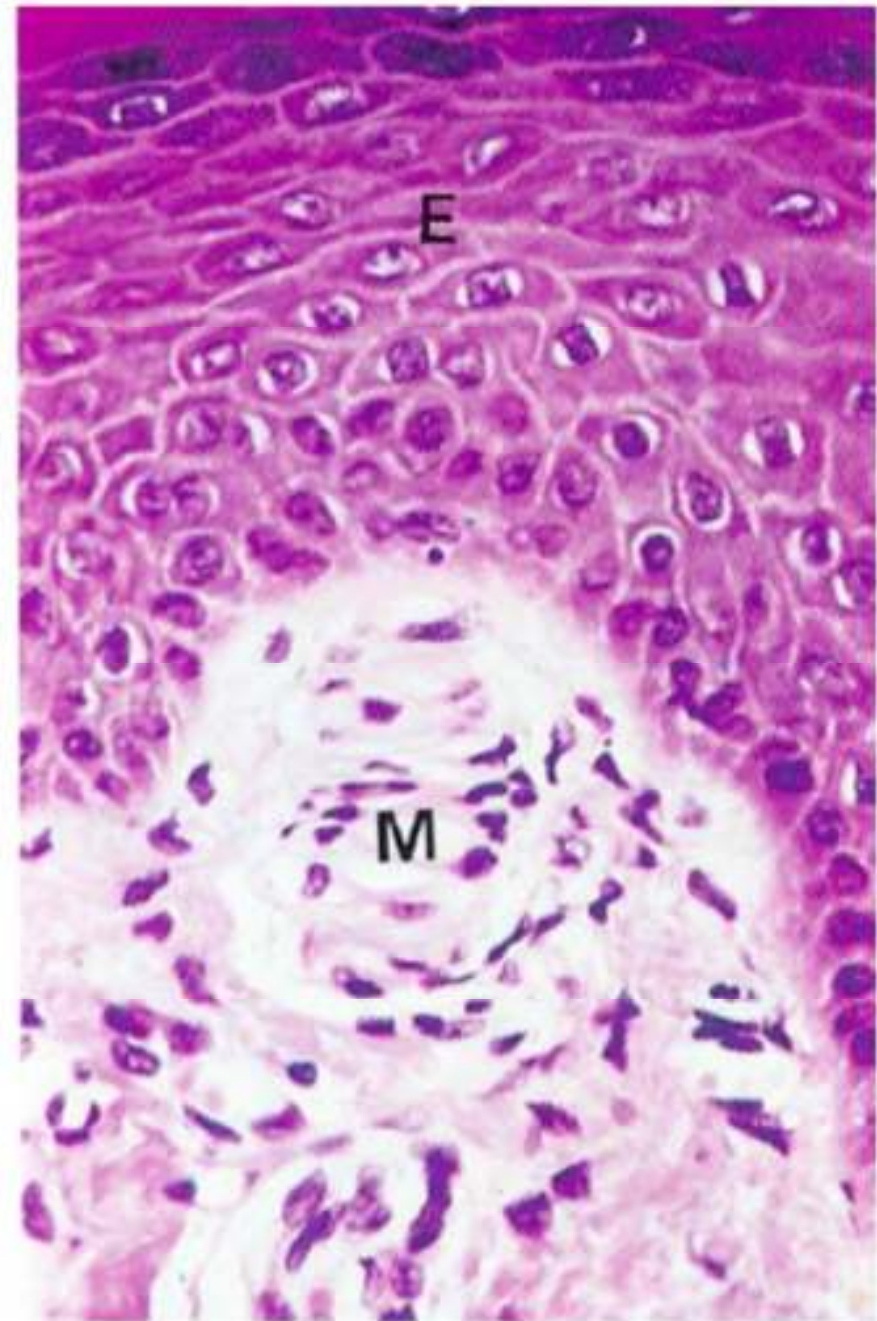
Αισθητήρες στο δέρμα!!

