



Este Switch

Medical INC.

Medikal Anonim Şirketi

#1. Wellstox MesoCut Key point

#2. Core Ingredient

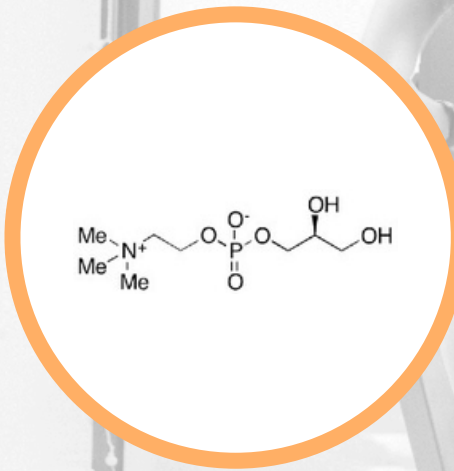
#3. Prior efficacy evaluation test

#4. Efficacy evaluation test

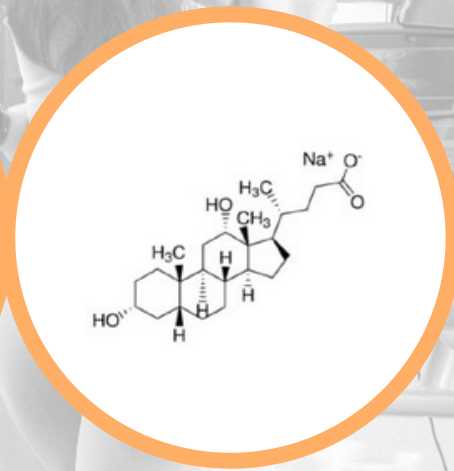
#5. Befor & After



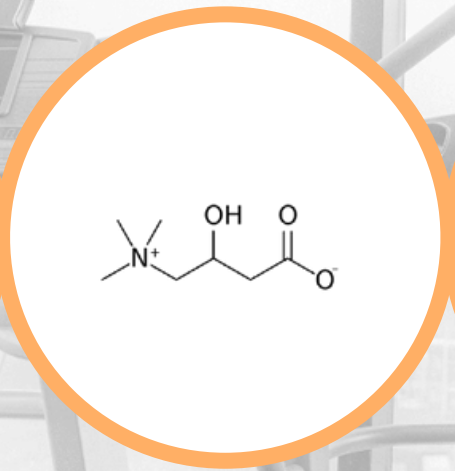
MAIN INGREDIENTS



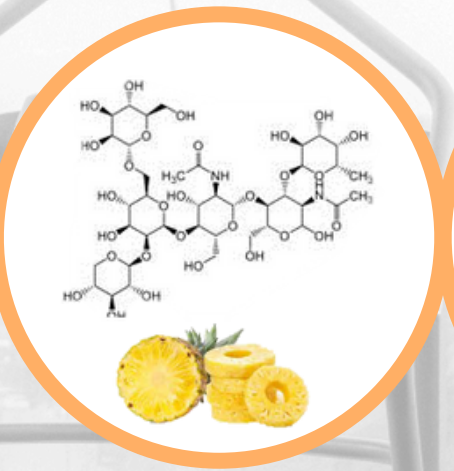
Glycerophosphocholine



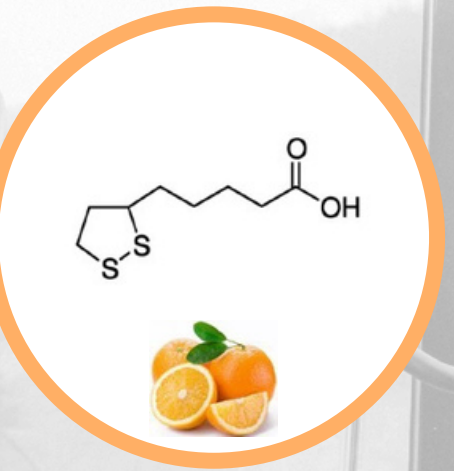
Sodium
Deoxycholate



Carnitine



Bromelain



Thioctic Acid

Five key ingredients composed of optimal composition changes the fat storage environment in the body, leading to a reduction in the number and size of fat cells. Rapid discharge of fat decomposition products and cellulite relief effect by promoting lymphatic circulation

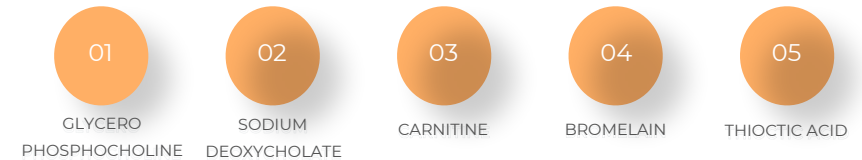
Wellstox MesoCut Key Point?

Summary



- Adopt QH Bio's own complex raw materials that are combined in an optimal ratio for sure fat breakdown – "SLIMSHOTZ™"
- Combined in the optimal ratio to maintain the concentration that secures safety while having the maximum effect.
- 1)Glycerophosphocoline (GPC) - As a key ingredient, it emulsifies fat and induces excretion in bile or urine
2)Sodium Deoxycholate(DC) - Reduces the size and number of fat cells by directly destroying the fat cells inducing necrosis.
3)Thiotic acid - Promotes energy expenditure by improving carbohydrate metabolism
4)Carnitine - Converts fat cells into energy to accelerate body fat breakdown
5)Bromelain - Breaking down of visceral fat and excretion of stagnant waste products in the body
- Wellstox MesoCut is composed of ingredients harmless to the human body, such as vitamins and antioxidants, which not only have the effect of breaking down fat, but also improve the elasticity of fibrous tissue, improve cellulite, and help maintain a healthy body.
- It is also expected to help with anti-aging effect and skin elasticity by removing free radicals, inflammation, and toxic substances, as well as improving blood circulation and activating lymph drainage.

SLIMSHOTZ™



Wellstox MesoCut?

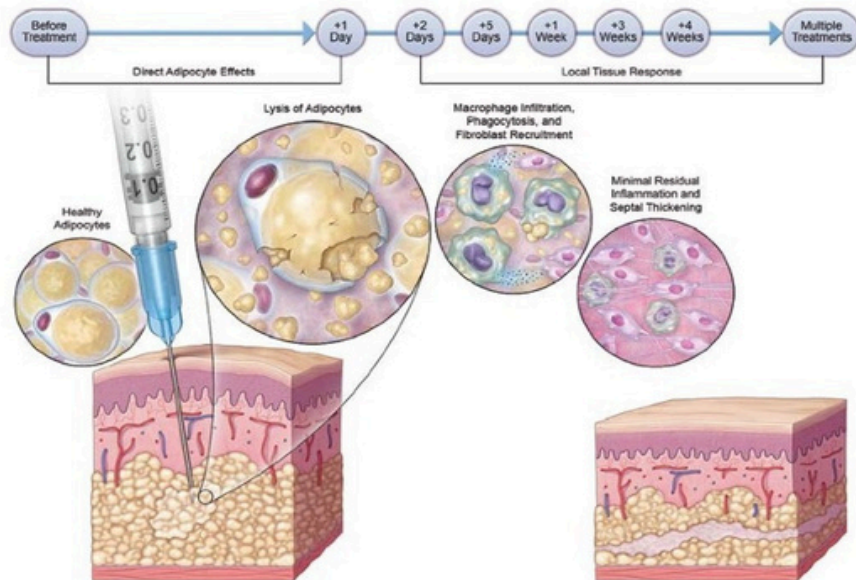
Summary



Fat decomposition “3-STEP action”

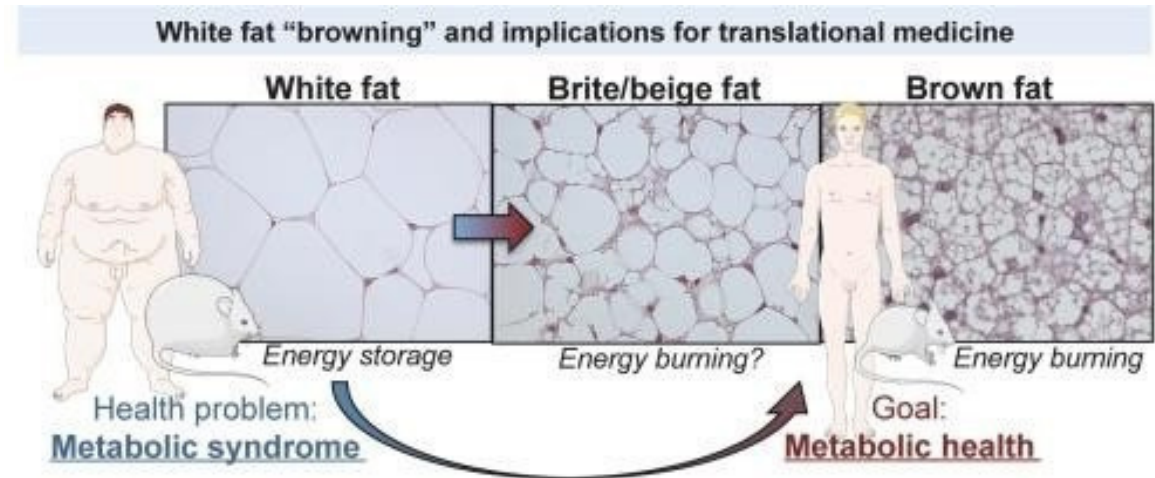
Triple action at once :

1. lipolysis
2. fat cell destruction
3. inhibition of fat cell differentiation



Promotes fat decomposition by promoting fat metabolism

Induces browning of white fat, which is the cause of fat accumulation,
and decomposes fat through improved metabolism



Core Ingredient

GPC (Glycerophosphocholine)



- It is originally used as a pharmaceutical medicine for cerebrovascular/degenerative brain disease, but the fatty oxidized effect has been known and is now widely used as a nonsteroidal lipolytic material.
- It is an essential nutrient for healthy cell membranes and is also used as a health functional food ingredient to improve brain function.
- Extracted from lecithin contained in soybeans.
- GPC is structurally similar to PPC, which is often used as a component for decomposition of fat and has a structure without two fatty acids.
- As PPC is a poorly soluble component, DC with large side effects must be used as an emulsifier, but GPC does not use DC, side effects are relatively few or no.
- Although the functional mechanism is almost identical to that of PPC but reported as a safe and painless substance.
 - Mechanism of action of GPC as a lipolytic core substance
 - : Emulsification of fat cells → Promotes the action of lipase, an enzyme that breaks down fat
 - Dissolved fat is excreted in bile or urine

Core Ingredient

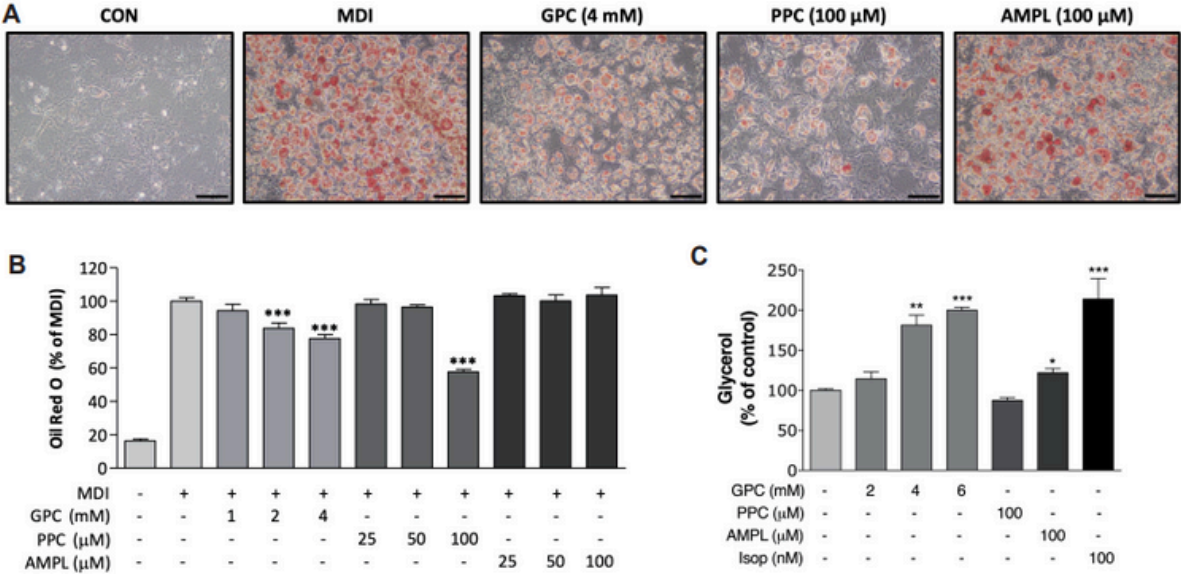
GPC (Glycerophosphocholine)



