



SLIMAGINE

Slimming

Reduces the body fat storage by preventing the endoplasmic reticulum stress

Anti-yoyo effect

Lipolysis + anti-lipogenesis + anti-adipogenesis



COSMOS
APPROVED

EXSYMOL
MONACO

Quest for the dream silhouette



Willingness to stay fit and stay toned

Any time of year can be a source of motivation to start a diet to get the silhouette we dream of. We want to be fit, firm, lose fat and stimulate our lipolysis.

Despite of all our efforts, we are all **concerned by up and down of our food intakes leading to unsightly bulges.**

The Yoyo effect

The yoyo effect is our body strategy to withstand the stress experienced during previous diet regimens.

Our body lives the diets as a period of danger worrying about the reduction of energy reserves (fatty tissue). Anticipating next period of deprivation, it stores the maximum energy available in adipose tissue.

After a diet (food deprivation), we have observed 2 main events explaining the yoyo effect:

Although mature adipocytes have released fat (**lipolysis**), they are still functional, well established with strong links with the extra cellular matrix and ready for a new fat intake (**lipogenesis**).

Our body favors fat tissue growth (**adipogenesis**), after having experienced a massive decrease of energetic stock. This mechanism is further increased with age (metabolic slow down).

SLIMAGINE's conception

The endoplasmic reticulum (ER) as the key organelle where is made the decision to increase fat tissue volume.

Occasional excessive food intake induces heavy metabolic stimulation (protein synthesis) and may cause a physiological reaction called the ER stress.

The ER stress leads to adipogenesis in order to further increase fat storage.

Origins of our disillusionment

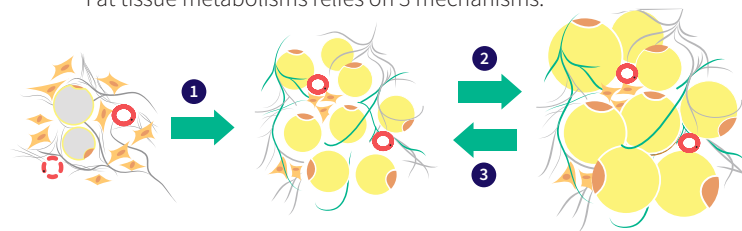
Our age, but also our diets and their goals (**losing weight quickly**) to find our ideal silhouette make us alternate periods of deprivation and others more generous.

As a result, we have more and more **trouble stabilizing our weight and it is difficult to avoid the yoyo effect.**

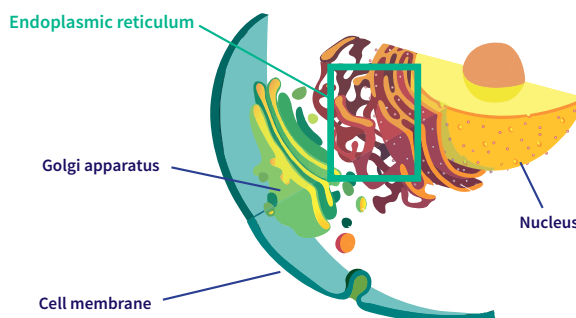
The quest for the desired silhouette becomes endless!

Fat tissue metabolisms

Fat tissue metabolisms relies on 3 mechanisms:



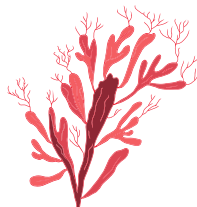
- 1 Adipogenesis:** development of fat tissue.
Increase in the number of pre-adipocytes that differentiate into fully functional for more fat storage.
- 2 Lipogenesis:** fat absorption.
Ingested fat within the blood stream is transferred into adipocytes and is stored as triglycerides
- 3 Lipolysis:** fat excretion
Triglycerides are degraded into fatty acids and glycerol which are excreted out of the adipocyte



METABOLIC OVER STIMULATION

ERS
(ENDOPLASMIC RETICULUM STRESS)

ADIPOGENESIS



Rich in floridosides

From the Nova Scotia (Canada), strain selection, maximal culture technology, pertinent harvesting period enable us to get the highest quality biomass possible with maximal bioactive content to develop our natural active **SLIMAGINE**.