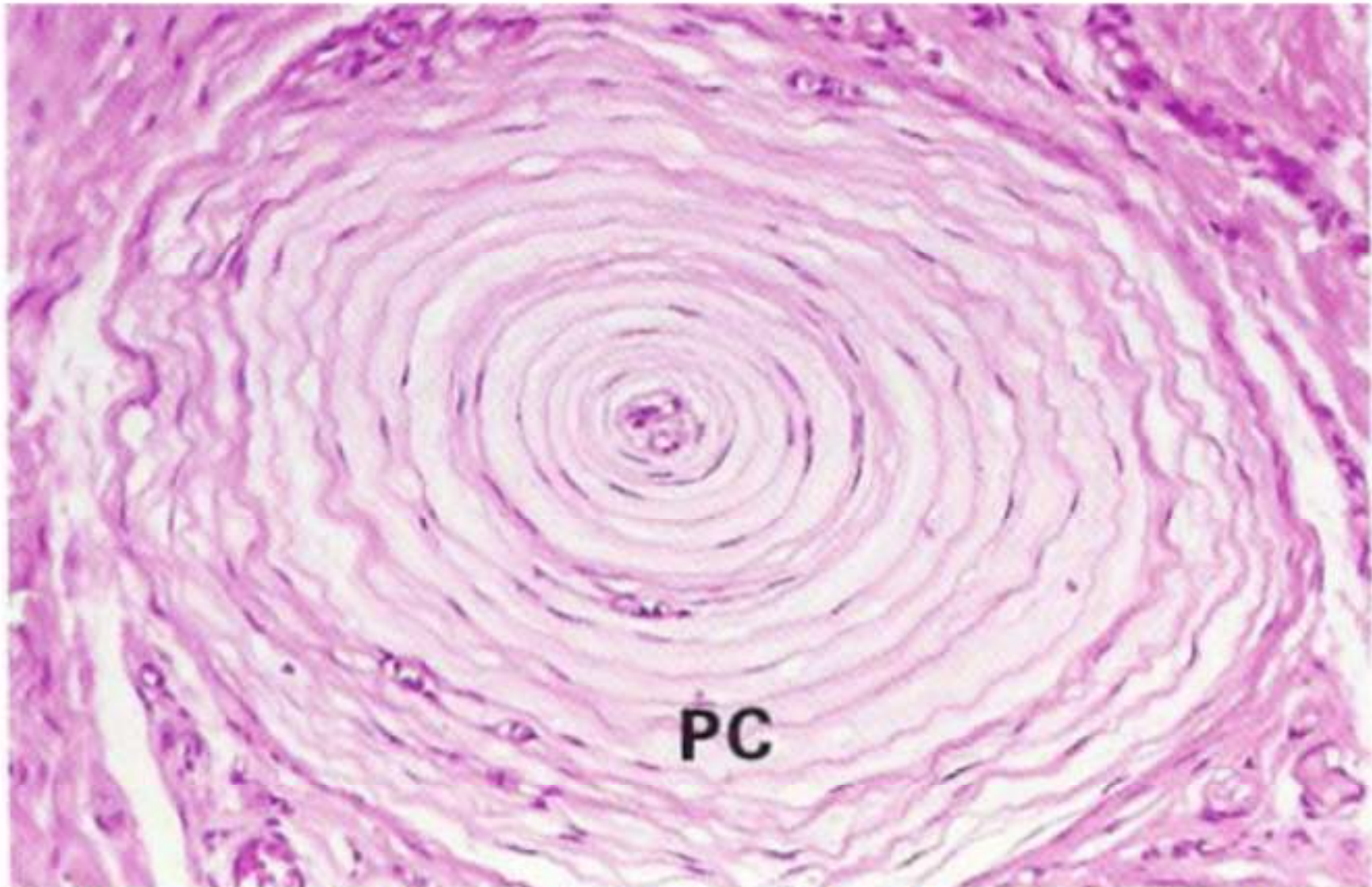
Free nerve endings (and Merkel cells): temperature, touch, pain



Meissner's corpuscle

- lies between dermis and epidermis
- located in fingertips, palms, lips and tongue, nipples, genitals
- informs body exactly where skin is touched





Pacinian corpuscle: lies deep inside dermis; located around joints and tendons, tissue lining organs, and blood vessels. Provides instant information about how and where we move

in France

Το
όργανο
της
αφής



Buddhist monks



Fire-walking ceremony in Kosti, Greece. Villagers walk on white-hot beds of coals, sometimes kneel for several minutes.



Premature baby being comforted with fleece of lamb's wool at Yale University Hospital to avoid deprivation of touch





skin decoration used in Mt. Hagen, New Guinea



Player in traditional Chinese opera



Nuba woman, Sudan used special cutting tools to retard healing and form scars



Meru girl, Kenya

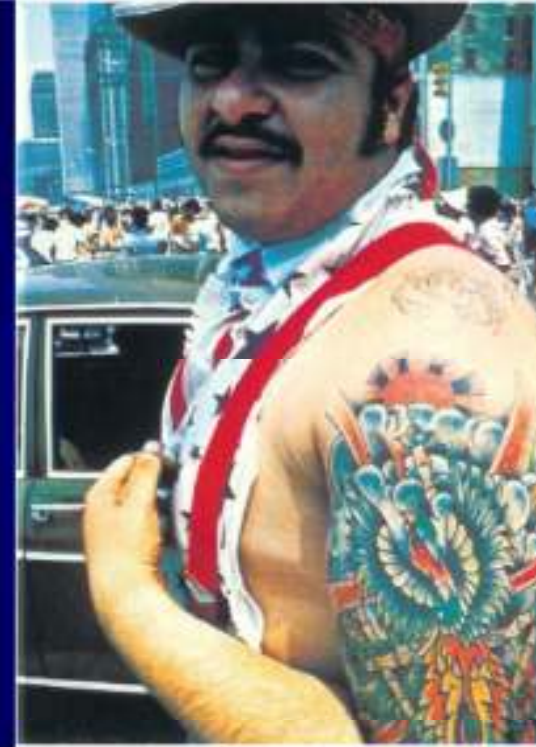
Hands of Moroccan woman painted for beauty and to protect during work with lip disk