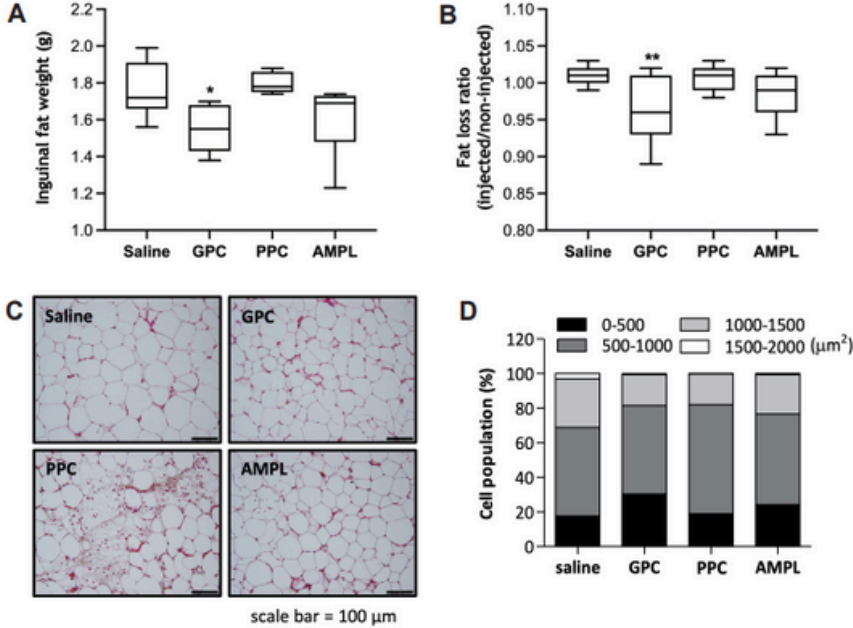
Structure	PPC Choline Phosphate Glycerol Fatty acid hydrophobicity fat soluble		α-GPC Choline Phosphate Glycerol Fatty acid hydrophobicity fat soluble	
	Structure without 2 Fatty Acids in PPC Structure (Conventional PPC acts as an emulsifier to mix water and oil due to the nature of its structure.)			
	Source of the GPC	Soy Lecithin		
	Compare to PPC/DC	1. Structurally similar to PPC, a well-known lipolytic substance		
		2. Safe compared to DC with large side effects		
	3. Also used as a health functional food ingredient to improve brain function.			

Core Ingredient

GPC (Glycerophosphocholine)



Effect of GPC on lipid accumulation and lipolysis in 3T3-L1 adipocytes. (A) Representative photomicrographs show lipid accumulation in the cell treated with GPC. 3T3-L1 cells were induced to differentiate with adipogenic cocktail containing IBMX, dexamethasone and insulin (MDI) in the presence or absence of GPC, PPC or AMPL. Lipid accumulation was visualized with Oil Red O staining. Scale = 100 μ m (B) Intracellular lipid content in differentiated adipocytes concomitantly treated with different compounds was quantified by elution of Oil Red O stain



Effect of GPC on localized fat reduction. (A) Inguinal adipose tissue was dissected and measured after 3 days of GPC, PPC or AMPL injection. * $p < 0.05$ vs. saline control. (B) Ratio of injected or non-injected mouse inguinal fat pads mass was calculated.

Core Ingredient

DC (Sodium Deoxycholate)



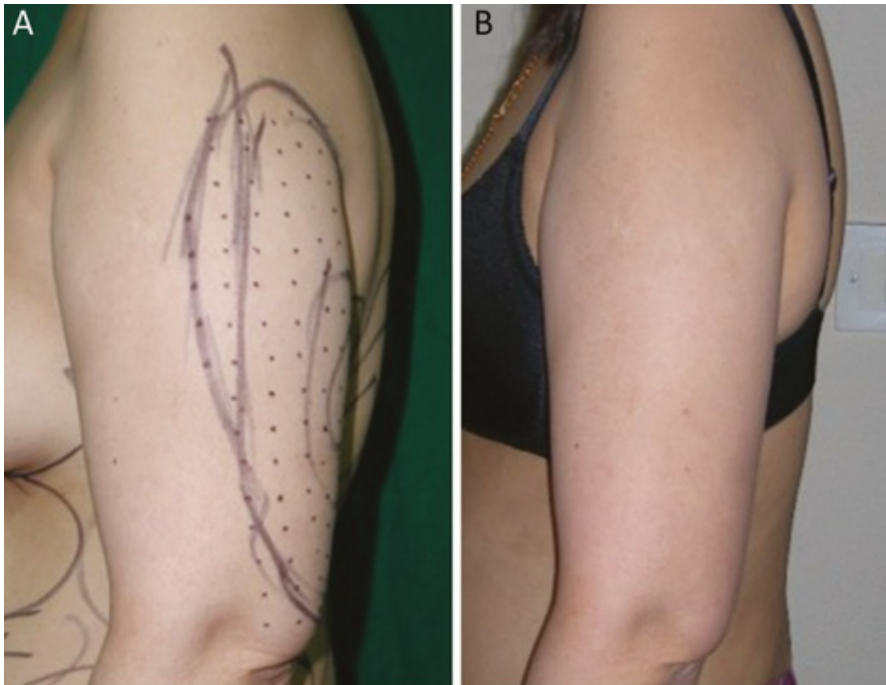
(A) Pre-procedural image showing prominent malar and jowl fat pads. (B) Post-procedural image showing reduction in malar and jowl fat pads after four sessions of injection lipolysis



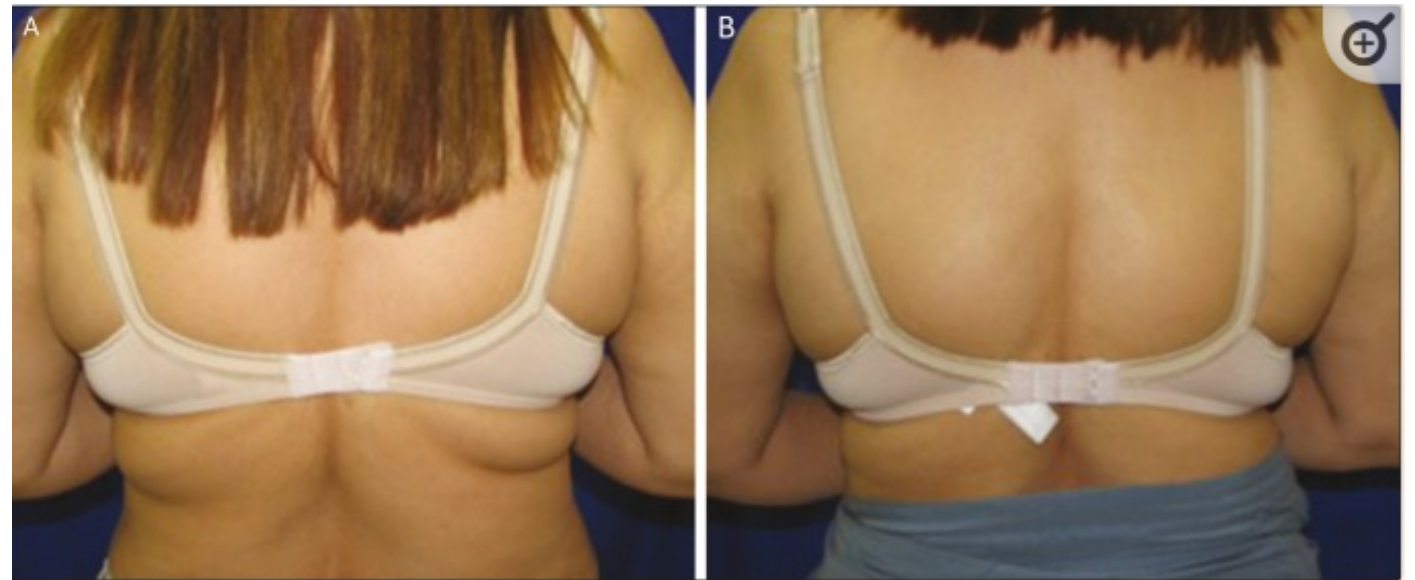
(A) Pre-procedural image showing prominent submental fat pad (double chin). (B) Post-procedural image showing reduction in submental fat pad (double chin) after four sessions of injection lipolysis.

Core Ingredient

DC (Sodium Deoxycholate)



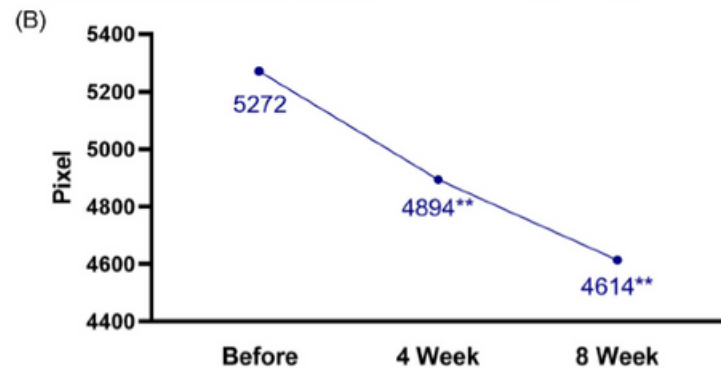
(A) Pre-procedural image showing arm with markings for injection lipolysis. (B) After six sessions of injection lipolysis for arm showing reduction in fat deposits of the arm



(A) Pre-procedural image showing prominent bra roll because of excess fat accumulation. (B) Post-procedural image showing reduction in the bra roll size after six sessions of injection lipolysis

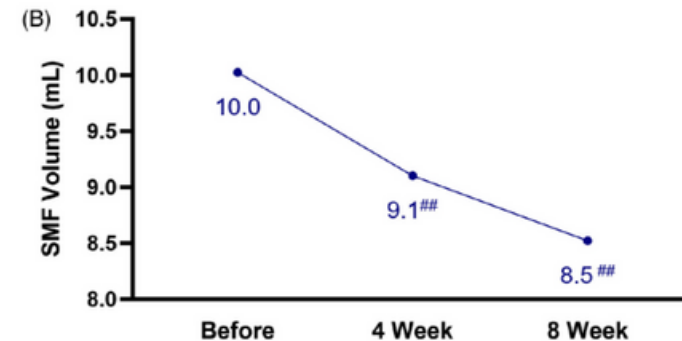
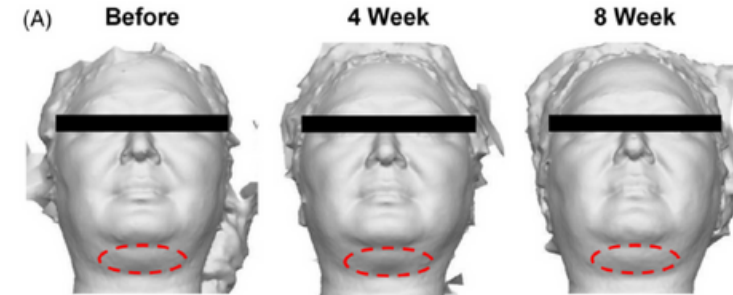
Core Ingredient

DC (Sodium Deoxycholate)



Clinical assessment of double chin reduction by area (pixel).

- (A) Representative images from the visual assessment of the submental area. The first image from the left was taken before the application of SCAI-NaDC, the second and third images were obtained after 4 and 8 weeks of daily SCAI-NaDC topical application.
- (B) Average submental fat (SMF) area was determined by ImagePro from 21 participants. ** $p < 0.05$ by repeated measures ANOVA, post hoc Bonferroni correction.