« Treat effectively the unpleasant results of weight changes, root out rebellious cellulite, smooth and tone the skin »»

Cosmetic applications

- Full body slimming
- Anti-aging slimming

Cosmetic Concepts

- Anti-yoyo effect: lure effect against the body's fat storage needs
- Willingness to lighten up:
Decrease volume and density of fat tissue
- Endoplasmic reticulum anti-stress effect
Prevent the activation of fat tissue growth

Beauty promises

- Loss of cm
- Draining effect
- Anti-cellulite
- Anti-yoyo
- Skin tonicity
- Softness – soothing

Metabolic targets

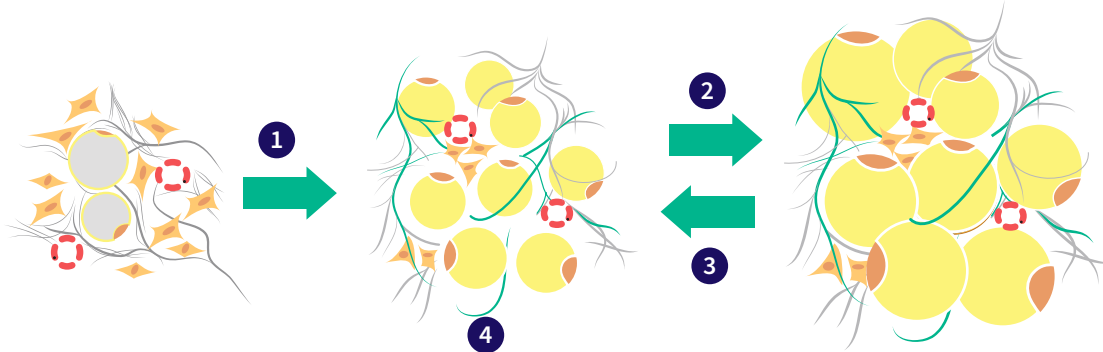
- Decreases adipocyte differentiation - Anti-adipogenesis
- Reduces fat intake - Anti-lipogenesis
- Increases fat excretion - Stimulates lipolysis
- Reduces endoplasmic reticulum stress

Innovative slimming

SLIMAGINE provides total fat control by:

