



REGU[®] -STRETCH

*Just relax and forget
about stretch marks*

October 2020

Stretch Marks...

Zebra-like White Skin Patches

- **Stretch Marks** or **striae** are a form of white scarring on the skin.
- They occur in areas with high skin stretch.
- They first appear as reddish or purple lines, but tend to gradually fade to a lighter color.
- The affected areas appear empty and soft to the touch.



Stretch Marks Affects Millions of People

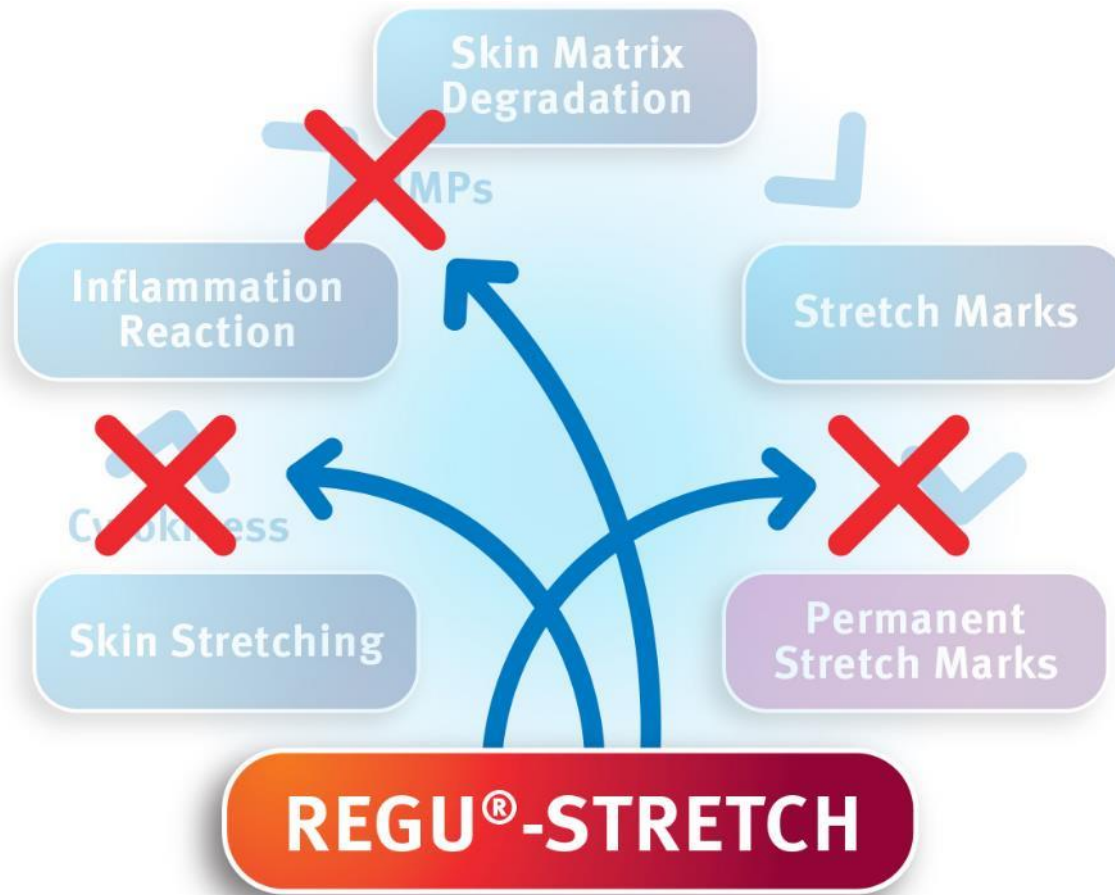
Main causes

- Quick weight gain
- Rapid growth during puberty
- Pregnancy
- Body building



Stretch marks affect both **men** and **women** with about 90% of women who are or have been **pregnant** 70% of **adolescent females** and 40% of **adolescent males** having stretch marks somewhere on their bodies