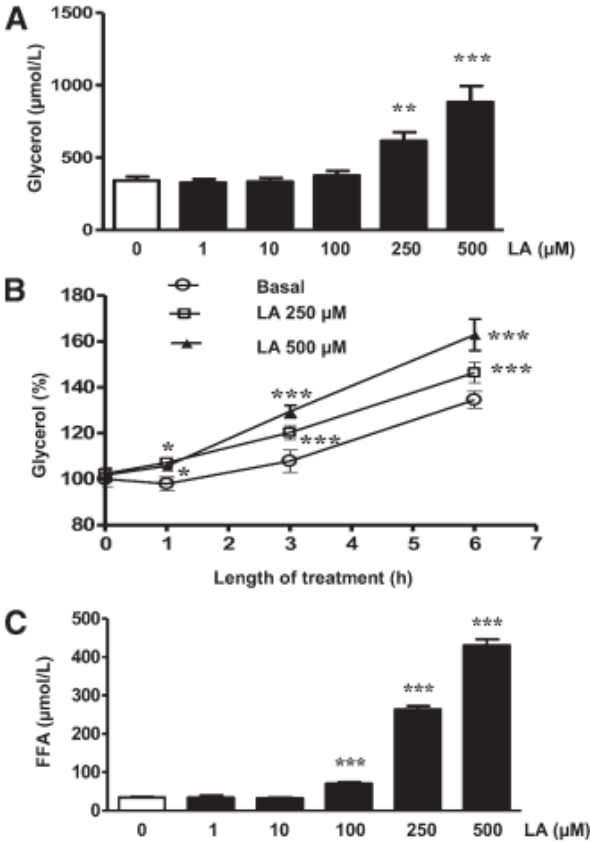


Clinical evaluation of the reductive effects of SCAI-NaDC topical application on submental fat (SMF).

- (A) Representative images from the 3D evaluation of the submental region. Red highlights indicate the region of interest for numerical analysis.
- (B) Average SMF volume determined before and after 4 and 8 weeks of SCAI-NaDC application. ## $p < 0.025$ by Friedman test, post hoc Wilcoxon signed-rank test with Bonferroni correction.

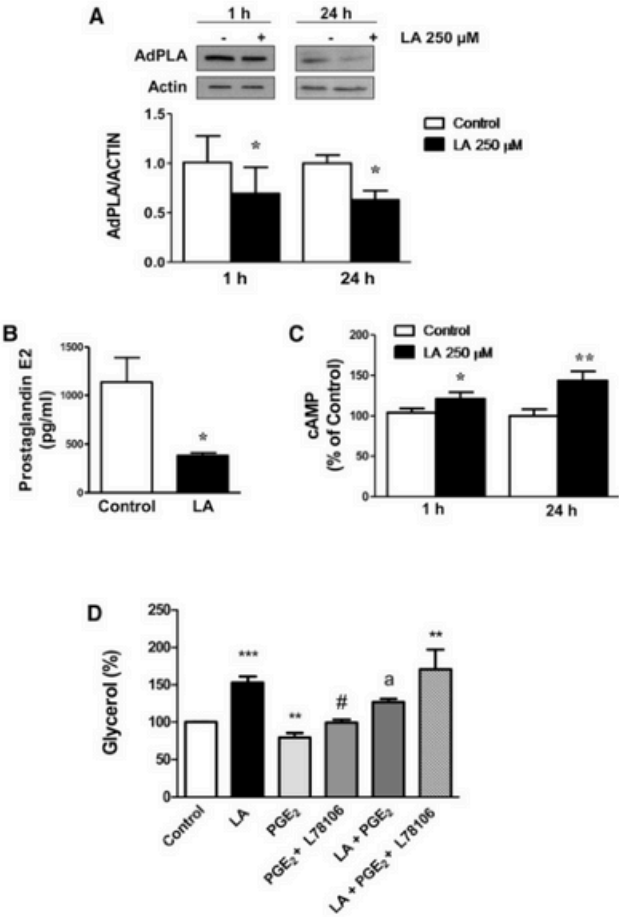
Core Ingredient

Thiotic Acid



LA stimulates lipolysis in 3T3-L1 adipocytes. Mature 3T3-L1 adipocytes were treated with LA (0–500 M) for the indicated times (1, 3, 6, or 24 h).

A. Lipolysis was assessed by the amount of glycerol released into media in adipocytes treated for 24 h.
B. Time-dependent effects of LA (250 and 500 M) on glycerol release.
C. Concentration-dependent effects of LA on FFA release in adipocytes treated for 3 h.



A reduces AdPLA levels and PGE 2 secretion and increases intracellular cAMP levels in 3T3-L1 adipocytes.

A. AdPLA protein levels at 1 and 24 h of treatment with LA (250 M).
B. PGE 2 released to the media in 3T3-L1 adipocytes treated with LA (250 μM) for 24 h.
C. Intracellular cAMP levels at 1 and 24 h of treatment with LA (250 M).
D. Effects of PGE 2 (0.5 ng/ml) on the lipolytic action of LA (250 M) in the presence or absence of the EP3 antagonist L78106 (10 M).

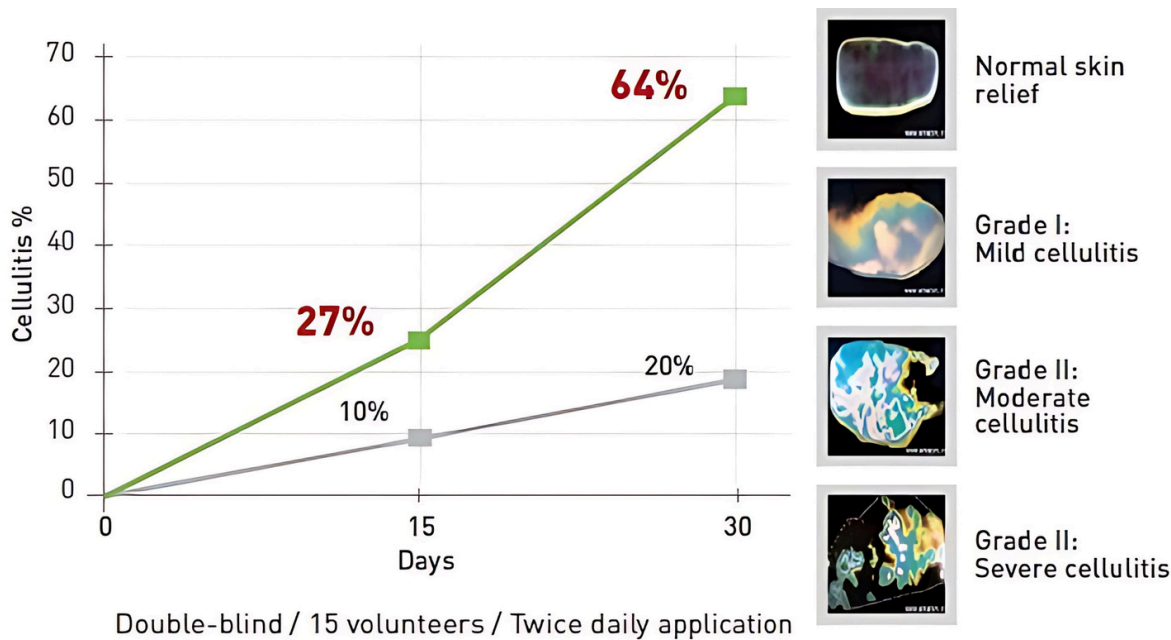
Core Ingredient

Thiotic Acid



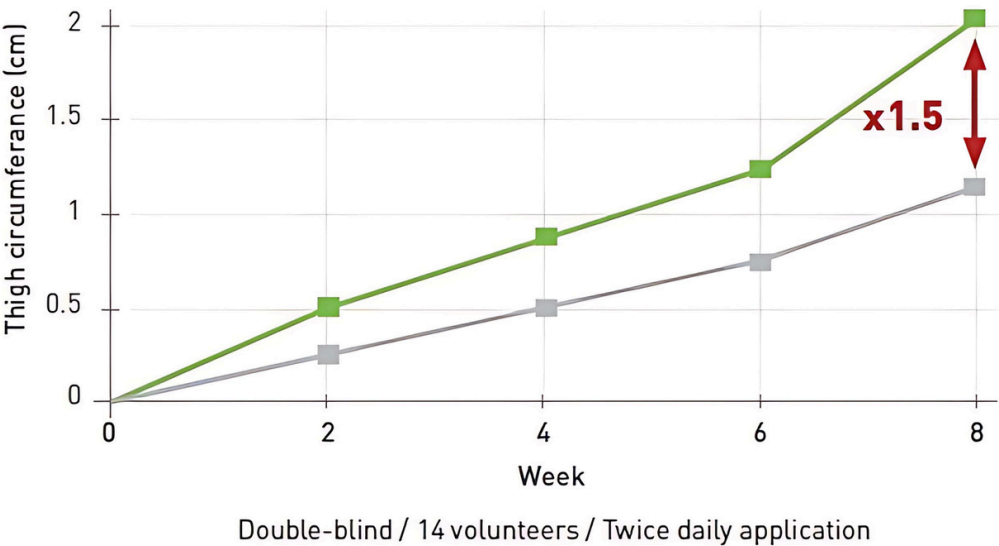
Cellulitis reduction effect

: Thiotic acid of 3% Tx twice a day, reduced to a level of up to 44% after 4 weeks



Thigh circumference reduction effect

: Tx of 1% Thiotic acid twice a day, after 8 weeks, the thigh circumference was reduced to 2cm level, which is 1.5 times different from simple massage level.



Core Ingredient

Thiotic Acid



Relief effect of the surface (orange peel) in appearance

: (For healthy women between the ages of 25-33) As a result of the clinical trial for the application of the product containing the ingredient, the effect of easing the cellulite surface in the thigh/hip area in the form of 'orange peel' after 84 days has elapsed

Percentage of volunteers with improvement at the end of the study (day 84)

Zone	Thighs		Hips		Buttocks		Mean	
	Active	Placebo	Active	Placebo	Active	Placebo	Active	Placebo
Group	Active	Placebo	Active	Placebo	Active	Placebo	Active	Placebo
Tonicity	95%	55%	70%	40%	70%	30%	78%	42%
Orange peel	95%	40%	65%	10%	80%	20%	80%	23%
Stubborn cellulite	95%	40%	75%	20%	85%	35%	85%	32%
Mean	95%	45%	70%	23%	78%	28%	81%	32%

Clin Cosmet Investig Dermatol 2014;7:73-88

Circumference reduction effect

: Effect of reducing the circumference of the abdomen, thighs, and buttocks over time

Means of the evolution (Dx-D0) of circumference measurements (in cm)

Time	Day 28		Day 56		Day 84	
	Active	Placebo	Active	Placebo	Active	Placebo
Product	Active	Placebo	Active	Placebo	Active	Placebo
Abdomen	-0.4*	-0.2	-0.9*,§	-0.2	-1.1*,§	-0.4*
Right thigh	-0.3	0.0	-0.6*	-0.3	-0.8*,§	-0.3
Left thigh	-0.1	0.0	-0.4*	-0.2	-0.8*,§	-0.3
Hips/buttocks	-0.4	-0.1	-0.7*	-0.2	-0.8*	-0.4*