Η γλώσσα του δέρματος



A nervous itching disease possibly forced Napoleon to keep scratching



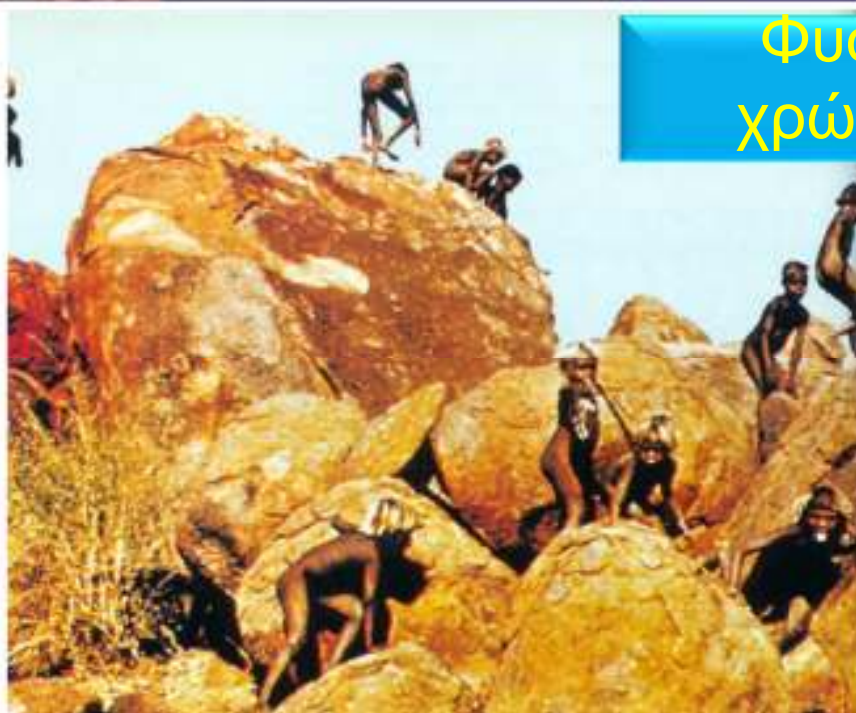
Fourth of July celebration, New York City



a traveling actress

Georges Seurat

Φυσικά χρώματα



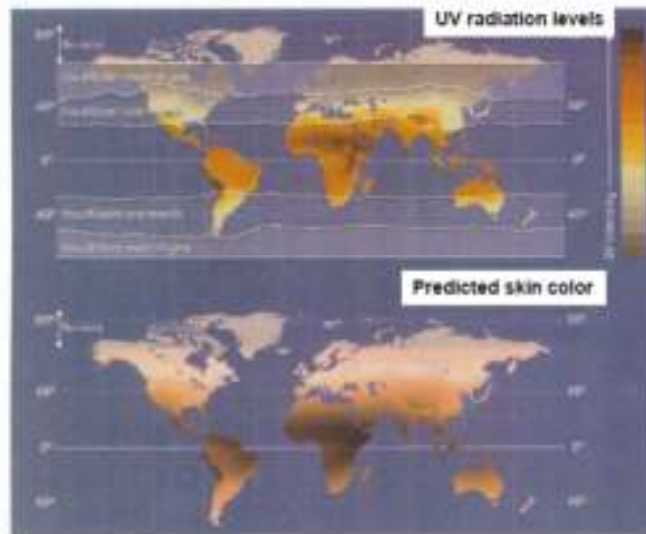
Melanin protects children from UV radiation in Australian outback



Absence of pigment (albinism) causes Hopi girl to squint, standing between her sisters

WHO MAKES ENOUGH VITAMIN D?

POPULATIONS THAT LIVE in the tropics receive enough ultraviolet (UV) light from the sun (top map, brown and orange) to synthesize vitamin D all year long. But those that live at northern or southern latitudes do not. In the temperate zones (light-shaded band), people lack sufficient UV light to make vitamin D one month of the year; those nearer the poles (dark-shaded band) do not get enough UV light most months for vitamin D synthesis. The bottom map shows predicted skin colors for humans based on UV light levels. In the Old World, the skin color of indigenous peoples closely matches predictions. In the New World, however, the skin color of long-term residents is generally lighter than expected—probably because of their recent migration and factors such as diet. —M. E. J. and G. C.