REGU®-STRETCH - Multi-targeted Mechanism for Optimum Effects

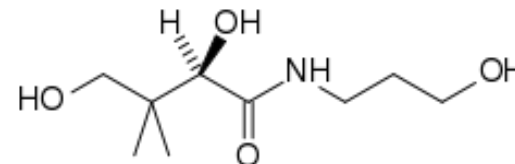


REGU[®]-STRETCH

A Carefully Selected Blend

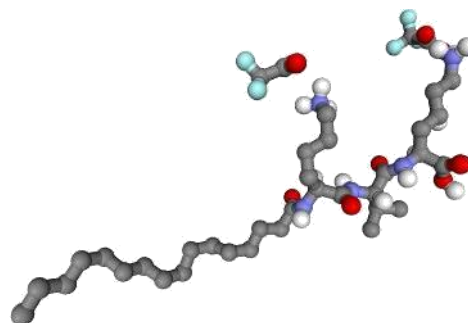
Panthenol

- helps to keep the skin moist and supple
- stimulates cell growth and tissue repair
- inhibits inflammation and reddening



Palmitoyl tripeptide-5

- stimulates the production of collagen
- repairs extracellular matrix damages
- firms the skin



Marrubium vulgare

- protects the skin from degradation
- reduces inflammation
- well known for its anti-inflammatory and healing properties



DSM Developed Unique Technology to Simulate Stretch Marks *in vitro*

PROTECTION AGAINST STRETCH MARKS

A innovative screening model has been developed by DSM to test the protective effects of various compounds.

Method characteristics

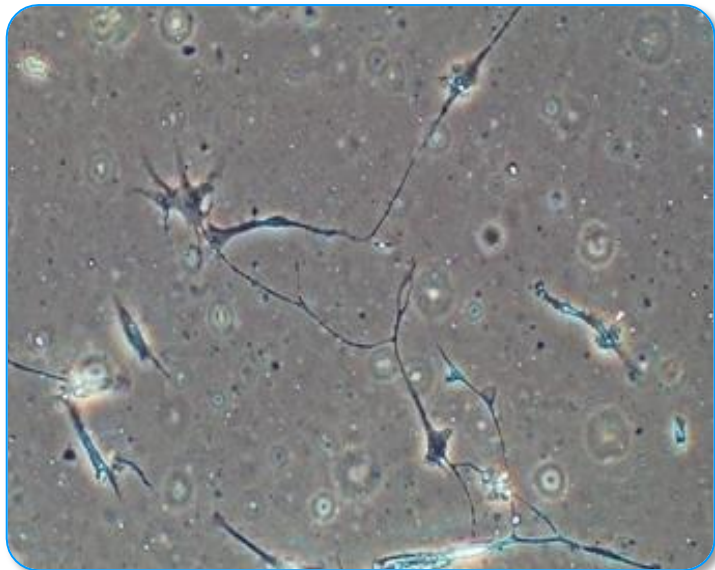
- Simulation of stretched skin in monolayer fibroblasts cultures
- Flexible silicone bottom to be stretched over glass hemispheres
- Equibiaxial stretching possible up to + 40%

Parameters analysis

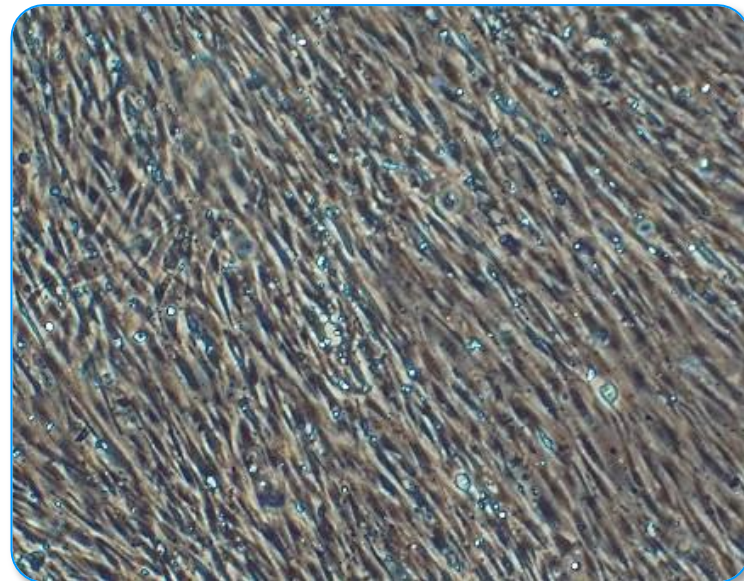
- Measurement of cell number and morphology
- Quantification of interleukins and MMP