Clin Cosmet Investig Dermatol 2014;7:73-88

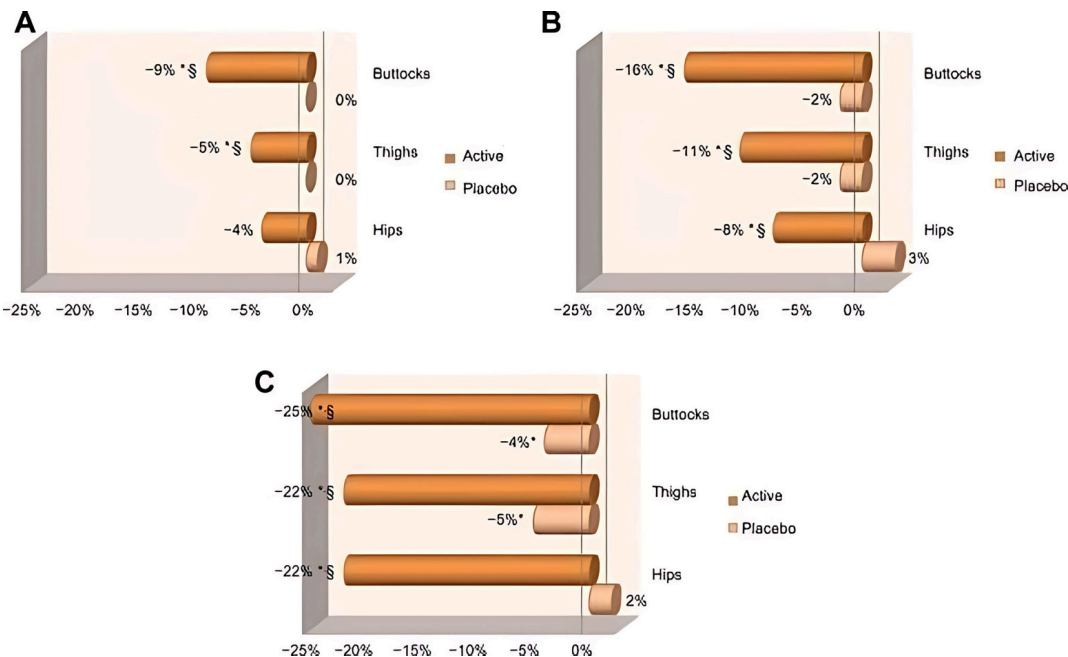
Core Ingredient

Thiotic Acid



Orange peel surface relief effect on appearance

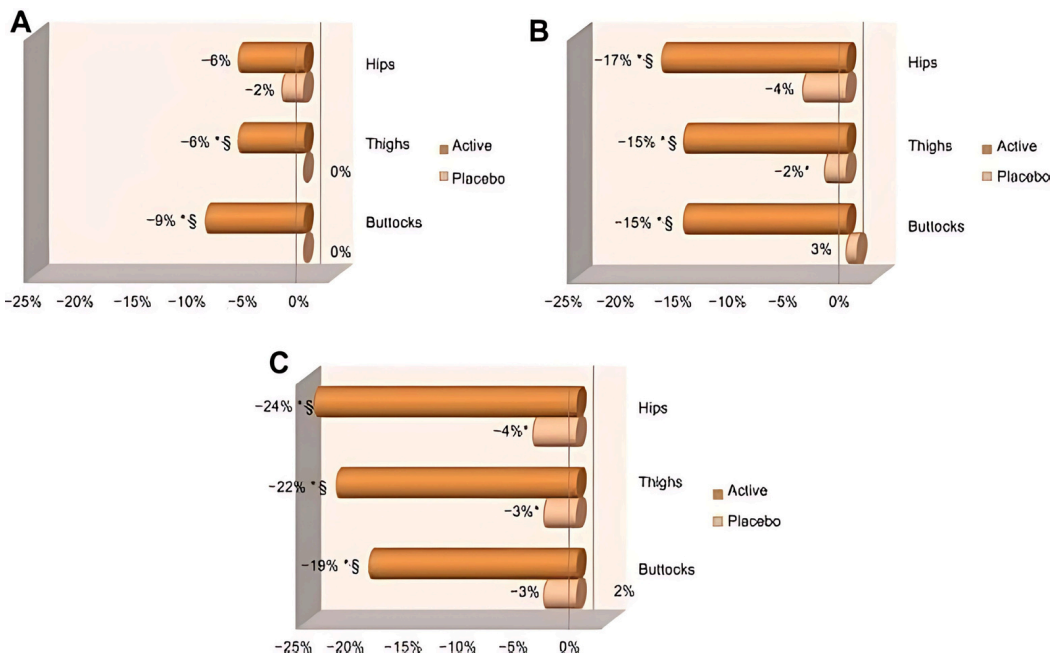
: The degree of relief of the orange peel appearance after 28 days, 56 days, and 84 days showed a decrease of 17-21% on average in the case of thighs/hips.



Clin Cosmet Investig Dermatol 2014;7:73-88

Cellulite relief effect

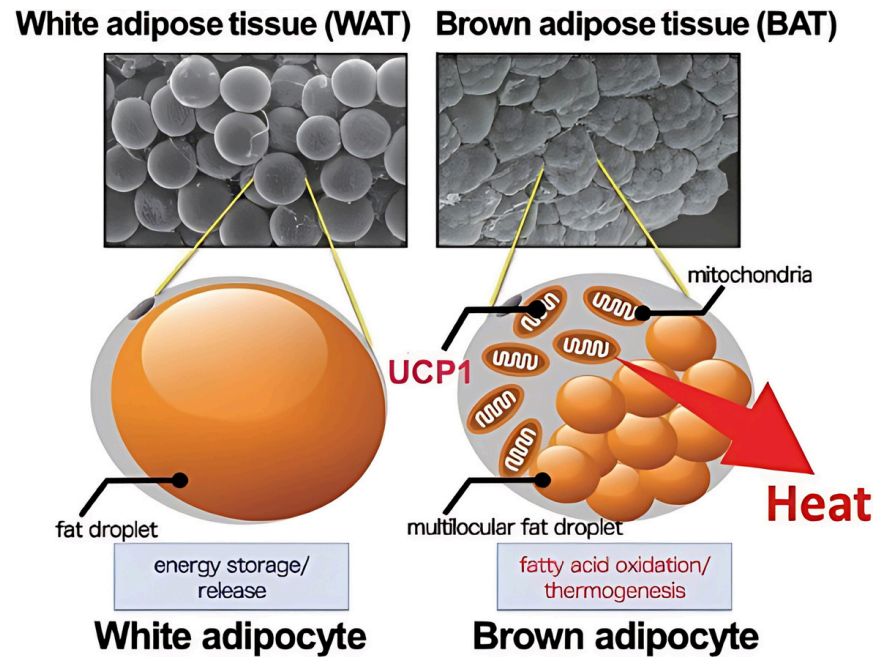
: The degree of cellulite relief after 28 days, 56 days, and 84 days showed a decrease of -19% on average in the case of thighs/hips



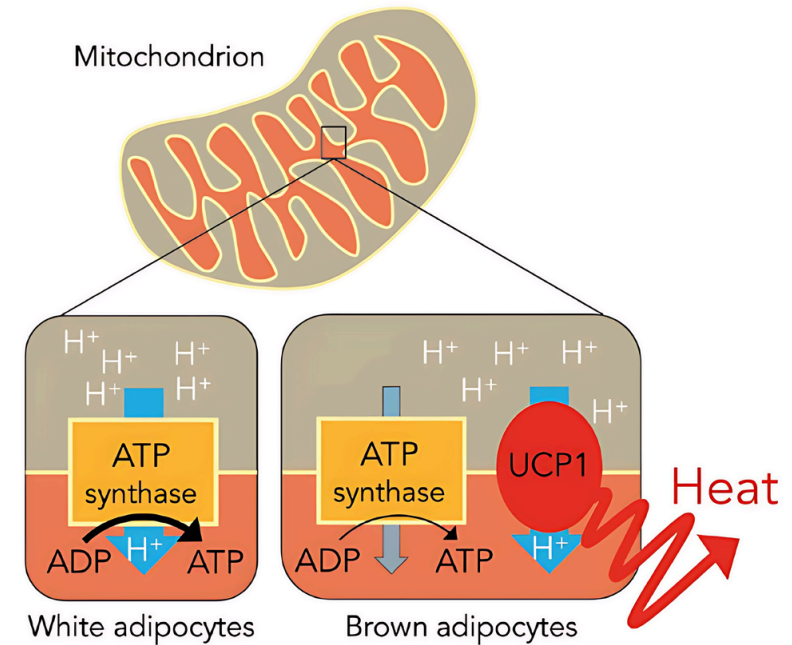
Clin Cosmet Investig Dermatol 2014;7:73-88

Core Ingredient

Carnitine



Korean J Obes 2016;25:109-114



SOFW journal 2016;9:14-17

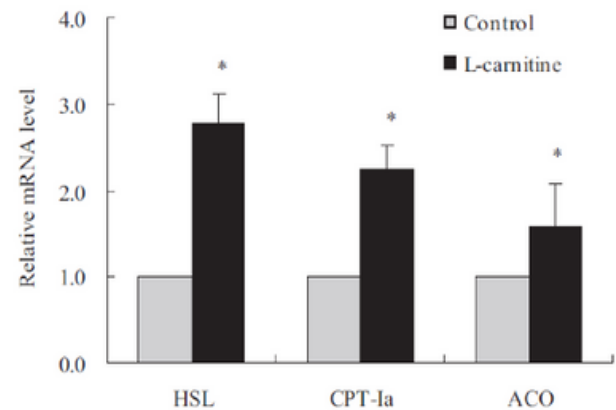
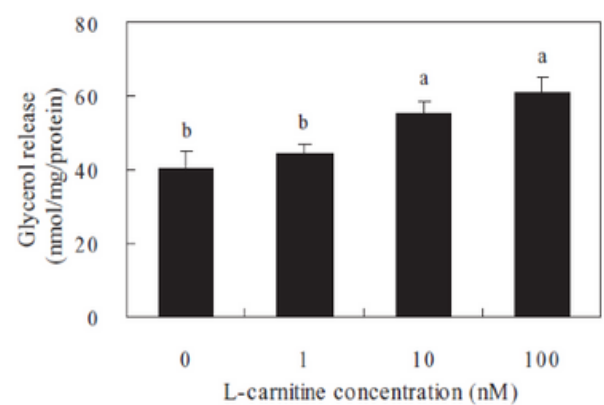
- 'UCP-1' protein in brown fat is an important substance that burns fat and converts it into heat
- In white fat, when ATP is full, the electron transport chain stops, but in brown fat, there is a specificity to express UCP-1.
- UCP-1 smooths the proton gradient of the mitochondria membrane, allowing energy to be dissipated in the form of heat rather than ATP
→ heat is produced.
- In this process, carnitine acts as a vasodilator and a cellulite-removing substance that dissolves fat released from heat.

Core Ingredient

Carnitine

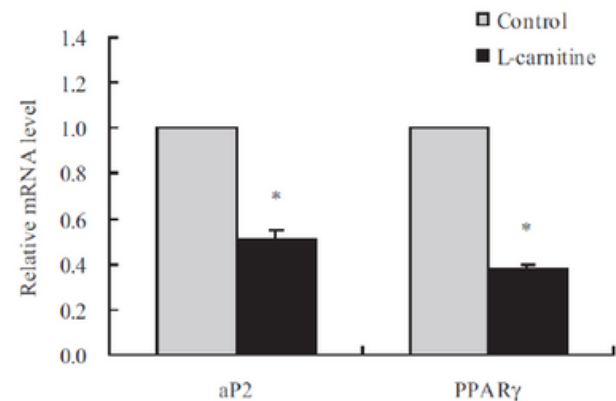
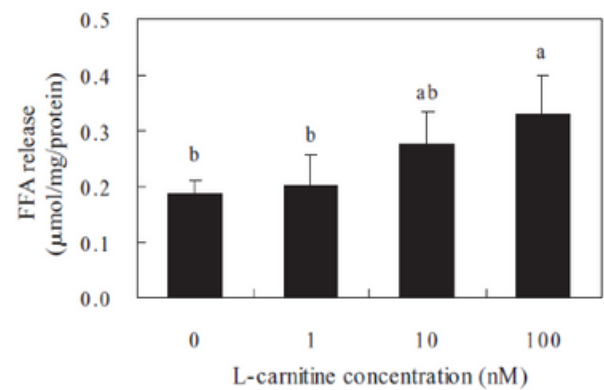


: L-carnitine inhibits intracellular lipid accumulation, increases adipocyte lipolysis, and stimulates lipolytic gene expression to suppress adipogenic gene expression (aP2, PPAR γ)



L-Carnitine (nM)	Lipid accumulation (%)
0	100.0 ± 9.6 ^a
1	92.0 ± 10.0 ^a
10	80.0 ± 3.6 ^b
100	83.6 ± 5.5 ^b

The values were calculated as a percentage of lipid accumulation of the control cells treated without L-carnitine and expressed as the mean $\pm$ SD ($n = 5$). Values with different superscript letters are significantly different at $P < .05$ by Duncan's test.



