



SKIN AGING

What happens in our skin during the aging process



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Aging process of human skin

Slowing the aging signs with fluorescent light energy

Transforming your skin from within

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AGING PROCESS OF HUMAN SKIN





WE AGE, SO DOES OUR SKIN

- Skin, like all other organs, undergoes **chronological aging**¹.
- In addition, unlike other organs, skin is in direct contact with the **environment** and therefore undergoes aging as a consequence of environmental damage¹.
- We can see differences in the skin that is commonly exposed to the environment and those parts of our body that are usually covered.

FACTORS OF SKIN AGING^{11,12}

INTRINSIC FACTORS

- Natural aging due to the passage of time (chronoaging)
- Occurs inevitably
- Natural consequence of physiological changes over time
- Variable genetically determined rates

EXTRINSIC FACTORS

- Controllable to varying degrees, including:
 - Sunlight (photoaging)
 - Pollution
 - Nicotine
 - Repetitive muscle movements (mechanical aging)
 - Lifestyle components (diet, sleeping position, overall health)

DIFFERENT EFFECTS IN THE SKIN^{11,13}



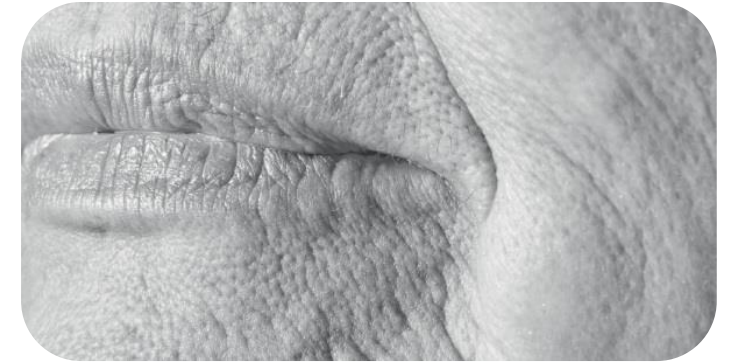
CHRONOAGING
(INTRINSIC AGING)

- Volume loss
- Texture alteration
- Dryer skin



PHOTOAGING
(DUE TO SUNLIGHT)

- Elastic tissue degeneration – sagging
- Pigmentation disorders – lighter skin & blemishes



MECHANICAL AGING¹³
(EXPRESSION LINES)

- Forehead transversal wrinkles
- Glabella lines
- Crow's feet
- Upper lip lines

SIGNS OF SKIN AGING¹¹

Wrinkles

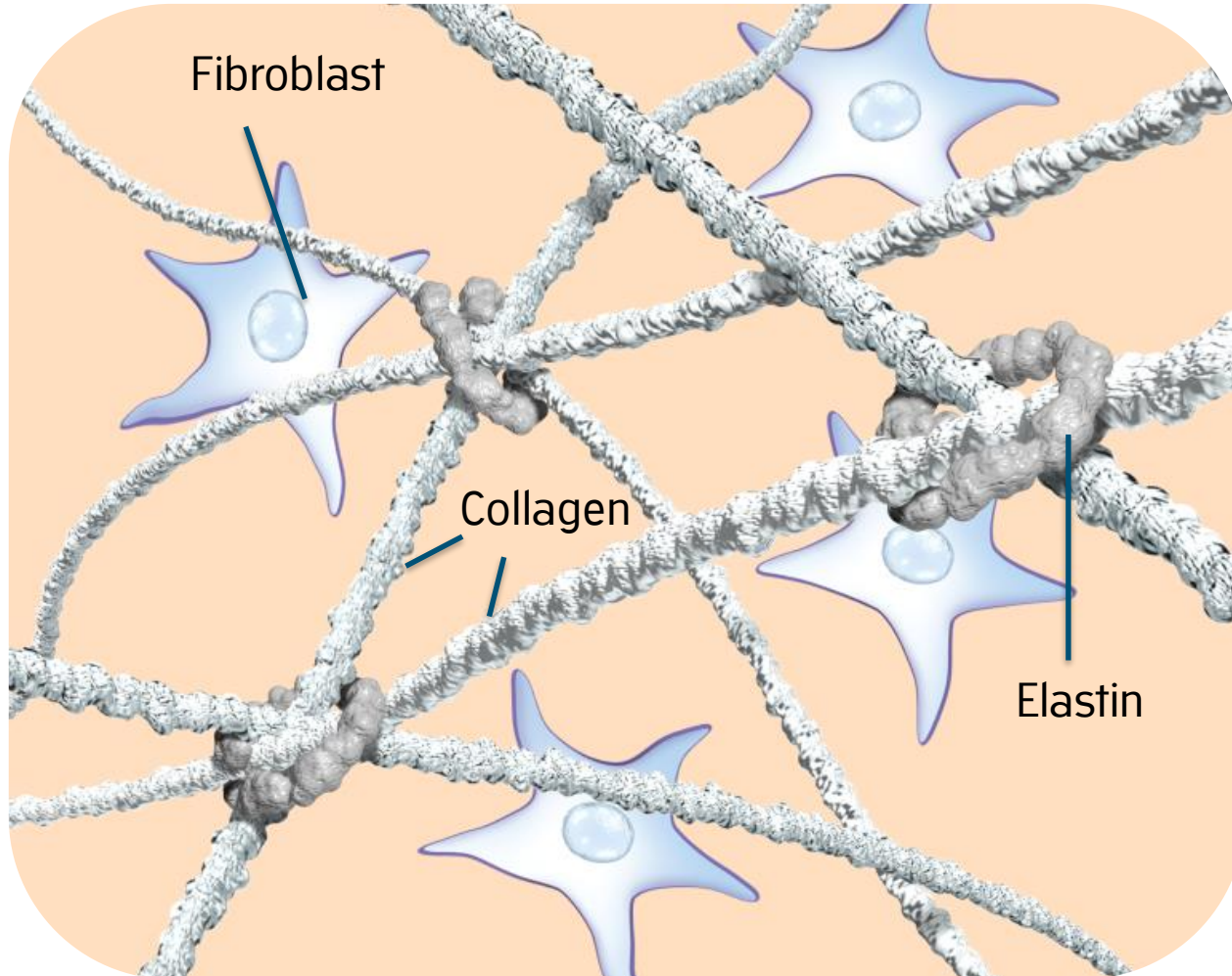
- First noticeable sign
- First fine lines are triggered by facial expression
- Deeper over time
- Deeper lines associated with loss of volume and elasticity