REGU®-STRETCH Visibly Protects Skin *in vitro* Against Mechanical Stress



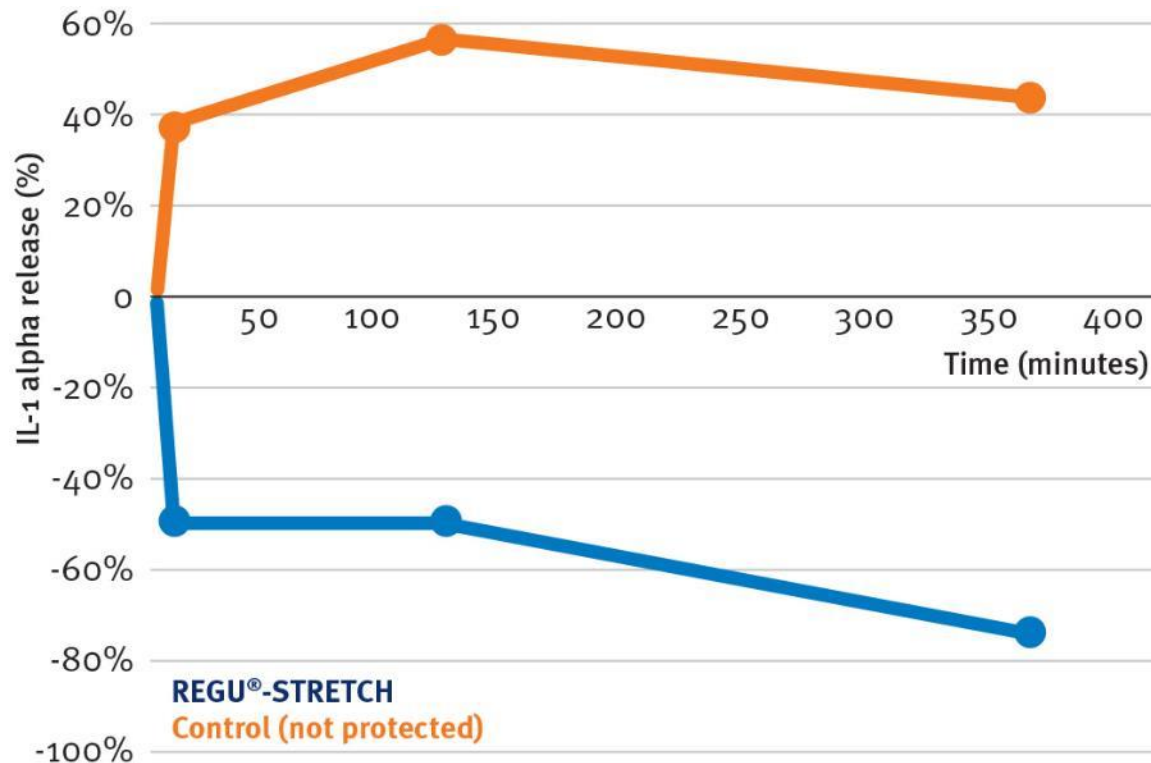
Stretched and destroyed fibroblasts
- not protected



Stretched and intact fibroblasts' structure
- protected by REGU®-STRETCH (0.05%)