Core Ingredient

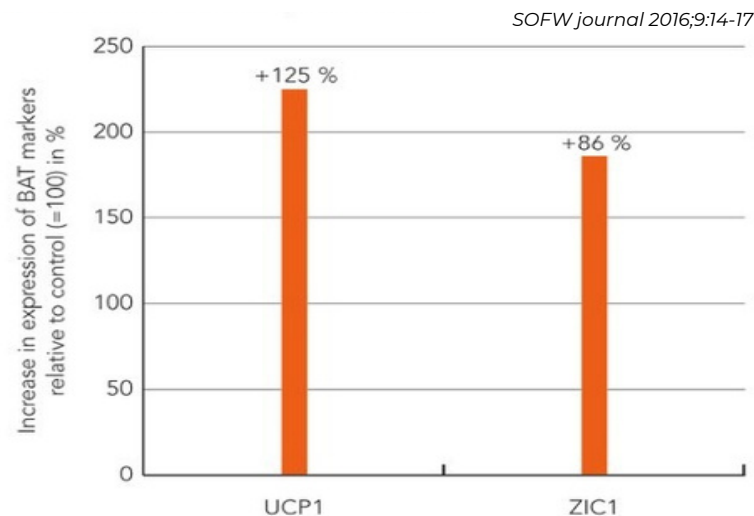
Carnitine



Brown adipocyte marker expression significantly increased upon administration

: After administration of carnitine in the process of differentiation of pre-adipocytes into adipocytes, we compared the expression of UCP-1 and ZIC-1, markers for brown adipose tissue (BAT).

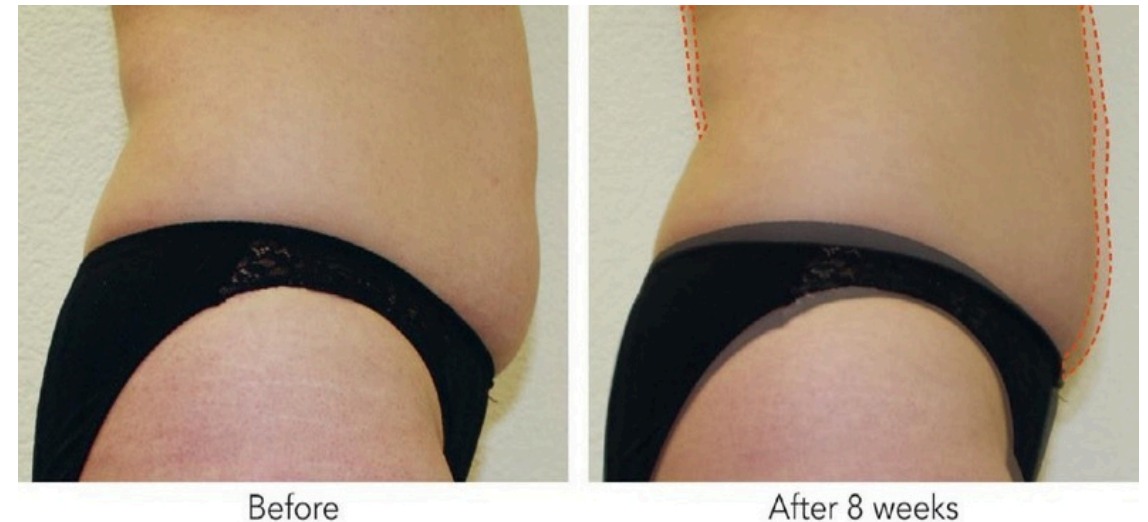
Compared to control group, UCP-1 increased by 125% and ZIC-1 showed a high expression rate of 86%. Through this, it can be seen that it plays an important role in inducing browning of adipose cells.



Confirmation of reduction in circumference of abdomen and thighs after weekly administration of 2%

: Comparison photo before and after application of the containing cream. Significant reductions were observed in the waist, abdomen, thighs, and upper arms after Tx for a total of 8 weeks. It is confirmed that mean waist circumference -3.4cm, abdomen circumference -4.1cm, upper arm circumference -0.9cm, thigh circumference -2.2cm.

SOFW journal 2016;9:14-17



Prior efficacy evaluation test

Check the cytotoxic concentration



Confirmation of cytotoxic concentration of deoxycholic acid (DCA) component: non-toxic up to ~0.8%

Assay		Result				
		DCA 0.5%	DCA 0.8%	DCA 1.0%	DCA 1.2%	DCA 1.5%
Cell Cytotoxicity Assay	Control	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
	10-Dilution	95.16 %	88.26 %	71.26 %	61.14 %	42.26 %
	10-2 Dilution	96.01 %	91.02 %	73.02 %	63.01 %	46.02 %
	10-3 Dilution	101.2%	92.43 %	73.53 %	67.23 %	46.33 %

** The standard of cytotoxicity is set at <80%. DCA concentration ~0.8%: PASS

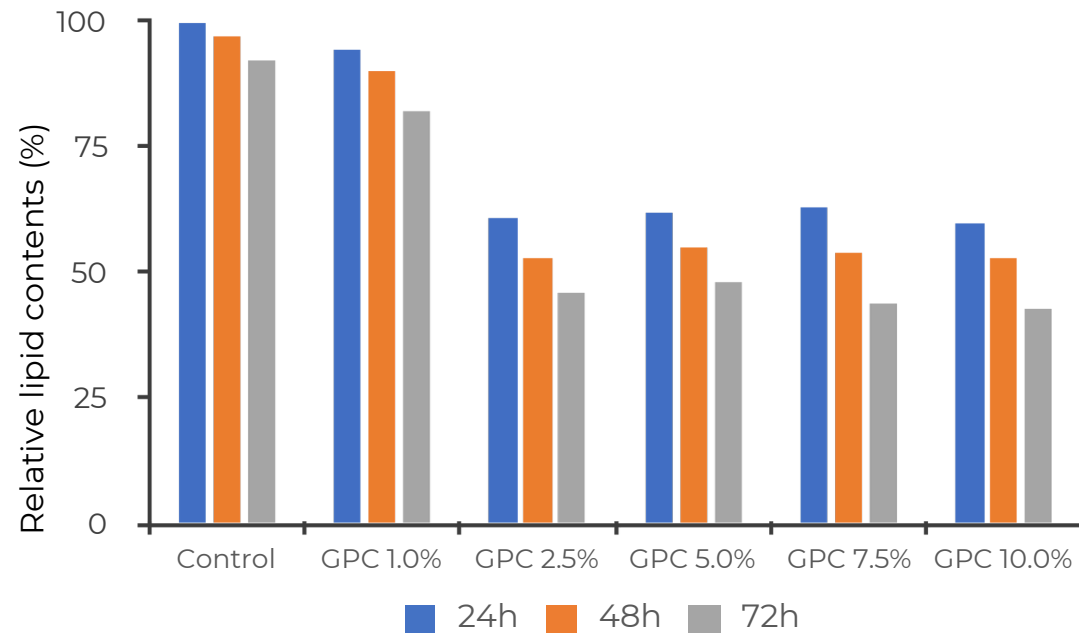
Confirmation of cytotoxic concentration of Glycerophosphocholine (GPC) component: non-toxic up to ~10.0%

Assay		Result				
		GPC 1.0%	GPC 2.5%	GPC 5.0%	GPC 7.5%	GPC 10.0%
Cell Cytotoxicity Assay	Control	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
	10-Dilution	95.16 %	96.26 %	94.14 %	93.11 %	89.26 %
	10-2 Dilution	96.01 %	97.00 %	97.01 %	95.01 %	91.06 %
	10-3 Dilution	101.2%	97.44 %	98.22%	95.66 %	93. 22 %

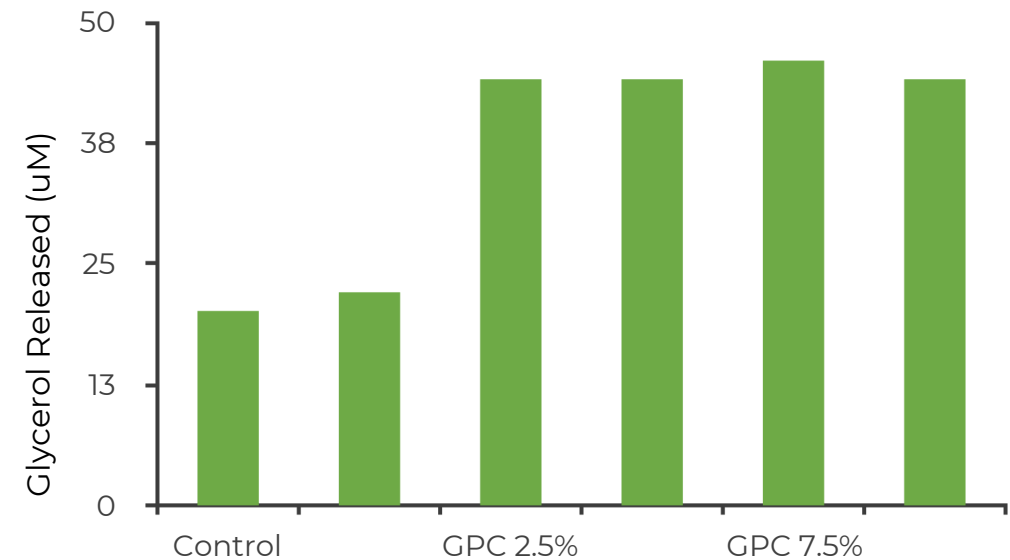
** The standard of cytotoxicity is set at <80%. GPC concentration ~10.0%: PASS

Prior efficacy evaluation test

Check the cytotoxic concentration



*** After GPC treatment by concentration in adipocytes, the amount of lipid components dissolved from decomposed adipocytes is measured.*



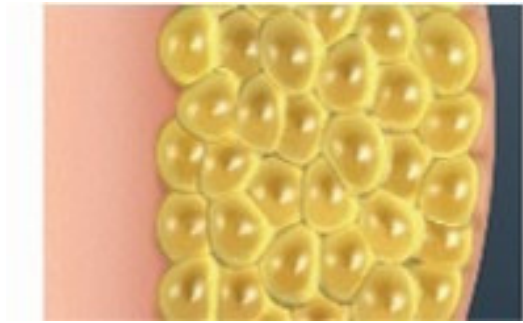
*** After GPC treatment by concentration in adipocytes, the amount of Glycerol, a product of adipocyte degradation, was measured.*

HOW Wellstox MesoCut WORKS?

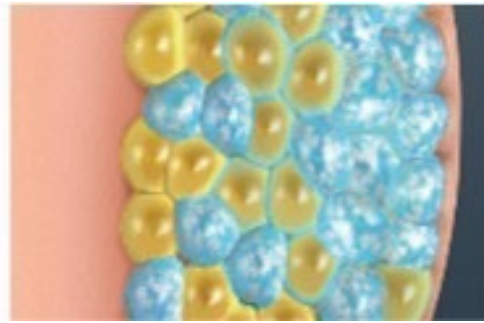
3-STEP triple action



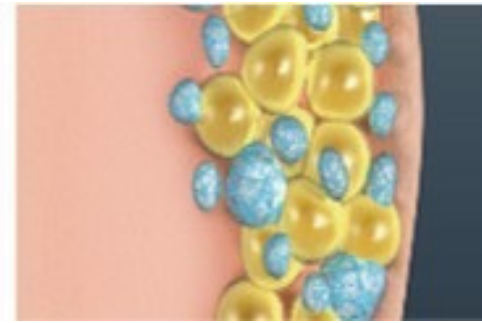
Prediction of Adipocyte Change after Drug Injection



0.08 ~ 0.14mm in size fat cell mass



Changes in cell appearance, such as contraction of adipocytes by osmotic pressure after drug injection



Destruction and dissolution of fat cells
Reduced cell size and production of degradation products



Excretion of degradation products in vitro and decreased number of adipocytes



Action 1.

Induction of fat cell contraction after drug injection based on osmotic pressure

Action 2.