Loss of volume

- Saggy skin and loss of contours
- Changes in overall appearance of face
- Diminishing volume and slackened facial contours

Loss of density

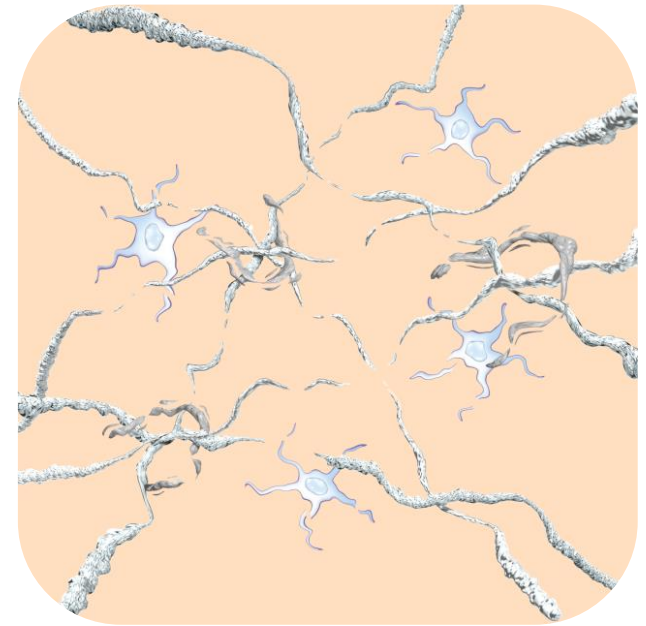
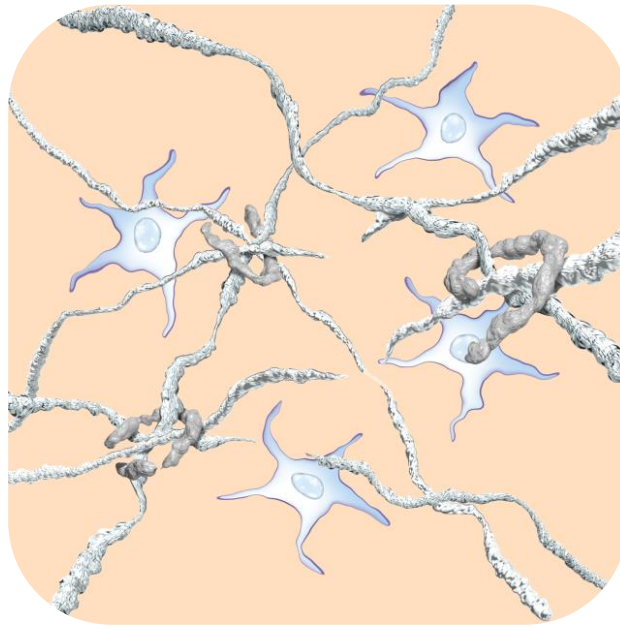
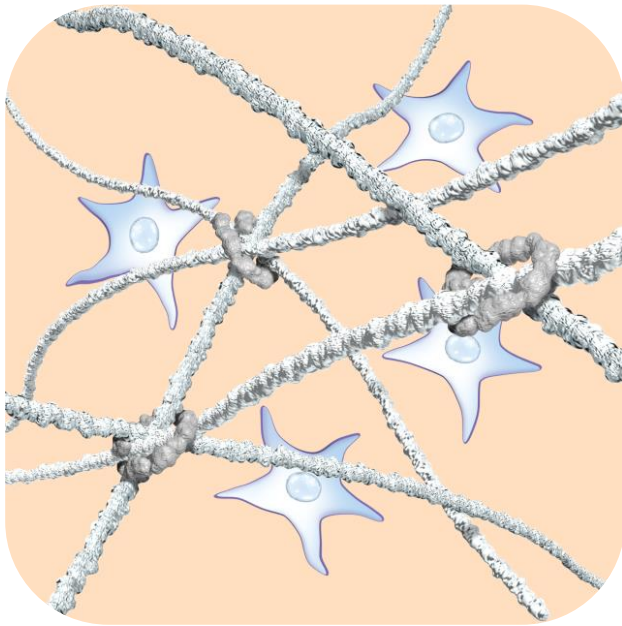
- Skin loses elasticity and firmness
- Structure of skin weakens
- Deeper wrinkles form
- Skin becomes drier and loses radiance