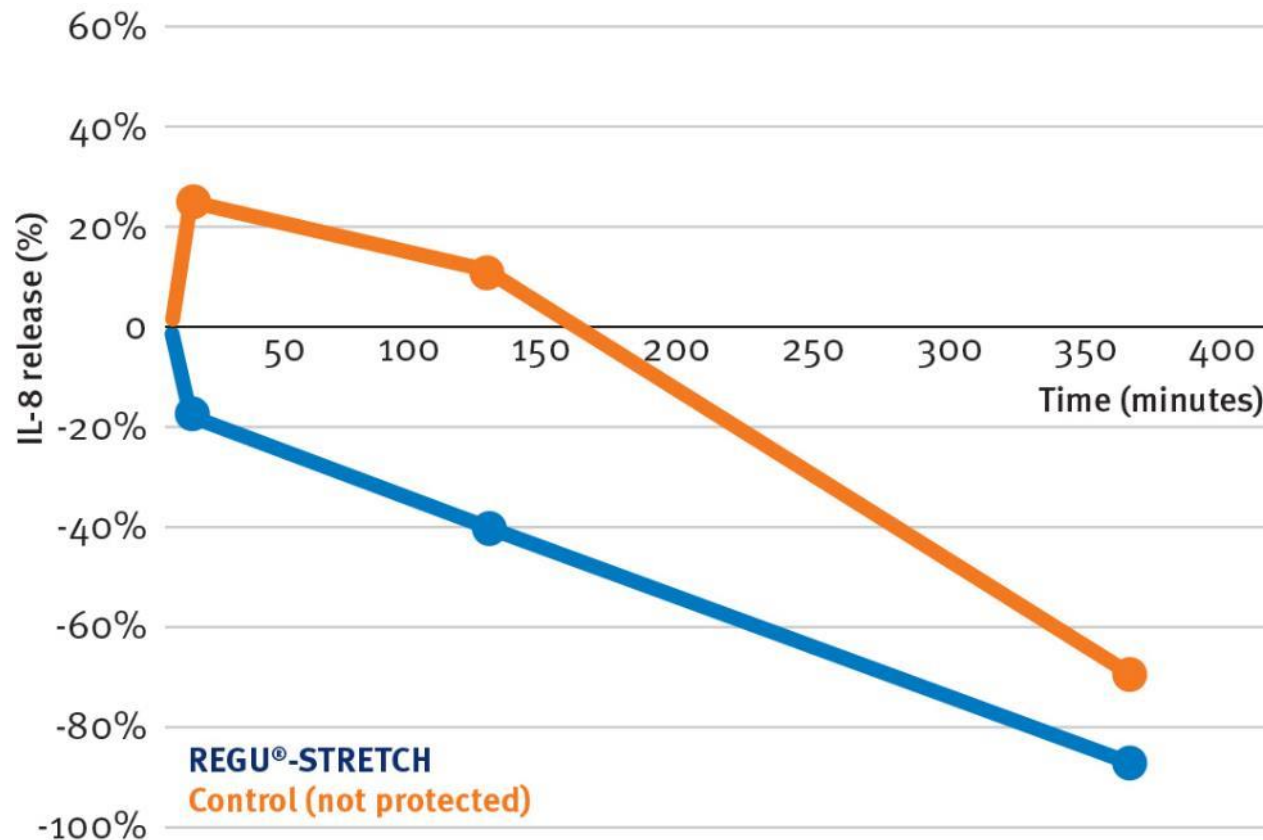
REGU®-STRETCH protects the skin cells from degradation during intensive and quick stretching

REGU®-STRETCH Significantly Reduces Inflammation Stress Marker IL-1 α (*in vitro*)