Προστατευτικό
φράγμα

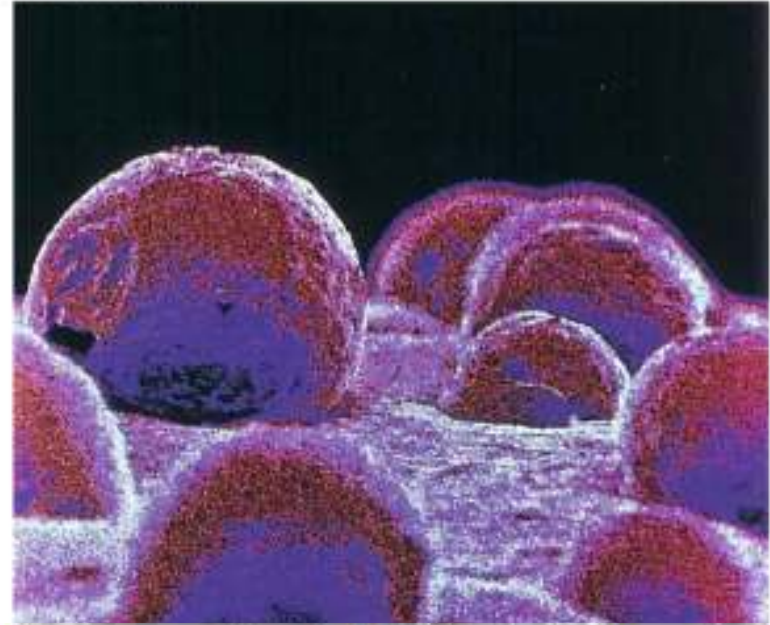


Child sitting on cold floor

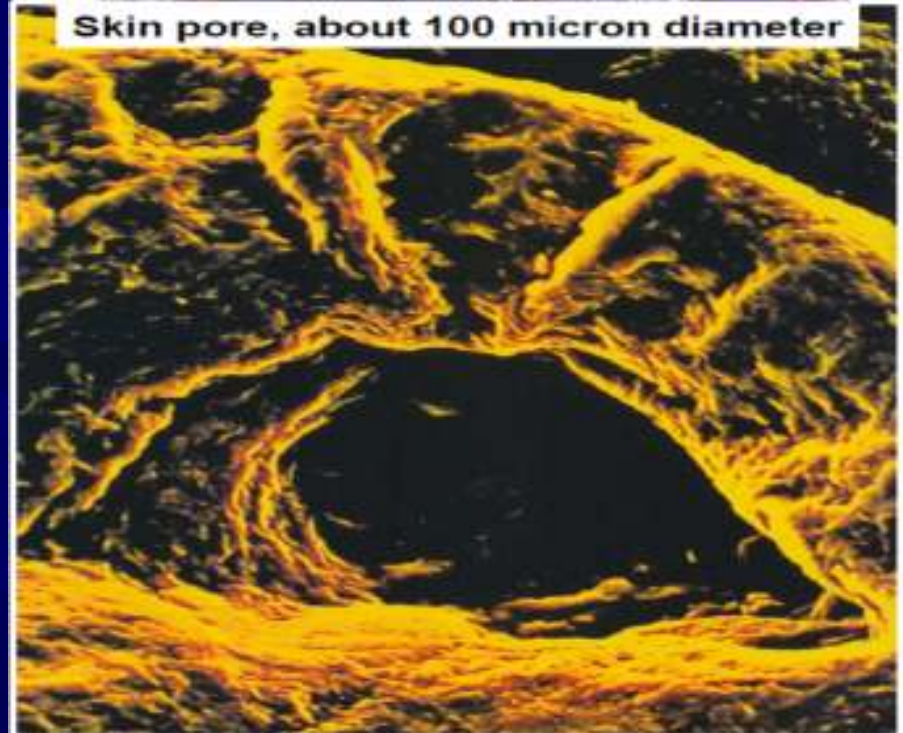


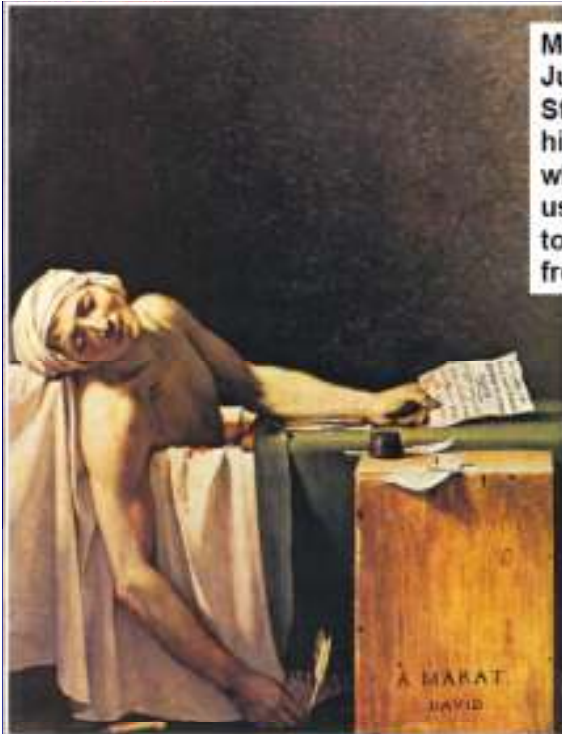
Climbers risk frostbite when too long in contact with freezing surface

Sweat droplets on surface of thumb. Sweat cools when allowed to evaporate from skin



Skin pore, about 100 micron diameter





Marat on July 13, 1793. Stabbed in his hot tub where he used to go often to get relief from skin disease

David

Όταν το φράγμα πέφτει...