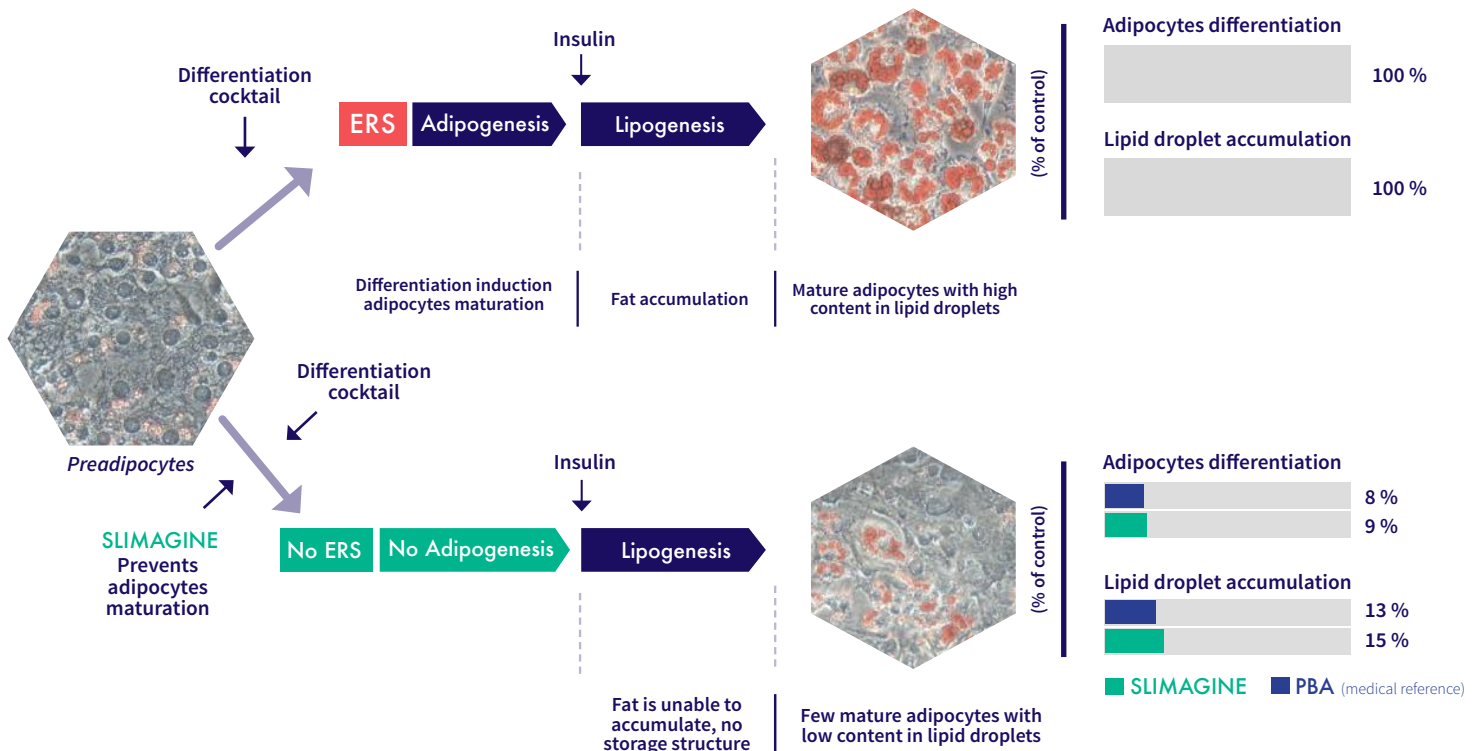
- 1 Reducing **adipogenesis** for a lower adipocyte differentiation
- 2 Inhibiting **lipogenesis** for a lower fat intake
- 3 Stimulating **lipolysis** for a higher fat excretion.
- 4 Preventing the formation of **adipocyte lobules**

SLIMAGINE also creates a synergy between all these activities for long lasting slimming benefits and preventing yoyo effect.



1 + 2 SLIMAGINE limits adipogenesis and lipogenesis – Prevention of fat tissue growth

SLIMAGINE prevents pre-adipocyte differentiation (number of mature adipocytes) and their functional role : lipid storage (fat accumulation)



2% SLIMAGINE inhibits adipocyte maturation **BY 91%**, therefore highly reduces **FAT TISSUE GROWTH.**

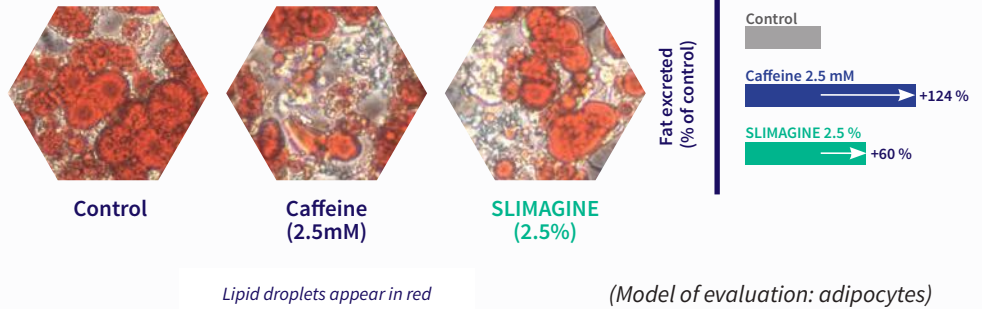
2% SLIMAGINE REDUCES THE **AMOUNT OF STORED FAT BY 85%**

By combining a lower amount of mature adipocytes and a lower fat intake, **SLIMAGINE** prevents fat accumulation

(Model of evaluation: adipocytes)