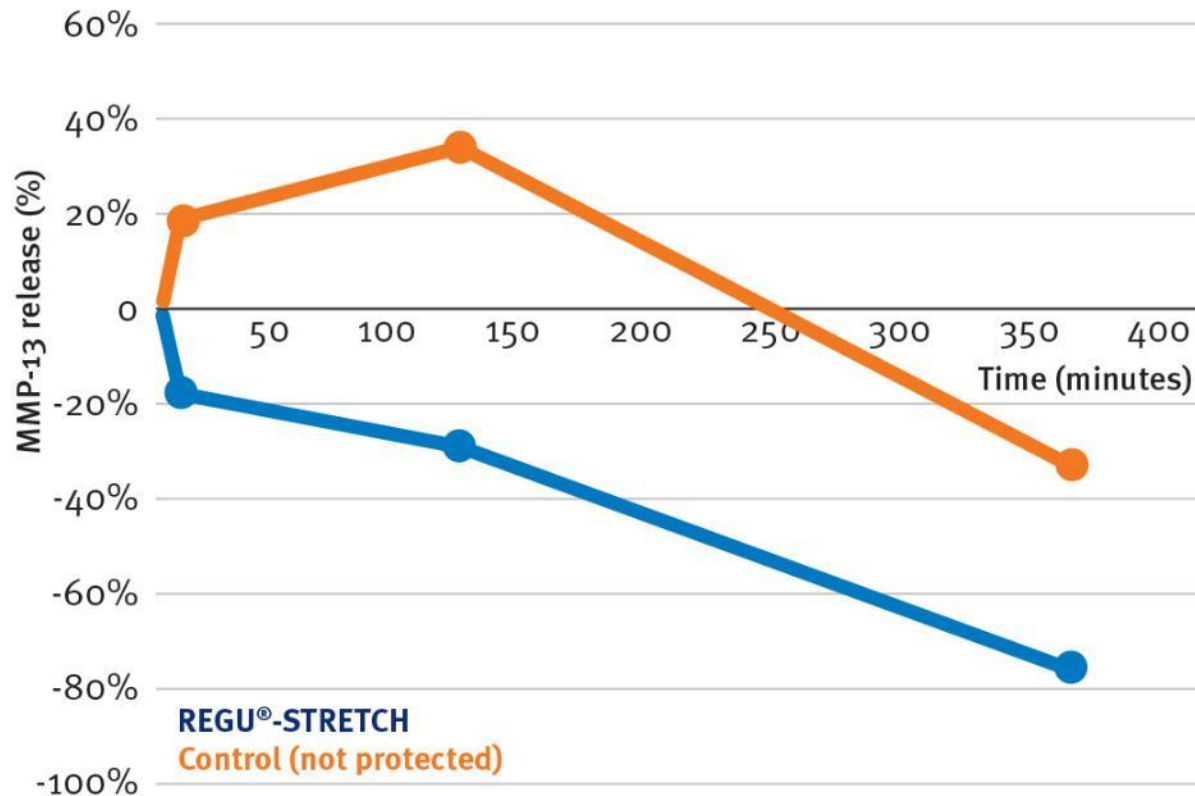
REGU®-STRETCH inhibits the inflammatory process

REGU®-STRETCH Significantly Reduces Inflammation Stress Marker IL-8 (*in vitro*)



REGU®-STRETCH inhibits the inflammatory process

REGU®-STRETCH Significantly Inhibits MMP-13 release (*in vitro*)



REGU®-STRETCH inhibits skin matrix degradation

REGU[®]-STRETCH

in vitro efficacy in a nutshell

REGU[®]-STRETCH showed outstanding capacity to protect the structure of skin cells from degradation by reducing inflammation during quick, intensive stretching

- **IL-1 alpha Inhibition** - the first induced pro-inflammatory cytokine produced by cells after stretching
- **IL-8 Inhibition** - one of the most important pro-inflammatory cytokines
- **MMP-13 Inhibition** - collagenase responsible for the degradation of the skin matrix

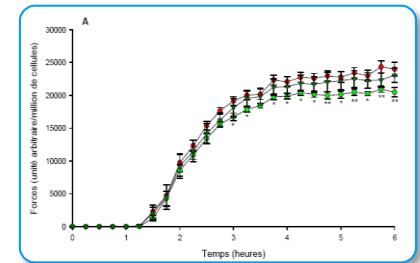
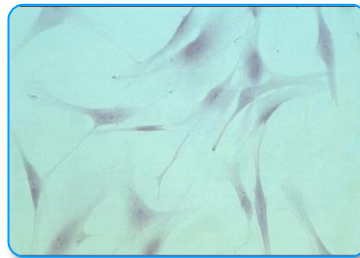


