



Skin Booster Related ANATOMY



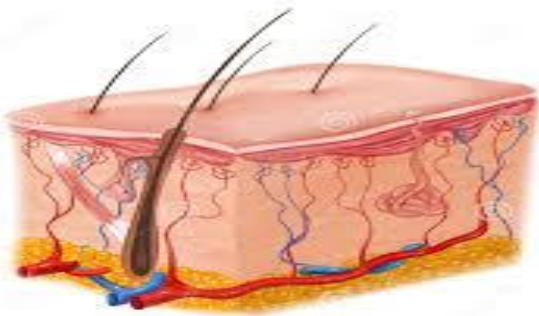
Introduction:

Skin boosters also known as injectable moisturiser inject moisturising molecules into the dermal skin layer at strategic points to enable migration and thus hydration. This improves surface lines and wrinkles and can enhance contours.

The skin

Made up of 3 main layers

1. Epidermis (has 5 layers of its own)
2. Dermis (2 layers)
3. Subcutaneous layer



The skin is complex but very delicate. All 8 layers are compressed into around 3mm of skin thickness. The epidermis being around 0.5mm

The skin is the largest organ of the human body and offers the following functions:

Sensation, heat regulation, absorption, protection, excretion, secretion

The skin is a living organ reliant on cellular metabolism to grow and repair.

Ageing

As we age naturally or prematurely (caused by lifestyle, environment) these are the visible signs we commonly see:

- Lines
- Wrinkles
- Lose skin
- Jowls
- Lack of contour
- Dull skin
- Hyperpigmentation
- Dehydration
- Crepy skin
- Hollow areas

What causes these changes physiologically (in the skin)

Lines and wrinkles- Collagen and elastin producing cells decline (as all cells do) meaning that the skin cannot plump out as it once did-leaving permanent lines and wrinkles that further deepen with expression

Dryness/dehydration- As we age, our sebaceous gland that produce our natural oils to hydrate and moisturise our skin shrink –producing less oils, leading to dehydration

Hyperpigmentation- As cell renewal slows , the distribution of melanocytes becomes more uneven leading to dark patches. Lack of frequent epidermal cell renewal holds down excess melanocytes cells that can't shed

Sagging skin-

As we age bones shrink and muscles lose tone, meaning the support for our skin lessens, leading to sagging.

Hollow Areas: As we age we lose connective fatty tissue leading to hollow areas typically around the eyes and cheeks

As well as skin showing visible ageing signs, changes also become apparent from facial bones shrinking and not being able to support muscles-leading to lack of tone (sagging/jowls)

This, as with all ageing is due to the lack of production of bone producing cells (osteocytes)

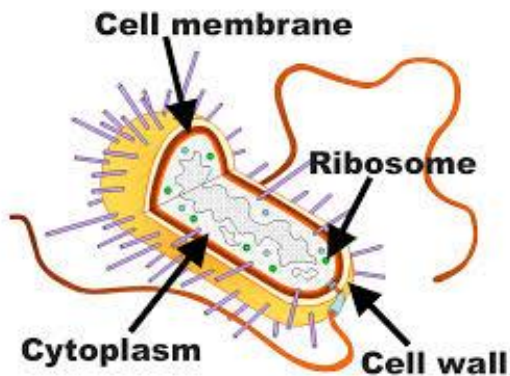


Fat pads diminish leading to skin not being naturally plumped out

Key anatomical terms:

Erythema-stimulatory treatment	redness to skin. Common contraction following any
Oedema-procedures	Swelling. Common contraction following invasive
Mitosis	Function of cell renewal
Cellular metabolism to be able to reproduce	Cells that have enough blood, oxygen and nutrients
Fibroblasts	Cells that produce collagen and elastin
Osteocyte's	cells that produce bone
Hyaluronic acid retention	water binding molecules in the skin to enable water
Vasodilation heat	swelling of the blood vessels-causing redness and
Desquamation	natural process of skin cells shedding
Nodes filtered	small glands where waste and toxins are cleaned and
Lymphocytes	antibodies in lymph nodes to fight infection
Permeable	Ability to excrete/secrete
Histamine	A chemical in the body reactive through reactions.
Causes redness, itching, swelling, hives , irritation. Bodies natural response and defence mechanism	
Homeostasis	body systems working harmoniously -good cellular metabolism, balanced blood pressure heart rate and pulse rate

Cells



We are made up of millions/trillions cell that come in different shapes and sizes, however invisible to the naked eye

Each cell is made up of complex systems each playing an important role to keep us alive and healthy

They go through a constant process of multiplication and reproduction.