3 SLIMAGINE stimulates lipolysis - Higher fat burning

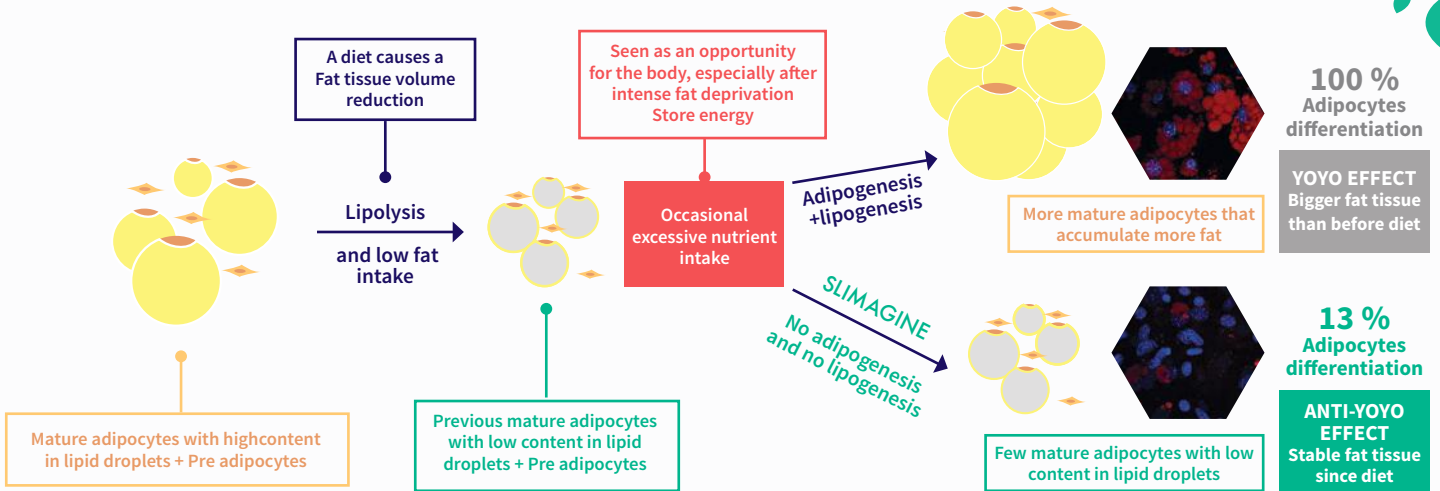
SLIMAGINE stimulates lipolysis by +60% in mature adipocytes. It is therefore responsible for higher **fat excretion**.



2 3 SLIMAGINE inhibits the yoyo effect – Prevention of fat reaccumulation and fat tissue over growth

The dreaded yoyo effect is amplified with aging and occurs after an intense fat deprivation (diet).

- 1/ Mature adipocytes are empty and insulin will favor lipid droplets storage
- 2/ Fat deprivation is perceived as a stress. Our organism will stimulate fat tissue growth to cope with the next potential lipid shortage

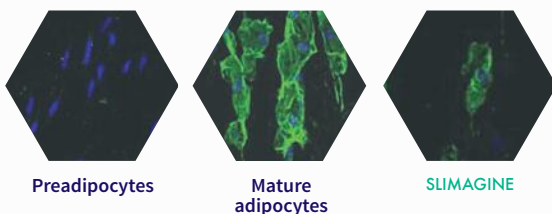


After a diet, **2% SLIMAGINE INHIBITS BY 87%** adipocyte differentiation and fat accumulation, therefore efficiently prevents **THE YOYO EFFECT**, (Model of evaluation: adipocytes).