REGU[®]-STRETCH Efficacy *in vitro*

Repair of Young Stretch Marks

Method characteristics

- GLASBOX[®] (Growing LAttice Study BOX): measurement of isometric forces of fibroblasts
- The fibroblast force of red (young) stretch marks is higher than for healthy cells
- A reduction of the force developed by the fibroblasts represents a lasting relaxing effect; the young stretch marks disappear



Fibroblasts from abdomen biopsy (15 year old woman)

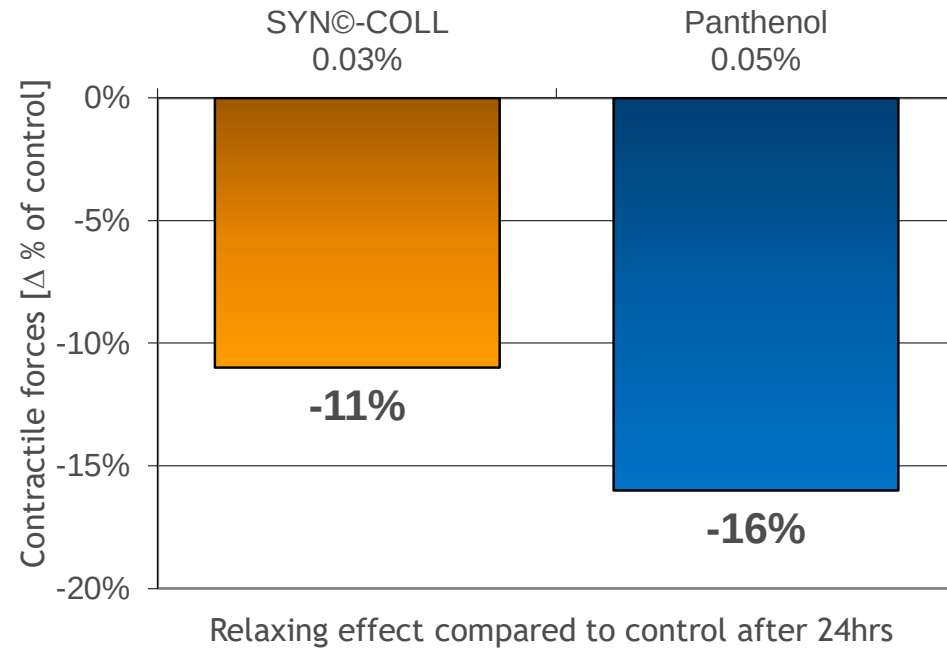
REGU®-STRETCH Efficacy *in vitro*

Repair of Young Stretch Marks

Forces developed by the fibroblasts under stretching in the GLASBOX System

SYN®-COLL and **Panthenol** reduce contractile forces fibroblasts that were directly derived from young stretch marks.

Marrubium vulgare is essential to the repair effect due to its well-known healing and anti-inflammatory properties.



REGU®-STRETCH components decrease fibroblast tension and support the repair and scarless healing process.