Jesus to leper: "Stand up and go your way"

11th century Echternach Gospels Lectionary



Trifoliate leaves of poison ivy in autumn



Severely burned victim heals injury by contraction and scar formation

horses do not form large scars

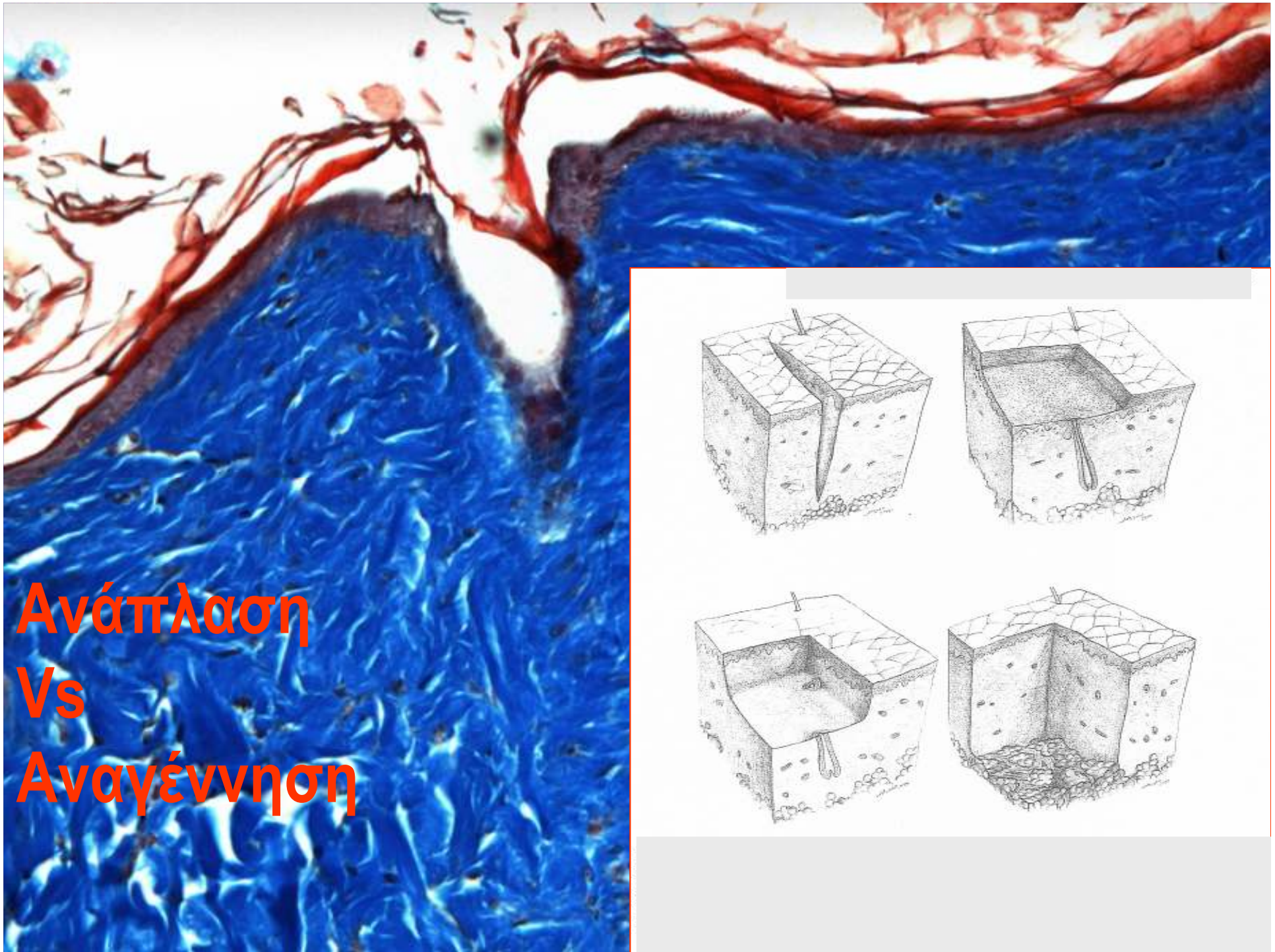


C. Stuart, 1997

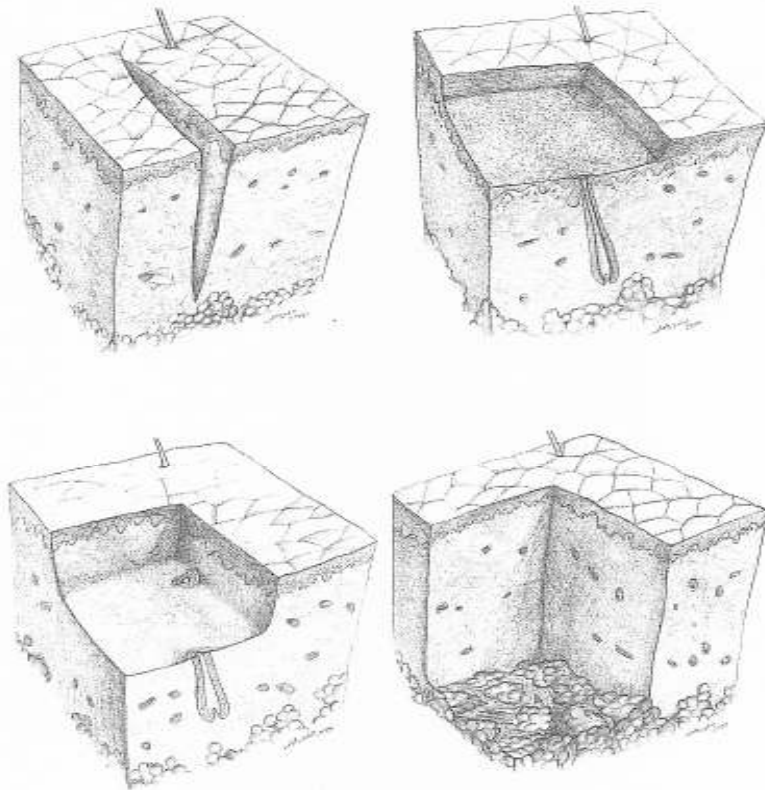


Meshed autograft, the patient's own skin