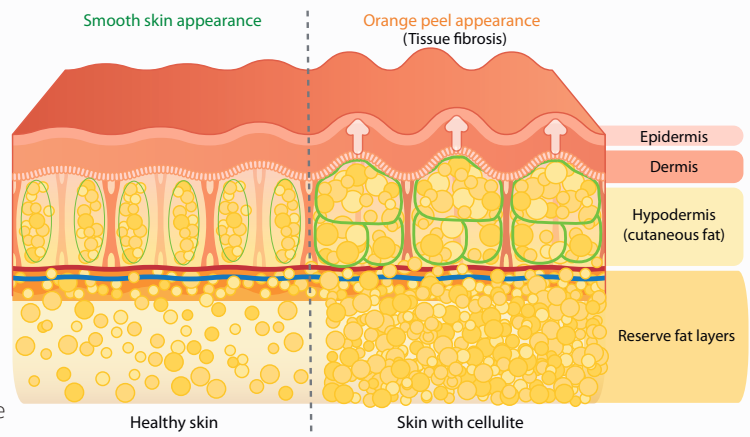
4 SLIMAGINE roots out fat & prevents anti-cellulite

Once mature, adipocytes are bound to the extra cellular matrix in lobules by **collagen IV (in green)** for a strong attachment and an optimal fat tissue growth.

Preventing excessive adipogenesis, **SLIMAGINE** participates to prevent the formation of specific lobules of collagen that can lead to cellulite.



Limitation of **collagen IV expression**, essential for fat tissue growth, minimizes possible appearance of cellulite. (Model of evaluation: Reconstructed hypodermis)



Schematic representation of skin organization leading to cellulite

Mechanism of action: ER stress, UPR and adipogenesis

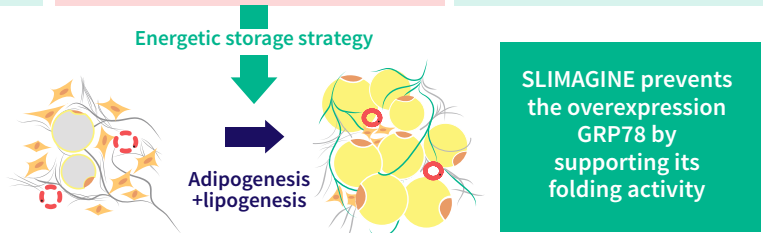
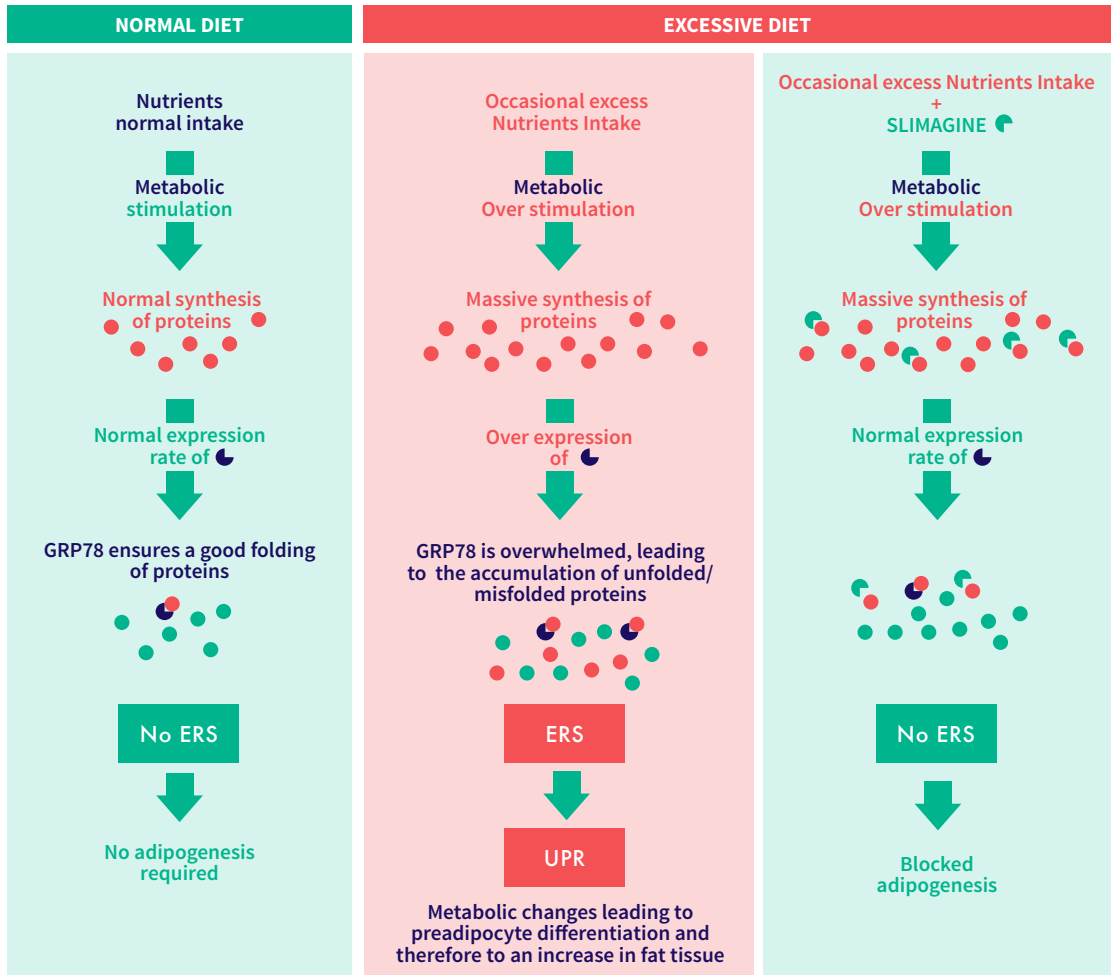
Occasional excessive food intake generates endoplasmic reticulum stress (ERS) which activates adipogenesis