REGU[®]-STRETCH

Efficacy *in vivo*

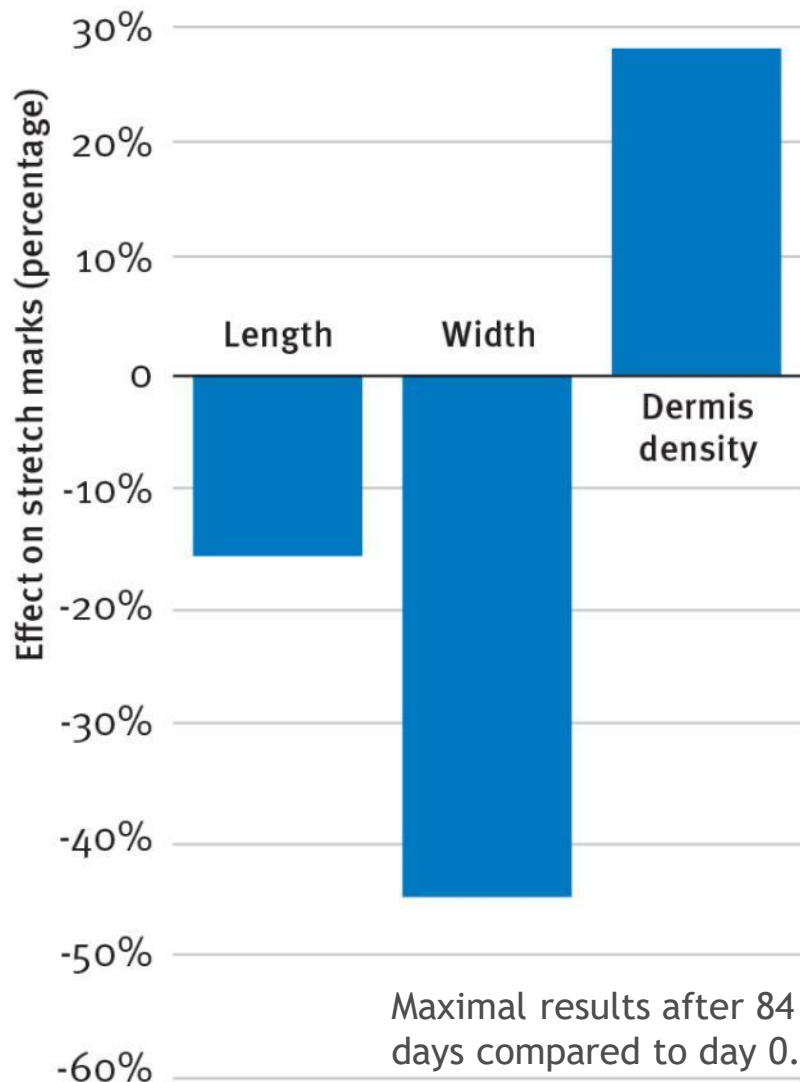
Study design

- 18 female volunteers (Caucasian, >18 years)
- Recent / red stretch marks (less than 6 months old)
- Emulsion containing 3% REGU[®]-STRETCH
- Duration: 3 months, measurements at days 0 and 84

Parameters

- Length and width of stretch marks
- Dermis density (Dermascan[®])
- Illustrative photographs
- Questionnaire evaluating the product efficacy

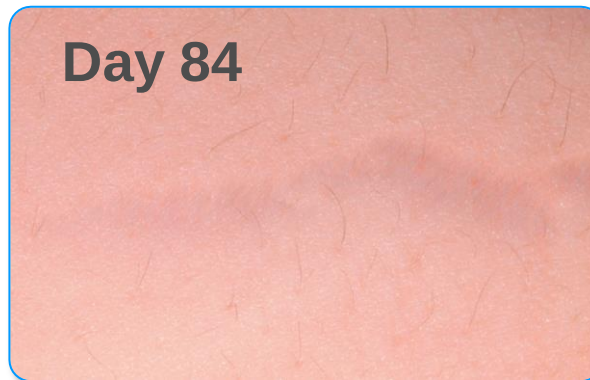
REGU®-STRETCH Visible Effects *in vivo*



REGU®-STRETCH visibly reduced stretch marks and improved general skin tissue properties