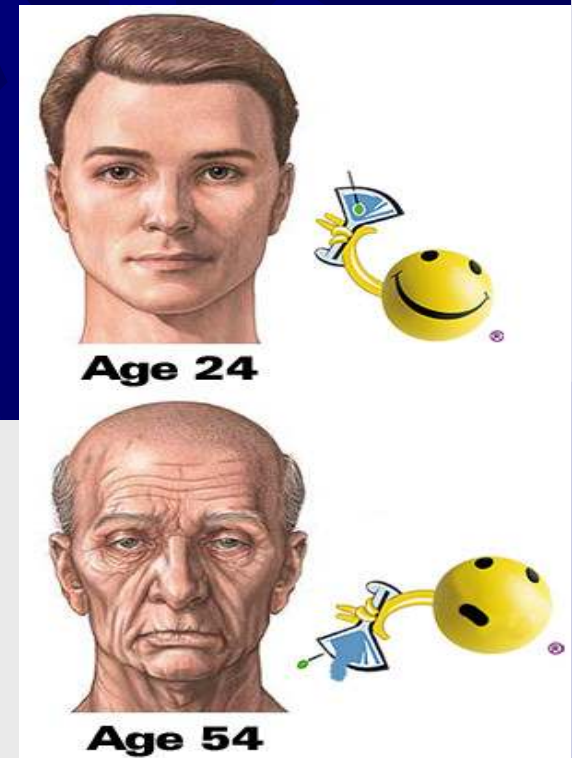


Ανάπλαση
Vs
Αναγέννηση



...Ωρίμανση – γήρανση του δέρματος...

- ...ενδογενής γήρανση (1,2,3)
- ...φωτογήρανση (4)



☀ 4 μηχανισμοί ωρίμανσης δέρματος:

1. Γενετικοί...
2. Τελομερής βράχυνση και χρωμοσωμικές επιδράσεις...
3. Παραγωγή Ελεύθερων Ριζών...
 - ...δίαιτα Α-οξειδωτικά
 - ...τοπική χρήση Α-Οξ
4. Υπεριώδης ακτινοβολία UV...