SKIN STRUCTURE^{12,15}

Fibroblasts: cells that synthesize the supportive structure in the skin. Produce two main proteins:

- **Collagen:** major component of skin. Gives structural support.
- **Elastin:** gives elasticity.



Skin aging process

Collagen, together with elastin, is responsible for skin strength and elasticity^{11,15}

Degradation of collagen leads to wrinkles and skin aging

WHY DOES OUR SKIN AGE?^{11,12}

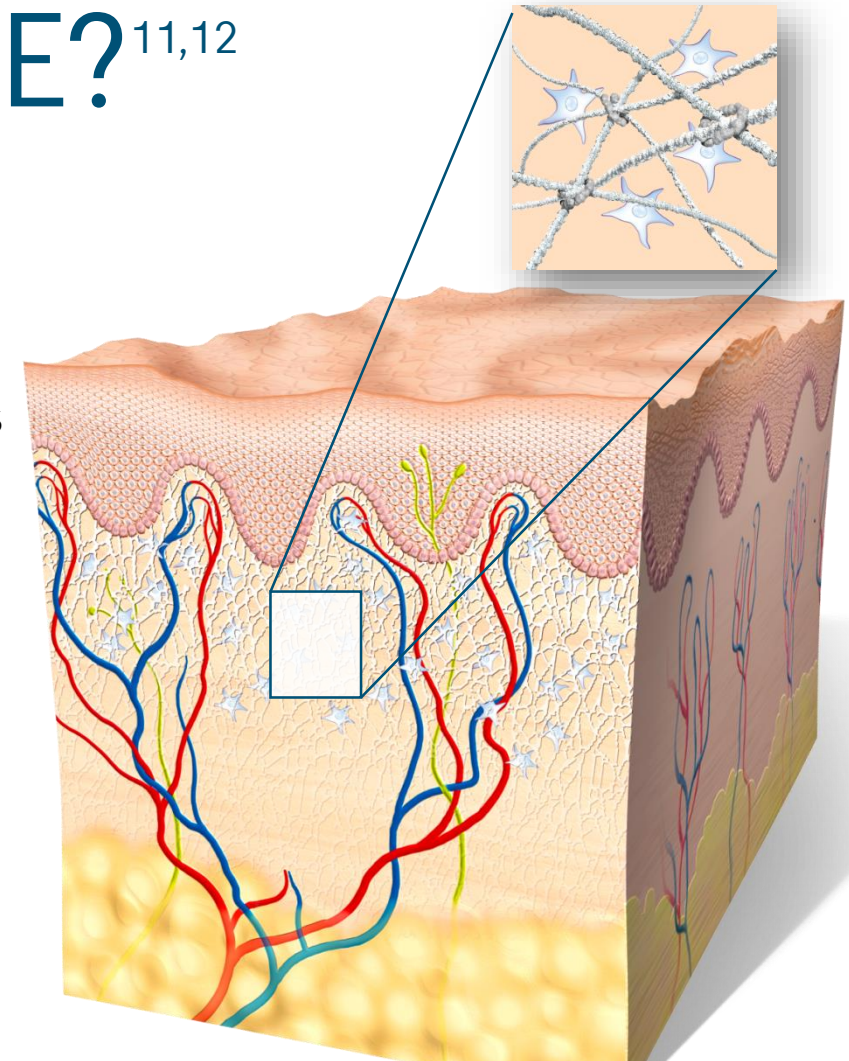
Changes happen in all three layers

- Slower cell turnover
- Reduction in sebum production
- Decrease in collagen and elastin
- Less hyaluronic acid production
- Reduced micro-circulation
- Decrease in fat storing cells