Age

Lifestyle

Diet

Illness

All play an important role in the healthy production of cells

Cell wall/membrane
everything in place

all cells are encased in a cell wall to hold

Cytoplasm
structures inside a cell

a jelly like substance that holds all

Nucleus

All cells need a nucleus as the 'brain' of the cell that holds DNA information for the cells to be able to reproduce

Organelles tiny structures within the cell that play roles to enable the cell to be able to divide. The organelles rely on oxygen and vitamins from what we breath in/ingest to use as energy to enable the cell the reproduce

Cells are permeable-the membrane enables absorpion and excretion

***Therefore, unhealthy diet, lack of fresh air inhibits the cells job ***

Cells naturally slow down as we age, which is why stimulatory treatments are advantageous for the overall health of the skin and body

Relation to skin boosters ;

Injection stimulation and products stimulates cellular regeneration

Blood

Complex system made up of

- Heart
- Vessels (Veins, arteries, venules, arterioles, capillaries)

The heart, an involuntary smooth cardiac muscle being the driving force , enabling blood to be pumped round the body to keep us alive.



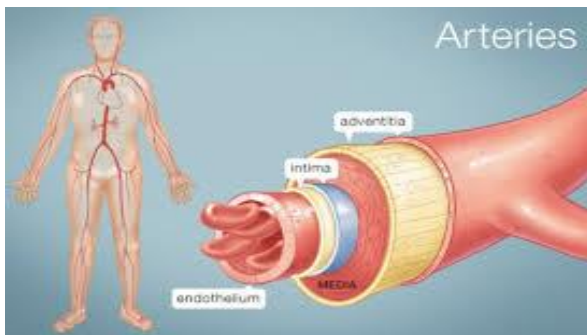
From the heart-Oxygenated blood (blood with oxygen) is pumped around the body in arteries. This feeds cells/tissues and organs .

Once cells have taken the oxygen the blood is now DEOXYGENATED (has no oxygen) and travels back to the heart in VEINS

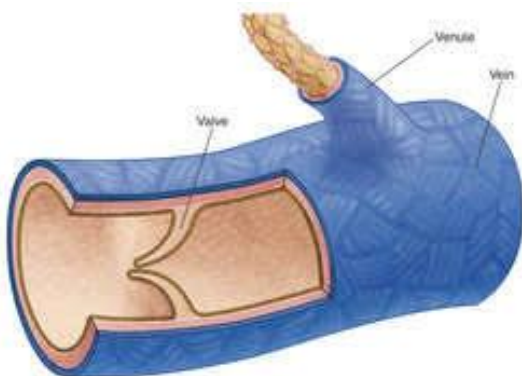
The blood then travels to the lungs to receive oxygen and then back to heart where the process starts again (arteries-veins-heart)

Vessels

Arteries- Situated deep within muscle fibres for protection. OXYGENATED blood shunts at force with each heartbeat . Added to this the artery wall is thick and contains muscle to ensure the blood will pump around the body



Veins- Situated close to the skins surface. Deoxygenated blood is now blue. It travels slowly without pressure back to the heart. Within the veins are VALVES to stop the blood flowing backwards



Capillaries- The smallest of vessels closest to the skins surface. Delicate and easily broken especially as the skin thins as we age and extrinsic factors



This is why the face will show erythema mild to deep following most stimulatory facial procedures

The Lymphatic System

The lymphatic system works closely with the blood circulatory system.

Lymphatic vessels are situated alongside the veins to be able to pick up waste left behind by veins.

The waste/toxins are taken up to lymph nodes (of which we have thousands around the body) where it is cleaned and filtered and becomes 'lymph'

Lymph is a sterile fluid

It then re-enters the blood circulatory system

In the lymph nodes, lymphocytes (antibodies) are also produced which fight infection around the surrounding area