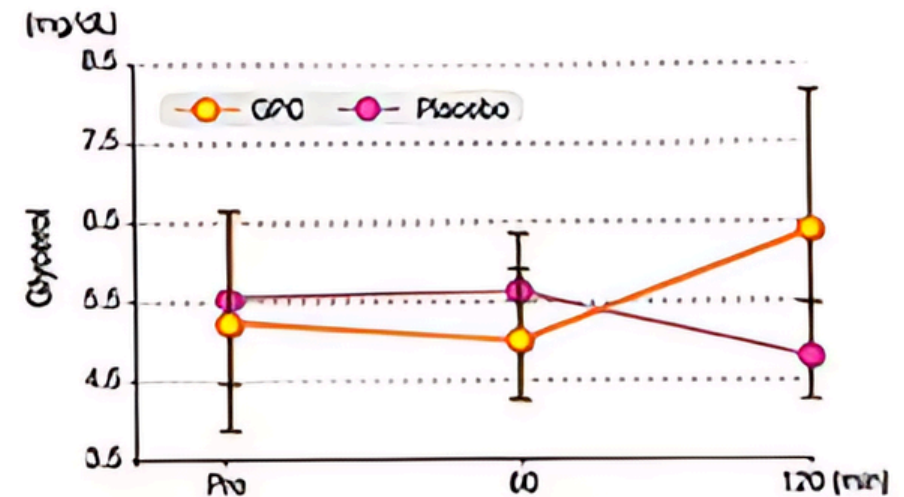
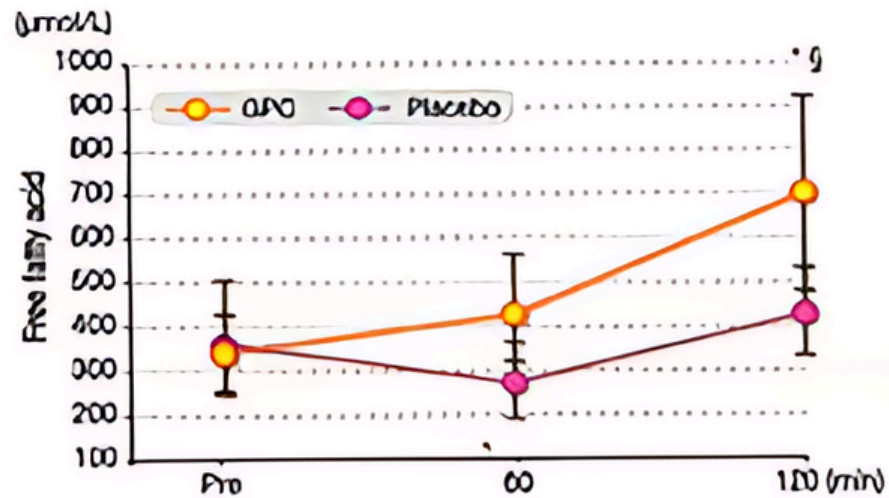
Destruction and dissolution of fat cells by the action of key ingredients

Action 3.

Acceleration of fat dissolution through the action of components that help lymphatic drainage

HOW Wellstox MesoCut WORKS?

Glycerophosphocholine

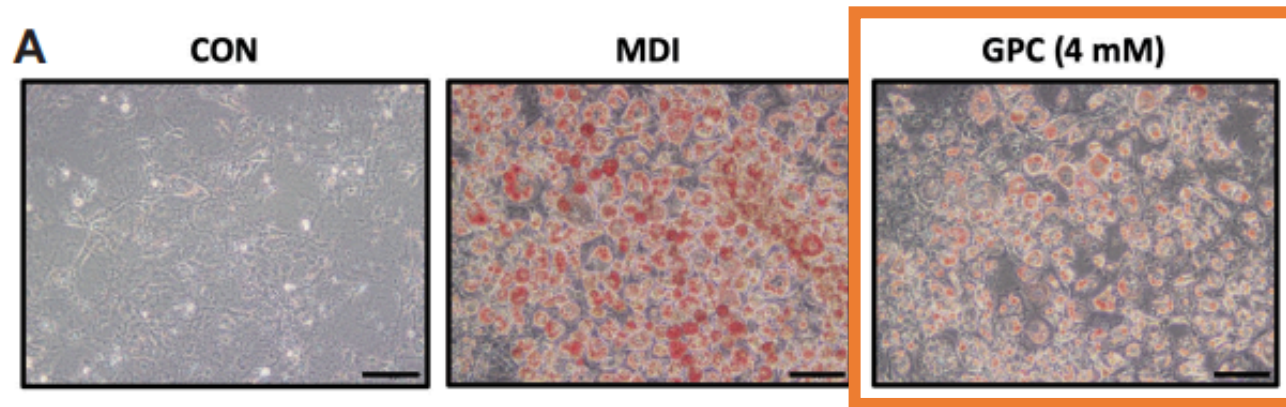


Increase in fatty acid oxidation, including increase in growth hormone (GH) After a single administration of GPC 1g, the free choline level and plasma growth hormone levels in the blood increased.

"In addition, the levels of glycerol and free fatty acid, which are lipolysis products, increased in serum."

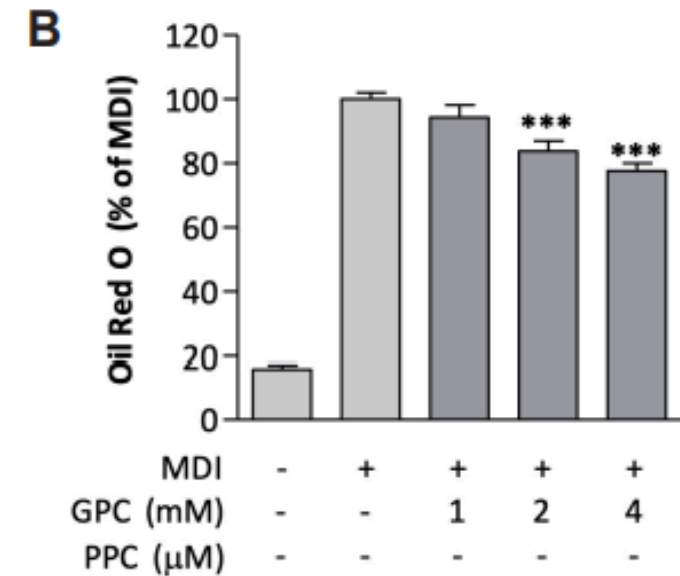
HOW Wellstox MesoCut WORKS?

Glycerophosphocholine



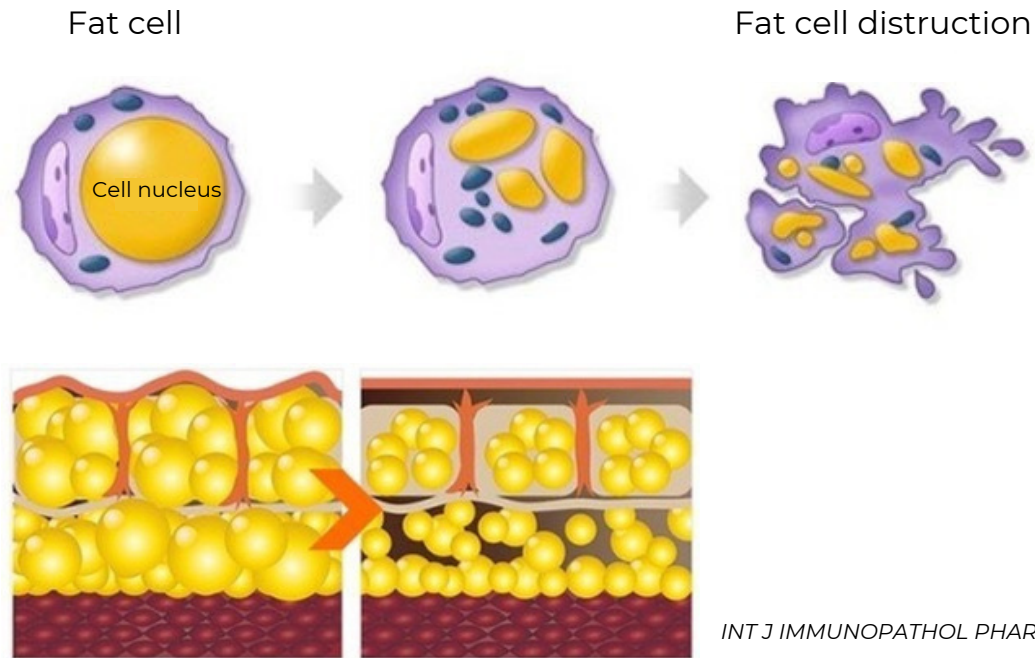
In order to investigate the effect of GPC on adipogenesis and lipid accumulation, the degree of GPC administration and adipocyte differentiation was compared to 3T3-L1 cells.

“GPC reduced the number of lipid droplets by about 22.3% in a concentration-dependent manner.”

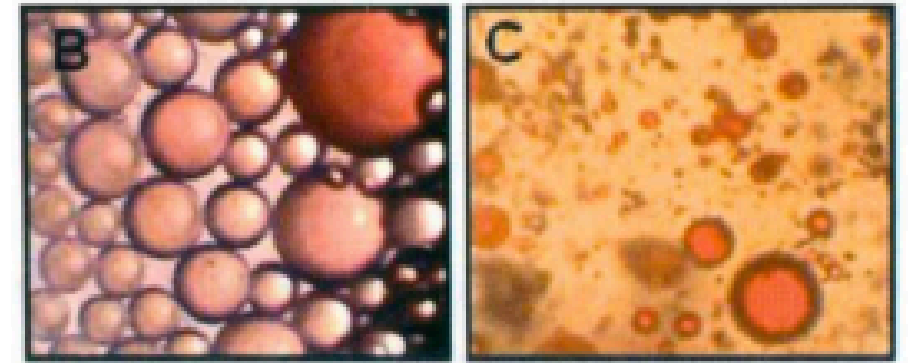


HOW Wellstox MesoCut WORKS?

Sodium deoxycholate



Sodium deoxycholate, which has been recognized for its efficacy and safety through numerous clinical trials, directly destroys and decomposes fat cells themselves to reduce the size of fat cells as well as reduce the number of fat cells underneath to obtain permanent effects.



The death rate of adipocytes was remarkably high in the group treated with Sodium deoxycholate, and the shape of adipocytes that were significantly destroyed in droplet image through Oil--Red-O staining.

HOW Wellstox MesoCut WORKS?

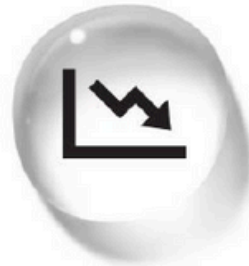
Bromelain



Proteolytic enzymes
contained in pineapple



Inflammation treatment
and wound recovery

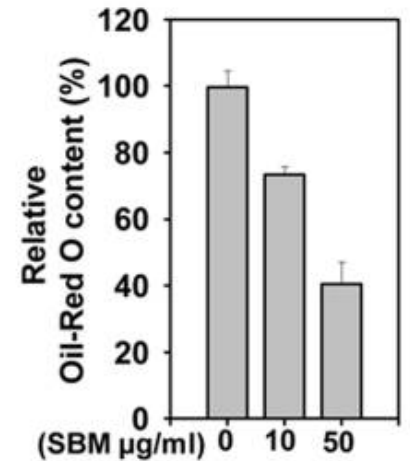
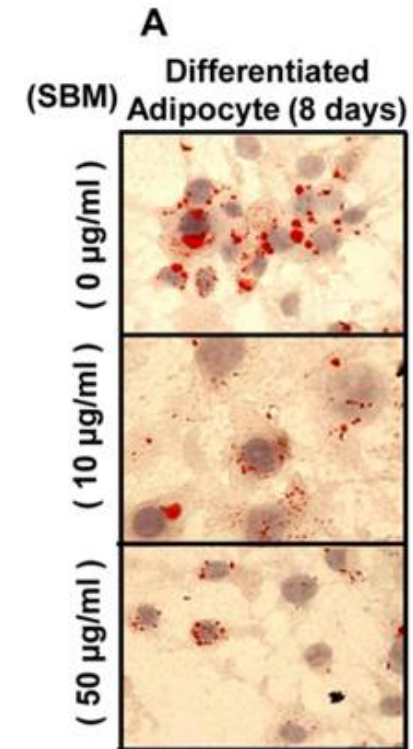


Fat decomposition effect

Reduces swelling and
reduces pain

"The phytotherapeutic protein stem bromelain (SBM) is used as an anti-obesity alternative medicine.

We show at the cellular level that SBM irreversibly inhibits 3T3-L1 adipocyte differentiation by reducing adipogenic gene expression and induces apoptosis and lipolysis in mature adipocytes."



HOW Wellstox MesoCut WORKS?

Carnitine



- Substance essential for converting fat into energy
- Transports long-chain fatty acids to the mitochondria and helps to actively promote intracellular fatty acid oxidation
- The liver and kidneys in the human body require significant intake from Lysine and Methionine.