Epidermis

Dermis

Subcutis



HOW IS AGING EXPRESSED?^{11,12}

- Roughness
- Dryness

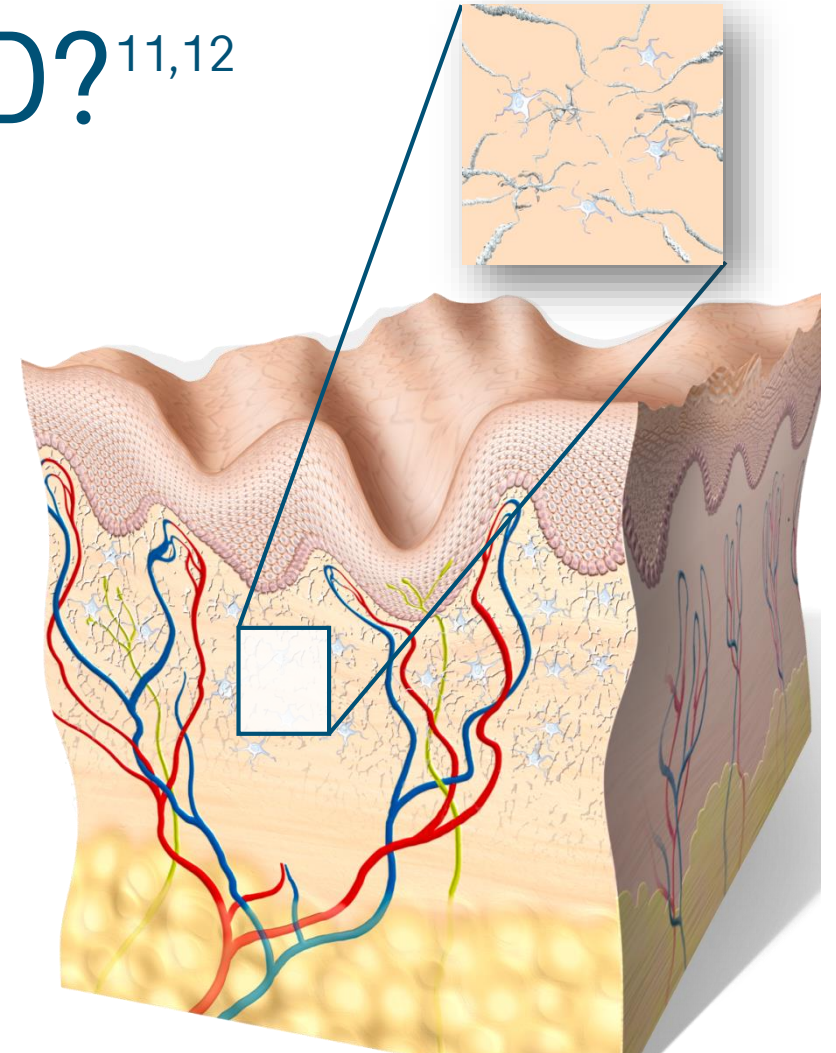
Epidermis

- Loss of elasticity
- Dermal tissue disorganization
- Dullness, fine lines and wrinkles

Dermis

- Loss of volume, hollow cheeks
- Deep wrinkles

Subcutis





SLOWING AGING SIGNS WITH FLUORESCENT LIGHT ENERGY

Kleresca® Skin Rejuvenation

FLUORESCENT LIGHT ENERGY TREATMENT

- Non-invasive, gentle, biophotonic treatments²⁻⁹
- Designed to rejuvenate the skin^{4,5,10}
- Comfortable and with little to no downtime²⁻⁸

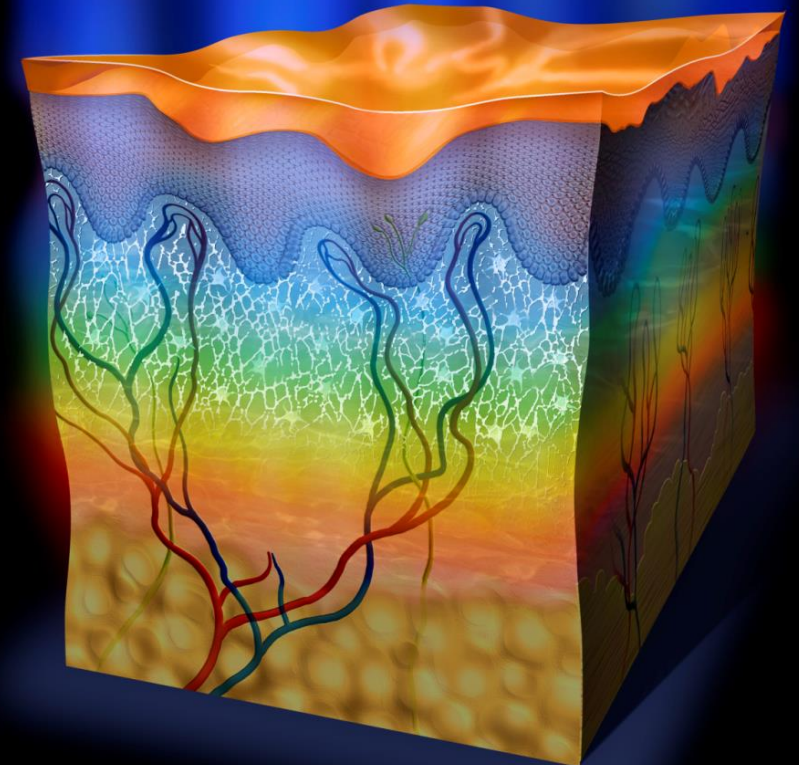




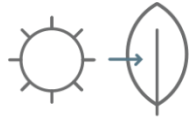
FLUORESCENT LIGHT ENERGY

Stimulates your skin's own biological processes^{2,6,10}

- Inducing collagen production^{5,10}
- Reduce pore size^{5,10}
- Eliminates fine lines^{5,10}
- Reduces scarring^{2-5,10}