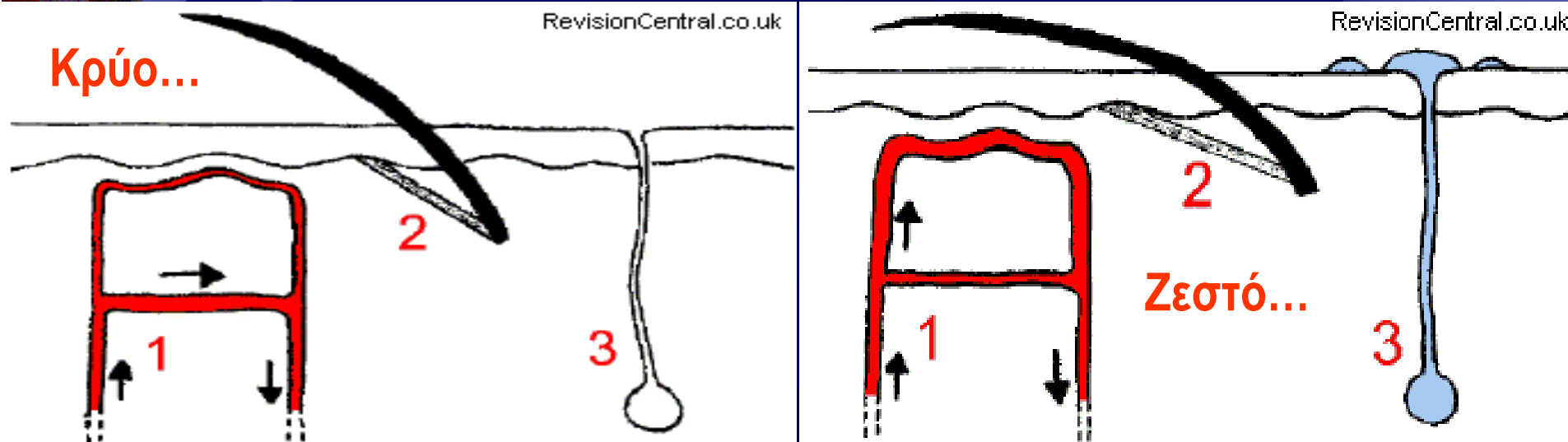


...άλλοι εξωγενείς
παράγοντες...χημικά...κρέμες...

- ✦ Για καλύτερη δράση των A-O...network antioxidants (vit C, E-lipoic Acid, Q10, glutathione) & strong A-O (vit E)
- ✦ **προσοχή!!!!**
- ✦ *Irritant Sulfates...*
- ✦ *Chemical Preservatives...*
- ✦ *Propylen Glycol...*
- ✦ *Ethoxylates and Dioxane...*
- ✦ *Nitrosamine Impurities...*
- ✦ *Artificial Fragrances...*

...τοπική επίδραση της σωματικής άσκησης...

- ...προμήθεια θρεπτικών ουσιών στα κύτταρα του δέρματος
- ...αποβολή τοξινών...
- ...παραγωγή Κολλαγόνου...
- ΚΥΡΙΑ!!!!** Επίδραση κατά της Ακμής.... (testo) DHEA & DHT, μέσω της ελάτωσης του στρες!!!



Facial exercises are better than botox

Too scared to go under the needle? **CHRISTINE MORGAN** tried out some facial exercises, and within a month her face looked smoother and younger

BOTOX injections may be the biggest trend in beauty, but experts are now warning they could damage more than just your bank balance.

The long-term effects of botox on the brain and nervous system have come under question. And I for one breathed a sigh of relief that I had not plucked up the courage to go under the needle.

Consultant neurophysiologist Dr Peter Mann, who works at the London National Hospital for Neurology and Neurosurgery, says evidence regarding the long-term effects of the toxin is patchy. About 6,000 botox treatments are performed a year as women around the country race to have the muscles that cause their wrinkles paralysed.

Having turned 55 recently, I've realised that growing old gracefully is easier said than done. So I decided that, instead of botox, I'd give facial exercises a go. I've had half-hearted attempts at these in the past, but this time I was going to give up after a few sessions. So I culled the help of facial exercise trainer Carole Morgan who initially practices what she preaches - at 68, she has young-looking skin and very few lines.

Carole is confident that facial exercises can do everything botox does - and more. There's an exercise that reduces frown lines by working the forehead muscles above the eyebrows. Two of her exercises help smooth crow's feet by exercising the orbicularis oculi muscles surrounding the eye, and there's another that helps tighten the skin between the nose and



Carole demonstrates the nasal labial smoother

mouth (the nasal labial fold). What you lose the underlying muscles of the face, wrinkles are smoothed out.

"Facial exercises work in the same way as body exercises," Carole explains. "It's like going to the gym. If you want to tone your arm, you pick up a weight."

Carole showed me 12 exercises that can be done in just 12 min-

utes. She made me work my face muscles so hard that they ached. I had to exercise them to their full capacity - this results in bigger, stronger muscles.

The idea is that as facial muscles develop, wrinkles are smoothed out. After the session my face felt tingly. I continued to do the exercises twice daily and within a few days I noticed my skin looked better.

After a week I saw a subtle lifting around my eyes and lower face. I'd started setting and I looked well.

I've been practising "facercise" for a month now. The hollows under my eyes look softer and the lines around my eyes and lips appear smoother. Even the lines on my forehead and the folds between my nose and mouth are starting to fade.

I'm convinced facial exercises make a difference - so I can grow old gracefully without resorting to botox.

• Exercises that work the nose, forehead, forehead and lips (Julie). Check out Carole's website www.facercise.com. Carole is also the author of *Facercise For Men* (May 2005, £9.99, £4.99) and *Facercise For Women* (July 2005, £9.99, £4.99).

Do these three exercises and you won't need botox

Eye Enhancer

Helps eliminate lines around eyes by strengthening upper and lower eyelids. Makes eyes look bigger by tightening deep-seated muscles.