The lipolytic effect of Carnitine

Stage 1	Fat Separation – Ketocrusafe HCA
Stage 2	Fat Movement - Pantotenyshan moves
Stage 3	Fat gathering - fat gathering around carnitine
Stage 4	lipolysis - lipolysis after mitochondrial binding

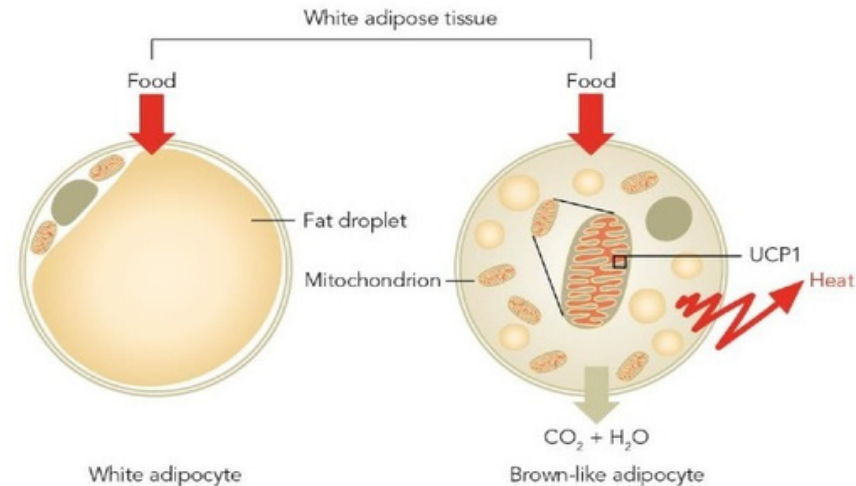
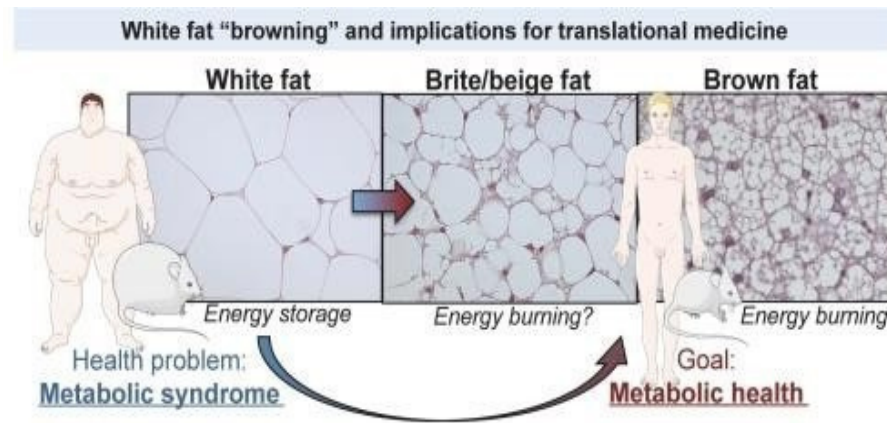
: As a part of the amino acid, the fat in the cell is moved to the mitochondria → it is burned by decomposing fatty acids through the b-oxidation process to generate energy. For this reason, when cartinine is supplemented, the transport of fatty acids becomes smooth and the energy conversion of fat is accelerated

HOW Wellstox MesoCut WORKS?

Carnitine



- Inhibits Phosphodiesterase (PDE III), increases cAMP concentration → activates Lipolysis
- Reduces adipocyte lipid concentration and prevents cellulite formation
- Flavonoids and polyphenols in plant extracts help smooth discharge/drainage of decomposed fat



- 'White fat', the cause of obesity that accumulates excess fat
- Burns white fat as energy by generating heat by itself → 'brown fat' that activates metabolism'
- **White fat → Brown fat (Browning process) is the key** 'UCP-1' protein in brown fat is an important substance that burns fat and converts it into heat

HOW Wellstox MesoCut WORKS?

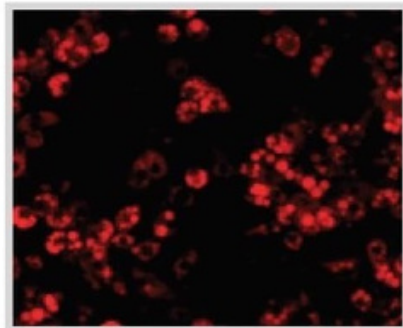
Thioctic Acid



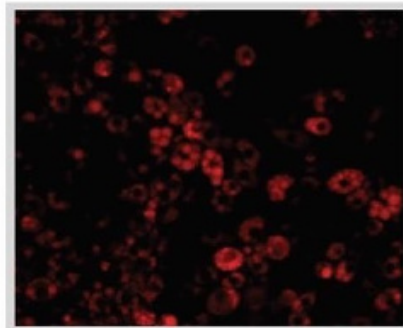
- Direct action into the adipocyte
- Reduces lipid production, reduces fat storage, and activates adipose tryglyceride lipase (ATGL) enzyme
- Promote transport of fatty acids to peripheral tissues, use of energy sources
- Inhibition of differentiation from pre-adipocyte to mature adipocyte

Lipid reduction effect

: The amount of lipid in the adipocyte is dropped to about 26%



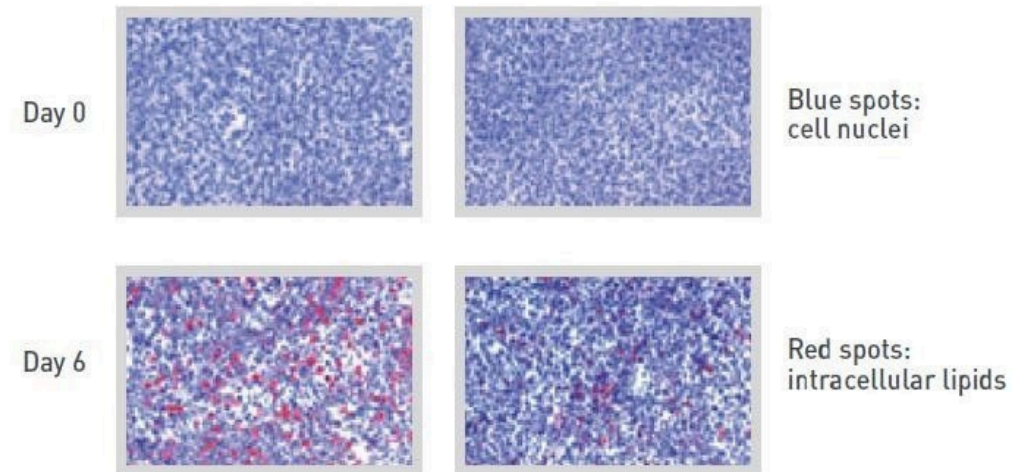
Control



Thiotic acid

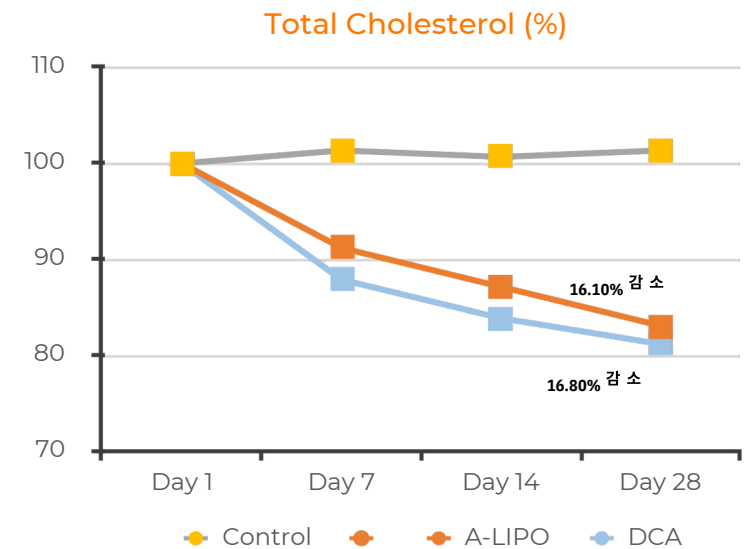
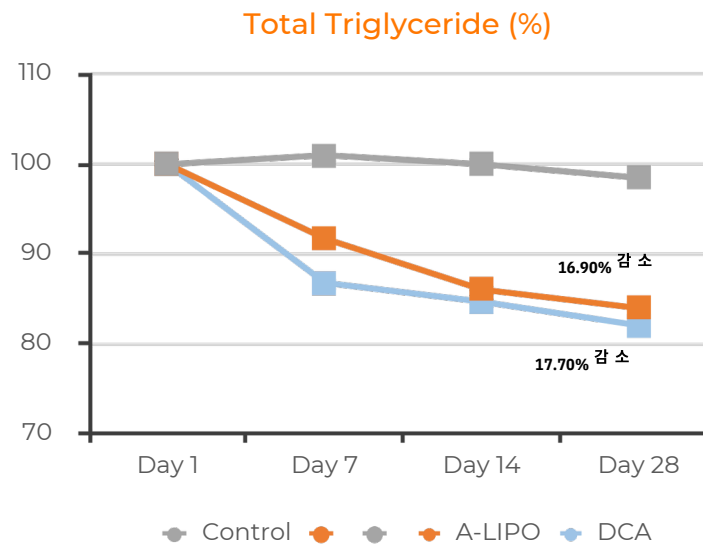
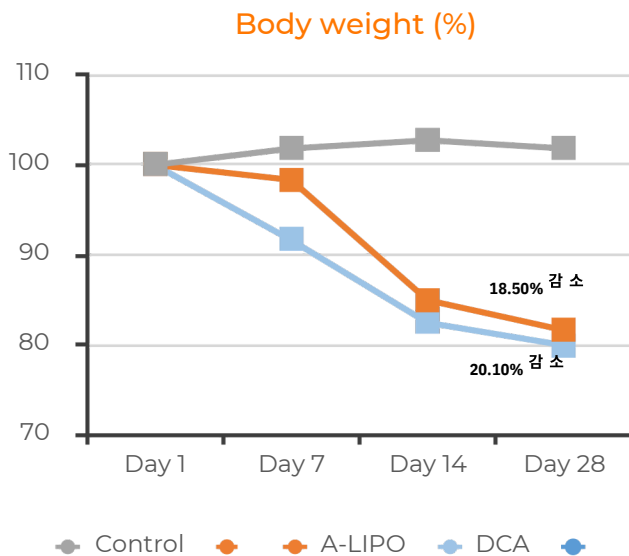
Inhibition of differentiation into adipocytes

: It can be seen that the differentiation of pre-adipocytes to mature adipocytes is significantly inhibited.