● Folded protein
● Unfolded/misfolded protein

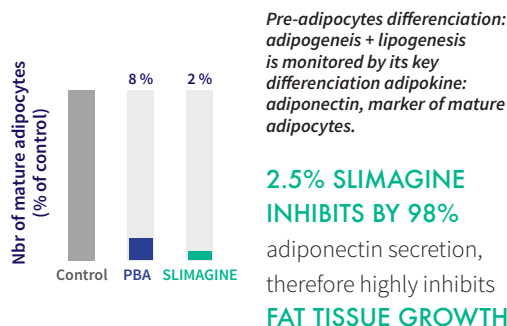
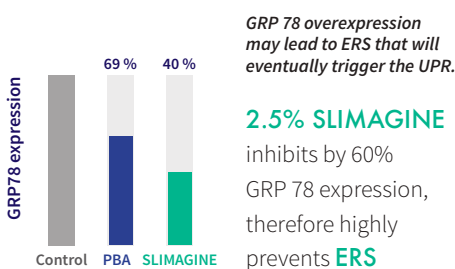
After being produced, proteins need to be folded with support from the GRP 78 (🌀) in the ER.

The accumulation of unfolded/misfolded proteins generates an alert: the **ERS (Endoplasmic Reticulum Stress)**.

To cope with this stress condition (ERS), GRP 78 triggers a metabolic pathway that initiates the unfolded protein response (UPR) responsible for stimulating the adipogenesis.



SLIMAGINE demonstrated anti-ER stress efficacy similar to a medical reference (PBA)



WITH SLIMAGINE

Adipogenesis is not necessary = lure effect

Adipogenesis inhibition passed through UPR signalling attenuation visualized by the diminution of GRP-78 expression.

Technical characteristics



INCI name

PALMARIA
PALMATA EXTRACT

Preservatives

NO PRESERVATIVE

Formulation

Advised doses: 2-4%
Avoid surfactants and thickening agents
sensitive to ionic components

Availabilities

SLIMAGINE is available in 5kg and
30kg drums

Analytical composition

PALMARIA PALMATA EXTRACT **8 %**
Propanediol **30 %**
Water (sqf) **100 %**

Physico-chemical characteristics

Limpid to slightly opalescent, yellow-orange to red-orange liquid
Density at 20°C: 1.062 - pH: 5.5
Miscible with water

Tolerance and Toxicity Studies

According to tolerance studies, **SLIMAGINE**
is perfectly tolerated.
SLIMAGINE does not show any toxicity.



**COSMOS
APPROVED**

EXSYMOL S.A.M.

4 avenue Albert II – MC 98000 MONACO

Tél: +377 92 05 66 77

exsymol@exsymol.com

www.exsymol.com

EXSYMOL
MONACO