REGU[®]-STRETCH Visible Effects *in vivo*

Macro photographs



Volunteer #1, Age 28

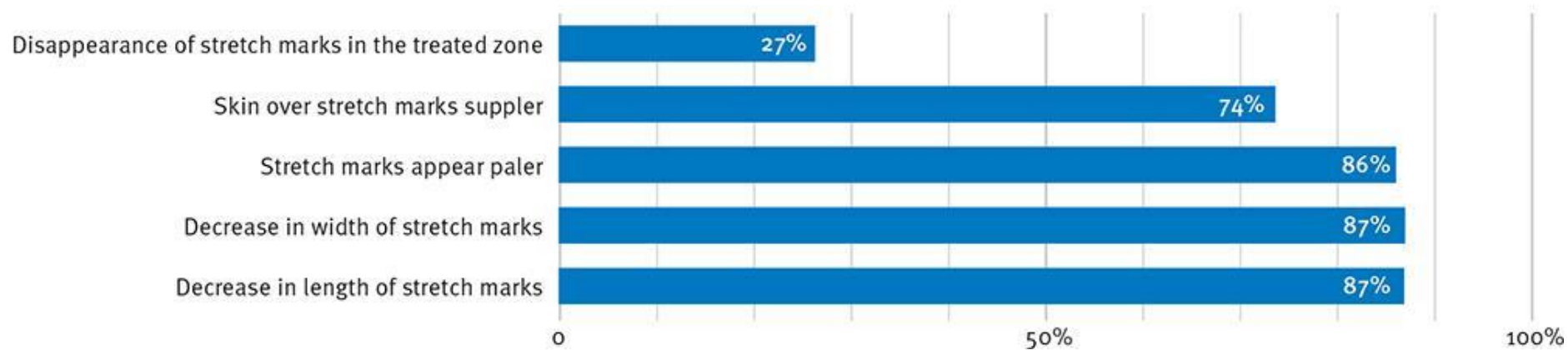


Volunteer #13, Age 28

Appearance is clearly improved and the stretch mark is visibly reduced

REGU[®]-STRETCH Efficacy *in vivo*

Volunteer Evaluation after 84 days



REGU[®]-STRETCH

Making Stretch Marks a Thing of the Past

Unique Product Features

- Complex designed to help prevent or repair all types of stretch marks during and after mechanical stretching
- Unique combination that protects skin from tissue degradation and reduces inflammation
- Positive effect on collagen levels
- Supports re-epithelialization

Benefits

- Helps prevent stretch marks occurring
- Helps restore the appearance of stretch marks
- Visible results in as little as two months
- Improves skin firmness, smoothness, and elasticity



REGU[®]-STRETCH

Product Profile

Cosmetic application

- Anti-stretch marks and anti-striae treatments
- Body contour remodeling products for adolescent skin
- Firming, moisturizing, and anti-cellulite products
- Treatment for fine lines and wrinkles

Formulation

- Glycerine-based aqueous solution
- Suggested concentration: 1-3%
- Optimal pH range: 3 to 6
- Stable at elevated temperature (70°C) for up to 2 hours
- Paraben-free. Preserved with Sodium benzoate and Potassium sorbate

REGU®-STRETCH

Product and Marketing Concepts

- Stretch marks care: body lotions, gels and concentrates
- Creams or pens to treat local scars
- Expert treatments: 1. Body massage 2. Apply corrective treatment
- Ultimate hydration and protection against stretch marks
 - with PENTAVITIN®
- Body care lotions for dry skin
 - with STIMU-TEX® AS
- Post partum body activator
 - with PEPHA®-CTIVE
- Body building ultimate care
 - with PEPHA®-CTIVE
- Firming & slimming products
 - with PEPHA®-TIGHT and REGU®-SHAPE
- Corrective body treatments for young people
 - with PENTAVITIN® and REGU®-SHAPE

Disclaimer

Copyright © 2021 DSM Nutritional Products, 4002 Basel, Switzerland.

www.dsm.com/personal-care. All rights reserved.

Although DSM has used diligent care to ensure that the information provided herein is accurate and up to date, DSM makes no representation or warranty of the accuracy, reliability, or completeness of the information. This presentation only contains scientific and technical information for business to business use. Country or region-specific information should also be considered when labeling or advertising to final consumers. This publication does not constitute or provide scientific or medical advice, diagnosis, or treatment and is distributed without warranty of any kind, either expressly or implied. In no event shall DSM be liable for any damages arising from the reader's reliance upon, or use of, these materials. The reader shall be solely responsible for any interpretation or use of the material contained herein. The content of this document is subject to change without further notice. Please contact your local DSM representative for more details. All trademarks listed in this brochure are either registered trademarks or trademarks of DSM in The Netherlands and/or other countries unless explicitly otherwise stated.

The background of the image is an abstract composition of flowing, overlapping waves in various shades of blue and green. The colors range from deep navy blue to light sky blue and vibrant teal. The waves create a sense of movement and depth, with some areas appearing more saturated than others. The overall effect is a dynamic and modern visual texture.

BRIGHT SCIENCE. BRIGHTER LIVING.™