THE DIFFERENCE IS IN THE FLUORESCENCE



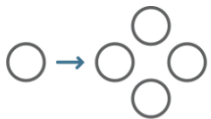
INSPIRED BY
PHOTOSYNTHESIS

The innovation of the Kleresca® Skin Rejuvenation system lies in its ability to create fluorescent light energy that activates your skin's collagen-producing cells^{5,10}



WORKS AT
CELLULAR LEVEL

The fluorescent light energy penetrates the skin and reaches into multiple layers, boosting collagen production^{39,44} by stimulating the natural processes of the skin^{2,9,10}

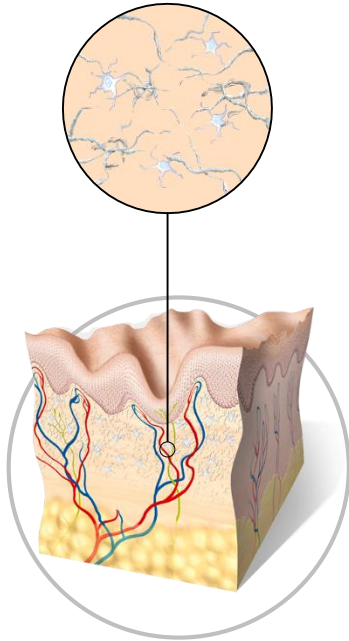


UP TO 400%
COLLAGEN INCREASE

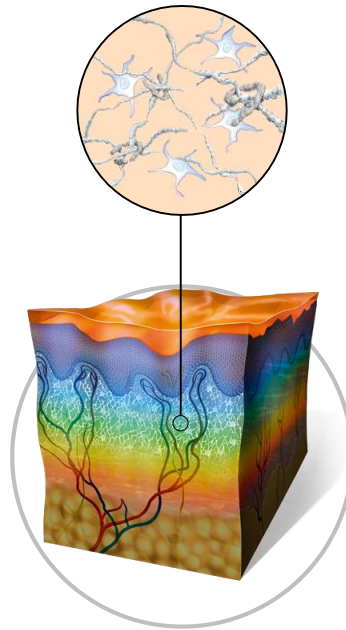
Studies show Kleresca® Skin Rejuvenation induces an approximate 400% increase in collagen production^{5,10*}

* With LED light as a control, the treatment delivers approximately a 400% increase in collagen production. These results were documented in-vitro and support findings from in vivo studies based on biopsies^{41,42}.