1 Place middle fingers between your brows, above bridge of your nose. Place index fingers with tips pressed at corners of outer eyes. Strongly squint upwards with lower eyelid. Feel outer eye muscle tense. Squint up and release 10 times.

2 Find the squint and squance eyes lightly shut. Count to 40.

Forehead Lift

Helps eliminate frown lines and raises eyebrows.

1 Place index fingers in middle of forehead parallel to top of eyebrows. Roll fingers down and keep them held down. Lift up and concentrate on pushing eyebrows up and release 10 times.

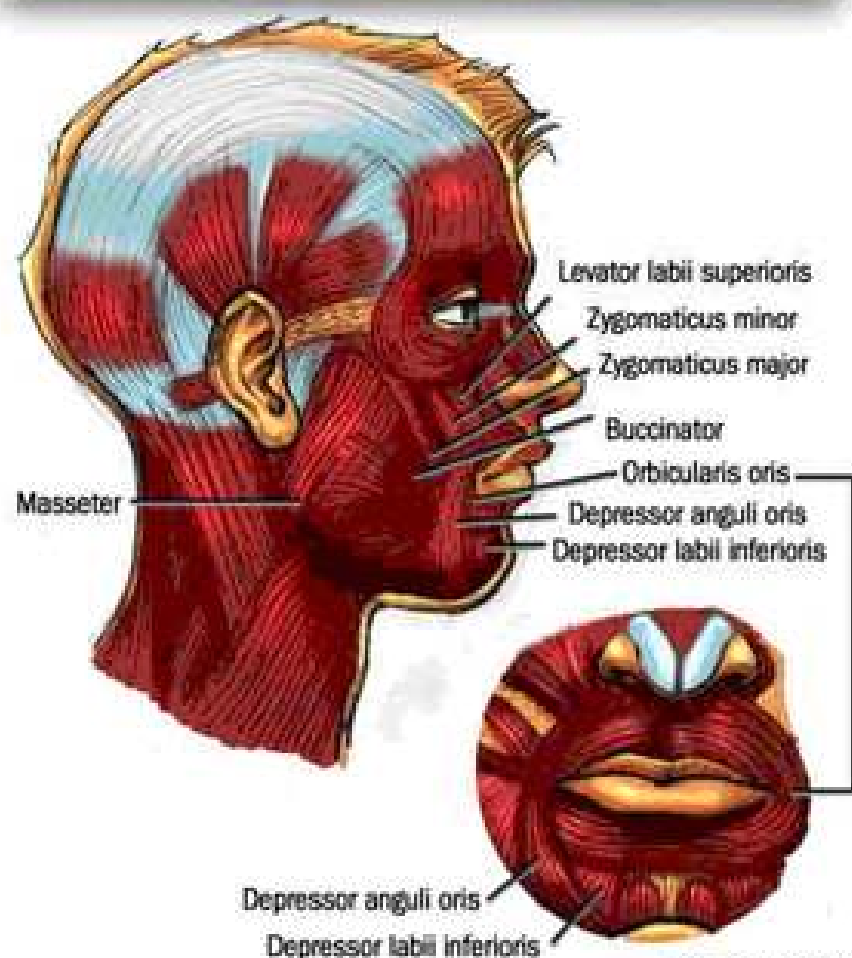
2 Keeping eyebrows raised up, do push up and you feel pressure about brows. Rest eyebrows pulled up with fingers pushing down. Count to 30.

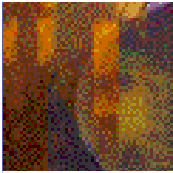
Nasal Labial Smoother

Plumps out creases and smooths out lines from nose to mouth.

1 Imagine a dot in the centre of upper lip and lower lip. Draw mouth and put index fingers on each side as you form a lip, strong oval shape with mouth. Keep upper lip pushing down as both.


2 With nose tip of upper lip moving from mouth corners to sides of nostrils. Use index fingers touching late to follow the upward. Must be strong about snoring. Lock down weighty line towards mouth corner. Repeat movement up and down until you feel burn in nasal labial line. Then make ridge 3 times up and down to count of 30.











.....ας κάνουμε λίγο πιο
προχωρημένες ασκήσεις....

...KISS for a facial tone.....

...όταν η αριθμητική ενώνει...
το πρόσωπο και η ψυχή (και το σώμα)
τονώνονται....



Τι υπάρχει στο ΦΙΛΙ?

- 34 Μυς του προσώπου ενεργοποιούνται...
- Ένα πιο «ένθερμο» φιλί ενεργοποιεί 112 μυς για τη στάση του σώματος...
- Καίει 26 θερμίδες...
- Απελευθερώνει τους ίδιους νευροδιαβιβαστές όπως και η έντονη άσκηση...

ΚΑΙ...

Καταπραΰνει το ΣΤΡΕΣΣΣΣΣΣΣΣΣΣΣ!!!!





...that's it....