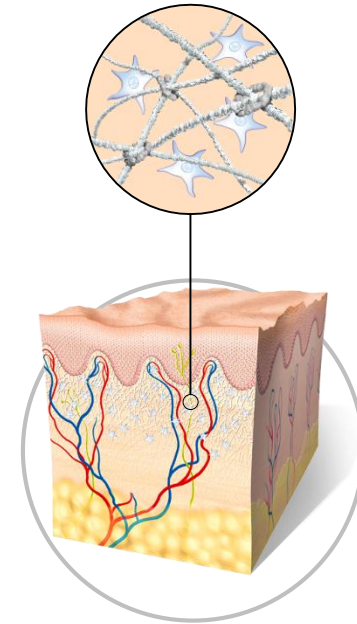




Aged skin



Kleresca[®] Skin Rejuvenation



Boost your skin's natural repair
mechanisms

Restoring complexion with fluorescent light energy

KLERESCA® SKIN REJUVENATION

- Non-invasive and comfortable treatment³⁶⁻⁴²

Kleresca®
Photoconverter Gel



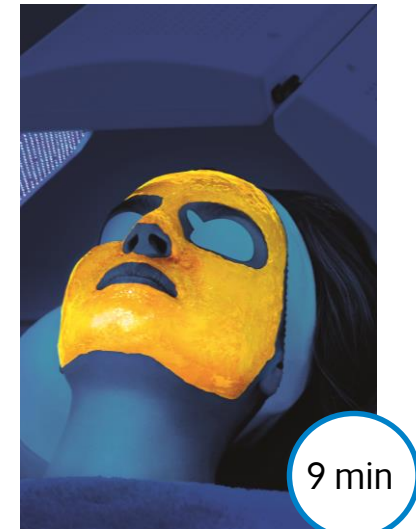
Kleresca® Skin Rejuvenation

Kleresca®
Multi-LED Lamp



Rejuvenation mode

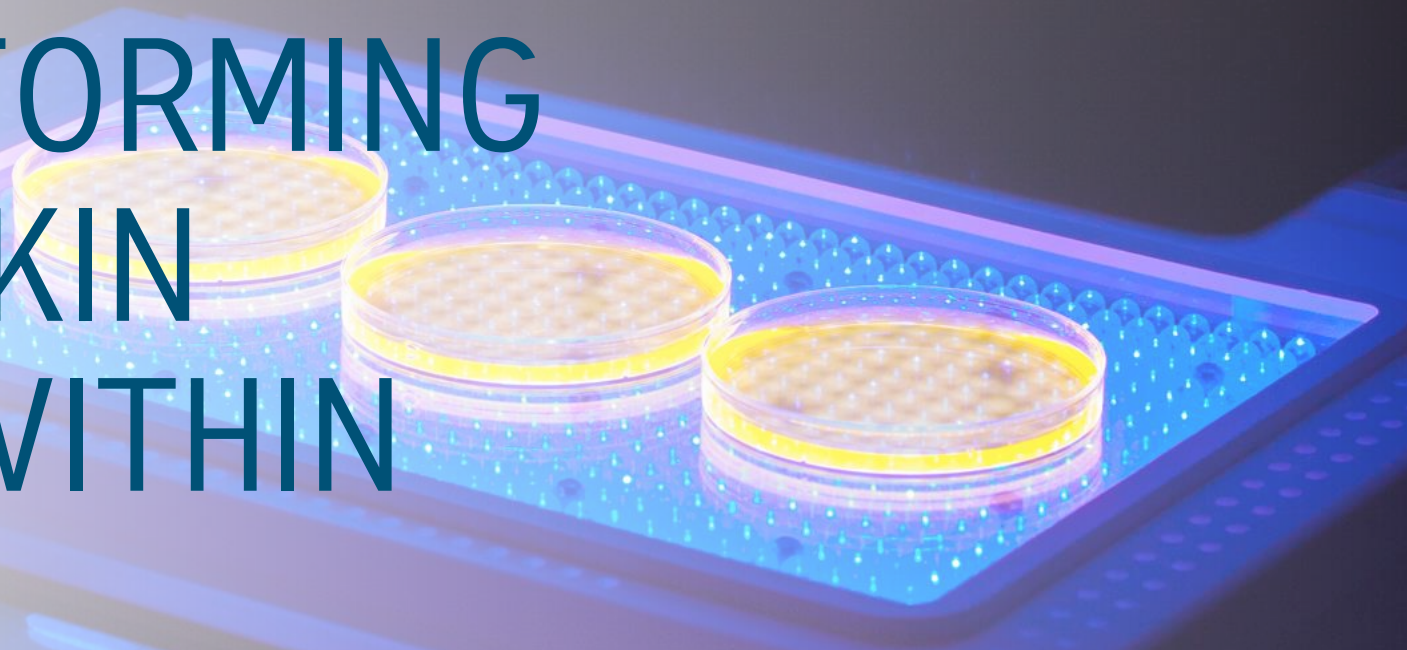
Kleresca®
Skin Rejuvenation



4 sessions over 4 weeks³³



TRANSFORMING YOUR SKIN FROM WITHIN





PROVEN RESULTS

- A comfortable experience²⁻⁸
- Little to no downtime²⁻⁸
- A non-abrasive, non-invasive treatment²⁻⁹
- High safety and efficacy²⁻⁸
- Only few and transient side-effects²⁻⁸
- Solid clinical trial with positive outcomes for patients⁵



CLINICAL TRIAL RESULTS

Performed to test the efficacy of the treatment compared to standard care⁵.

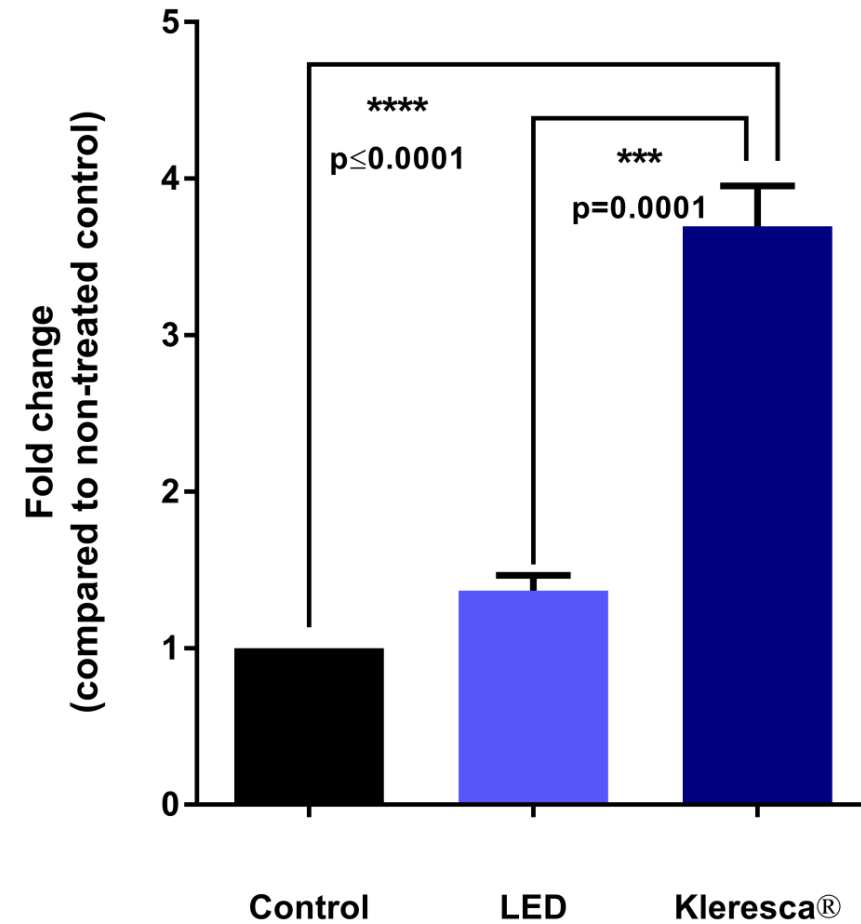
Results also included:

- Tolerability
- Adverse outcomes
- Patient satisfaction



HIGH EFFICACY¹⁰

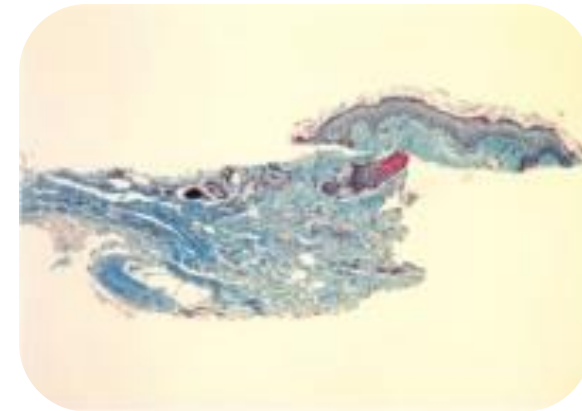
With LED light as a control, the treatment delivers approximately a 400% increase in collagen production. These results were documented in-vitro and support findings from in vivo studies based on biopsies.



SKIN BIOPSY

A visual increase of the amount of collagen (in blue) was visible 12 weeks after the treatment⁵

Gömöri trichome is a dye used on muscle tissue that was used to stain collagen present in the biopsy

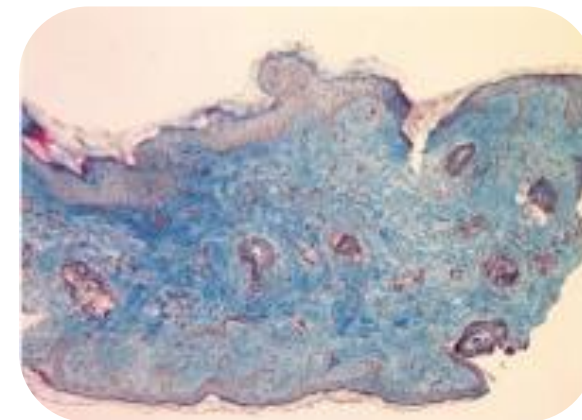


Gömöri trichöme score: 1

Week 0



Week 12



Gömöri trichome score: 1,5

PLEASANT TREATMENT⁵



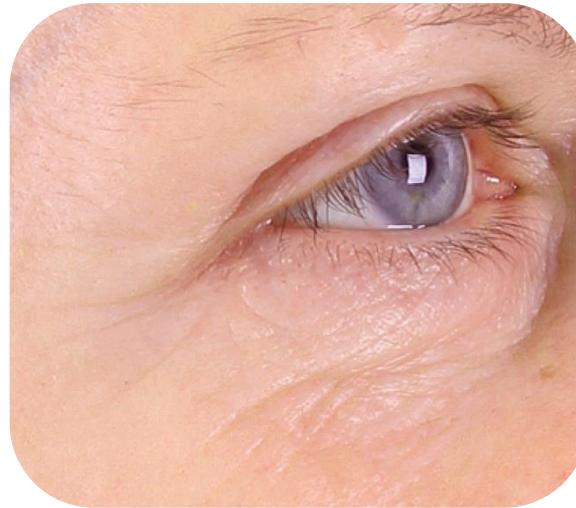
- High-safety and well-tolerated treatment
- Few side effects
- Patients had a positive experience:
 - Experienced 'tightening of the skin'
 - Improvement in pore size and fine lines
 - Improved skin texture
 - Improved overall appearance

BEFORE AND AFTER

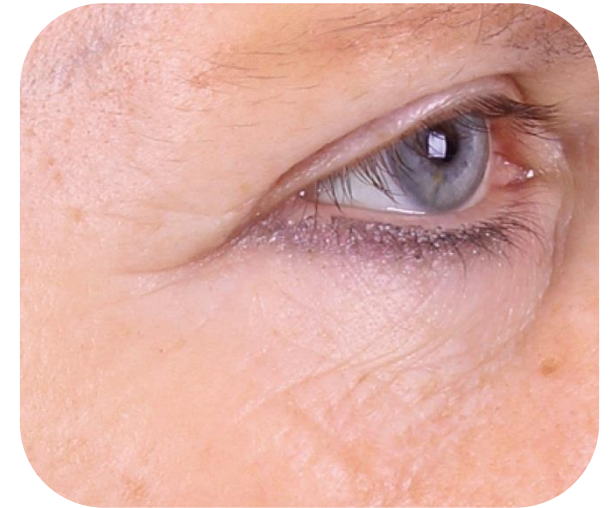
Female patient 3 months post Kleresca[®]
Skin Rejuvenation.

- Clinical trial results⁵

Improvement of crow's feet and decrease in fine rhytides



Baseline



After 12 weeks

BEFORE AND AFTER

Female patient 3 months post
Kleresca[®] Skin Rejuvenation.

- Clinical trial results⁵

Pore size improvement at week 12



Baseline



After 12 weeks



BEFORE AND AFTER

Female patient 3 months post
Kleresca® Skin Rejuvenation.

- Clinical trial results⁵

Reduction of marionette lines at week 12 due to increase in
collagen production



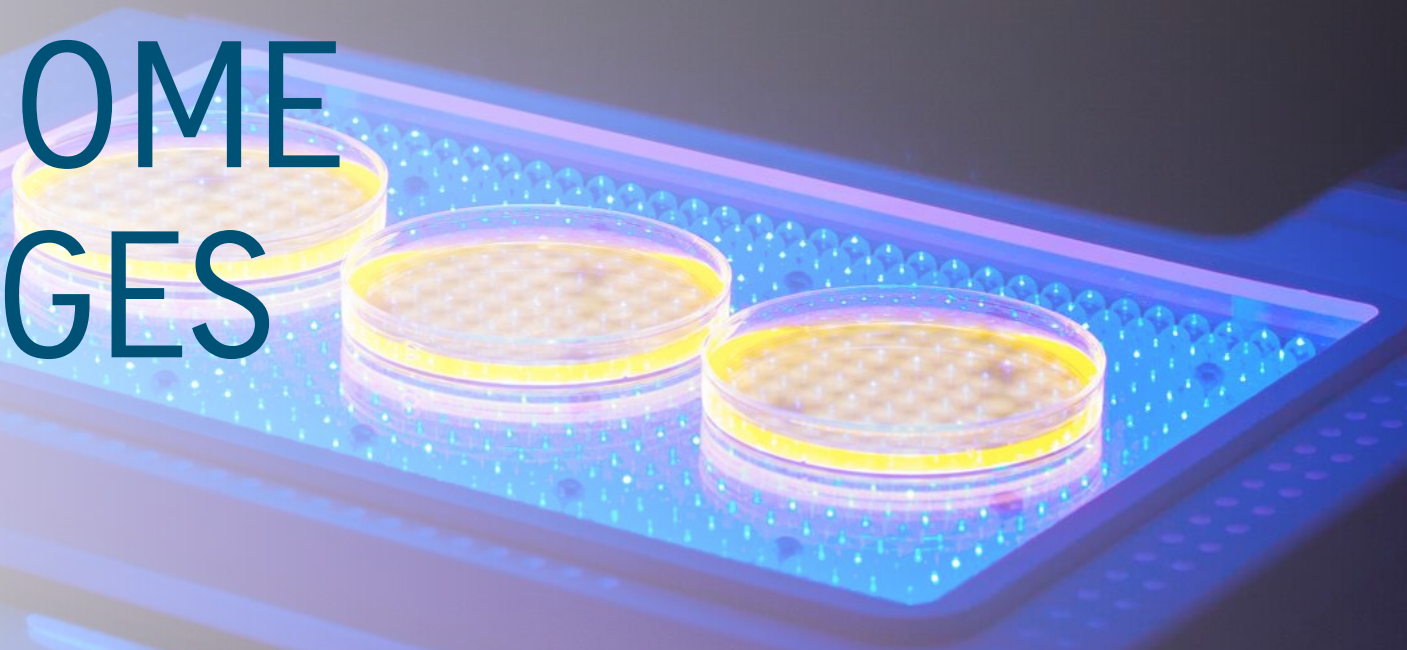
Baseline



After 12 weeks



TAKE HOME MESSAGES



SUMMARY

- The main factors of skin aging are intrinsic factors (chronoageing) and extrinsic factors (e.g. photoaging and mechanical ageing)
- The main effects of chronoageing are volume loss, texture alteration and dryer skin
- Fibroblasts are the cells in our skin that synthesize the supportive structure in the skin, producing two main proteins: collagen and elastin
- Changes happen in all the three layers of the skin:
 - **Epidermis**: slower cell turnover and reduction in sebum production
 - **Dermis**: decrease in collagen and elastin, less hyaluronic acid production and reduced micro-circulation
 - **Subcutis**: decrease in fat storing cells
- The fluorescent light energy treatment (Kleresca®) is comfortable and with little to no downtime, designed to rejuvenate the skin
- The treatment induces the collagen production, reduces the pore size, eliminates fine lines and reduces signs of scarring
- In skin biopsies Kleresca® Skin Rejuvenation has seen the increase of the amount of collagen in treated human skin



Do you have further questions?
Send us a mail at academy@kleresca.com

Do you want to check your knowledge about the aging processes that happen in the human skin? Do the test to see how much you have learned and get your certificate of completion!

TAKE THE TEST



Sharing the knowledge

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