Wellstox MesoCut EFFICACY DATA

Weight / blood triglyceride / blood cholesterol level comparison



** Content determination criteria

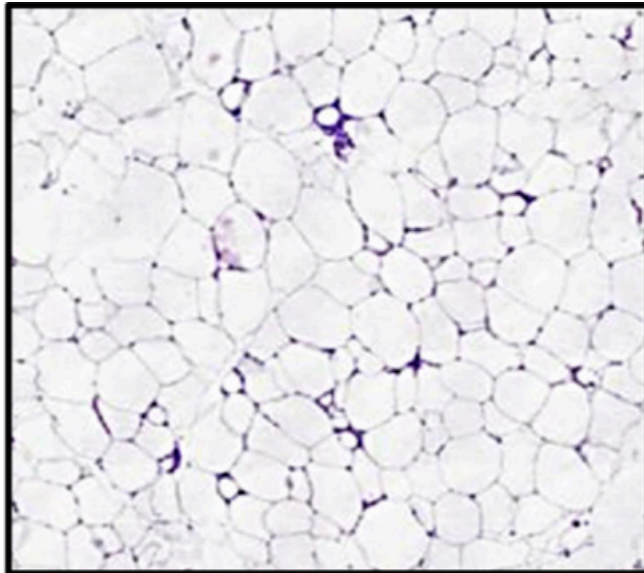
- 1) In the case of DCA, necrosis due to cytotoxic reaction was induced in more than 90% of cases when 1.2% or more was used (previous study). Therefore, the maximum concentration standard within the range that does not cause effective toxicity was set to 0.8%.
- 2) In the case of Wellstox MesoCut, does not show cytotoxicity up to 10.0%, but the maximum effect is the same within the range of 2.5% to 10.0%. Therefore, the content is set based on the minimum effective concentration of 2.5%

Wellstox MesoCut EFFICACY DATA

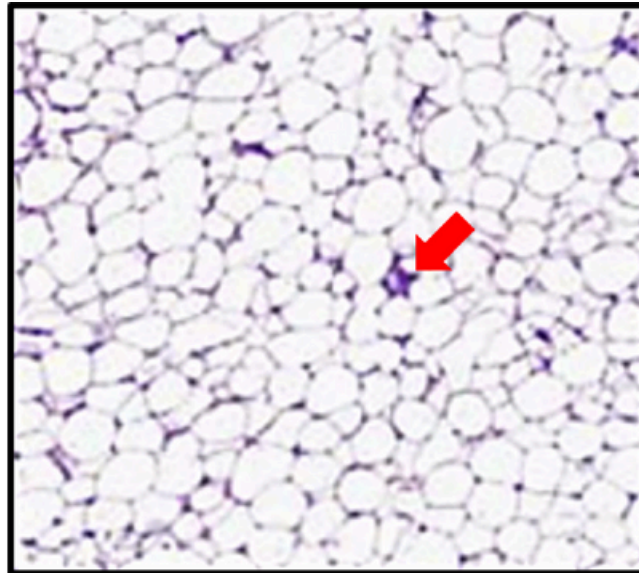
Comparison of cell necrosis and inflammation
through adipose tissue staining



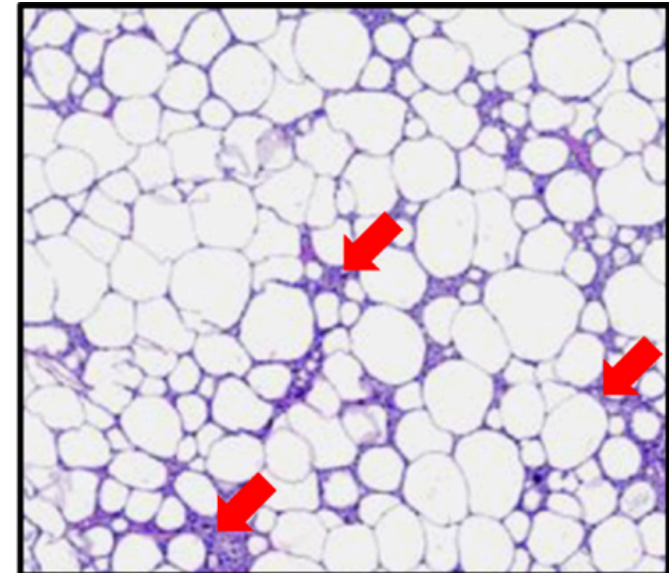
Control



Wellstox MesoCut



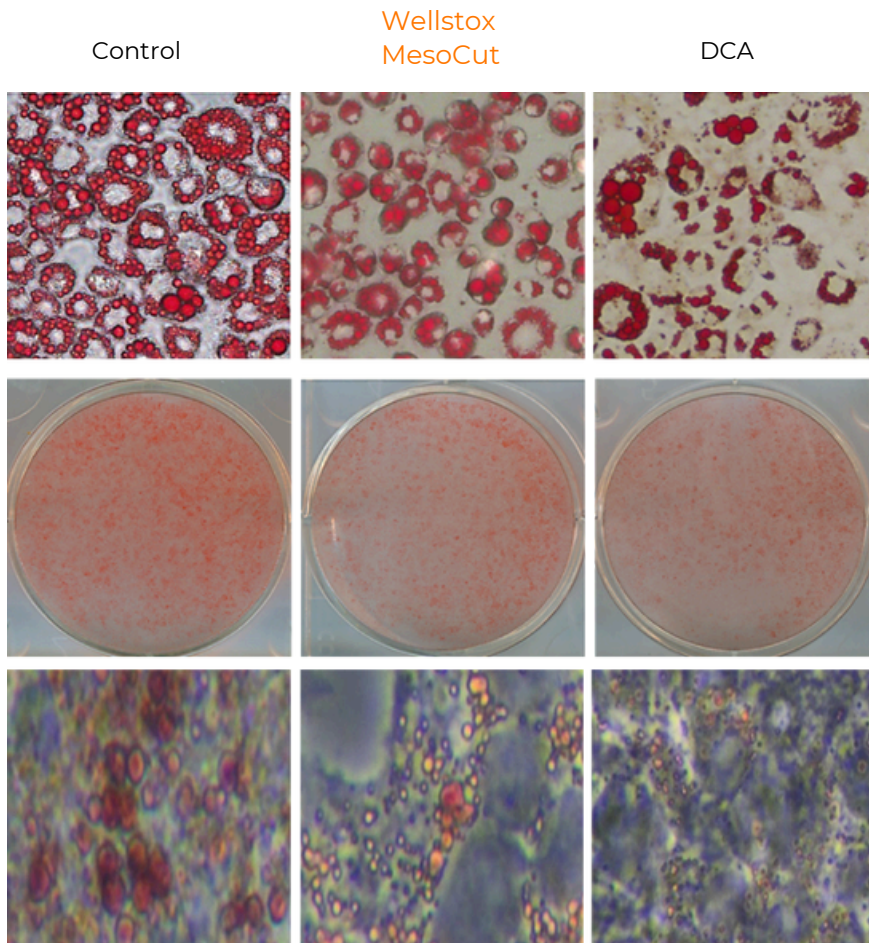
DCA



- Wellstox MesoCut test group: Confirmation of overall fat cell size reduction. Inflammatory reaction is seen in some, but very local
- DCA test group: A large amount of fibrosis and some tissue necrotic inflammatory response in tissues were confirmed.

Wellstox MesoCut EFFICACY DATA

Comparison of changes in adipocytes according to treatment of product



[Data Description]

-Experimental method: Observation of cells over time after administration of each product group to adipocytes

-Results observation: Adipocyte staining (Oil Red O staining)

-Interpretation of results:

1) Wellstox MesoCut test group: Confirmation of overall reduction in the number of fat cells and reduction in cell size

2) DCA test group: The overall number of fat cells decreased, but most of them were observed in the form of cellular debris due to necrosis.

COMPARISON OF OTHER PRODUCTS AND Wellstox MesoCut

Difference between other lipolytic products



	Product based on plant extracts	Other lipolysis product	Wellstox MesoCut
Main ingredient	Juglans Regia Seed, Fucus Vesiculosus, Cynara Scolymus, etc	Phosphatidylcholine, Deoxycholic acid, Aminophyllin etc	Glycerophosphocholine, Carnitine, Sodium Deoxycholate, etc
Durability	Officially 2~3 month	Technically eternal / Officially up to 1 year	Technically eternal / Officially up to 1 year
Advantages	Reduced fat size	Breaks down fat cell	Breaks down fat cell, inhibits lipogenesis
Side effect	Shrunk fat cell turns back to the normal	Swelling, Bruising	No bruising, Less pain
Down time	1 – 3 days	14 – 30 days	1 – 3 days
Pain	Painless	Severe Pain	Mild or painless

APPLICATION SITES

Wellstox MesoCut

Sites	Recommended dosage
Double chin	1 cc - 2 cc
Arms	5 cc – 10 cc
Abdomen / Love Handles	5 cc – 20 cc
Thighs	10 cc – 20 cc
Treatment cycle	Once every two weeks for the first 3-4 sessions, then once a month

** The above recommended amount may change according to the opinions of doctors or experts or the patient's condition.*



Wellstox MesoCut Packing Unit



Item	Area	Main ingredient	Packing Unit
Wellstox MesoCut	Face & Body	Glycerophosphocholine Sodium Deoxycholate Thioctic Acid Carnitine Bromelain	10ml x 5ea / box

**All ingredients used are INCI and Chinese NMPA approved registered ingredients.



Before & After

Wellstox MesoCut

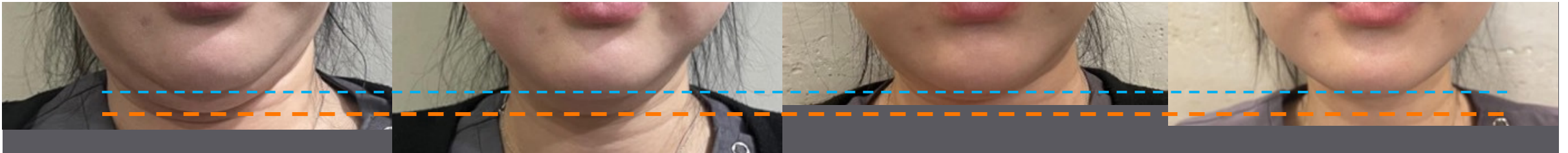


Before>

Right After>

After 2 weeks>

After 4 weeks!



* * Results may vary

Before & After

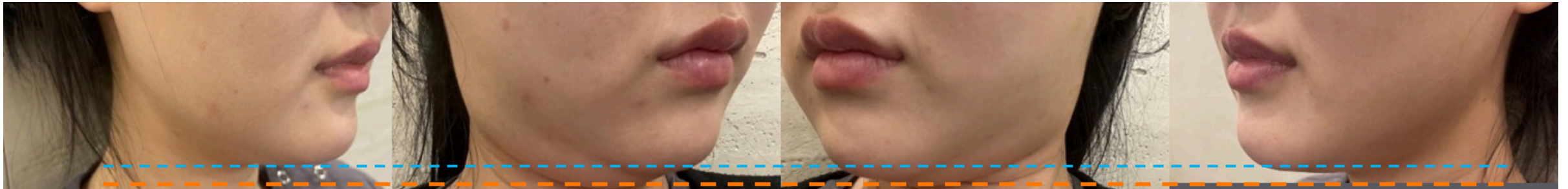
Wellstox MesoCut



After 4 weeks

< < Before > >

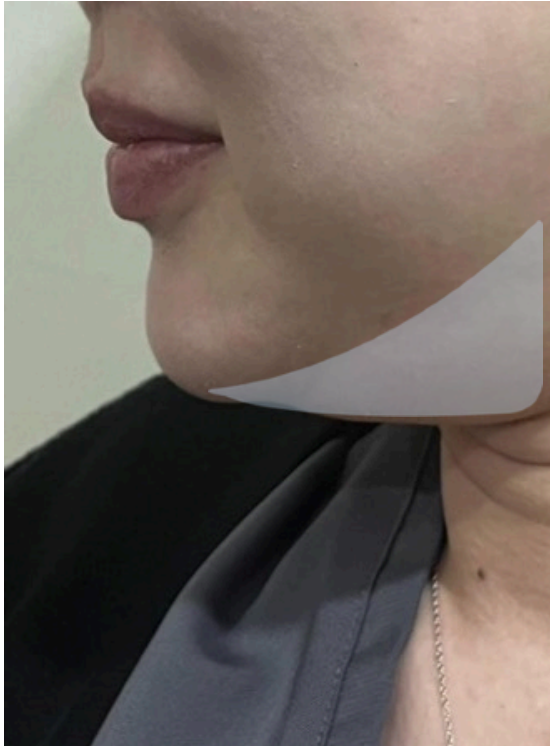
After 4 weeks



* * Results may vary

Before & After

Wellstox MesoCut



Before



Right After



After 4 weeks!

* * Results may vary

Before & After

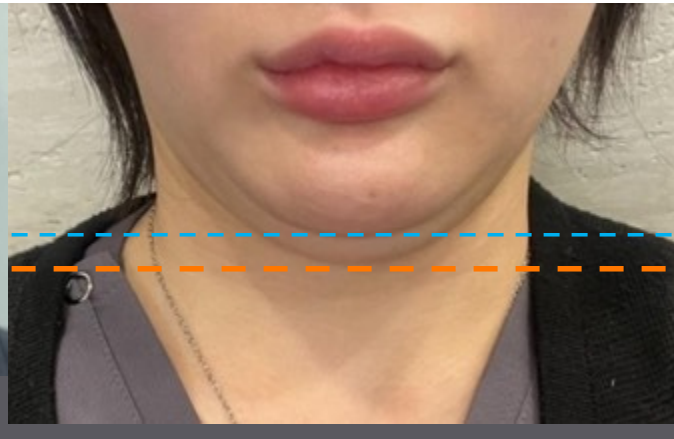
Wellstox MesoCut



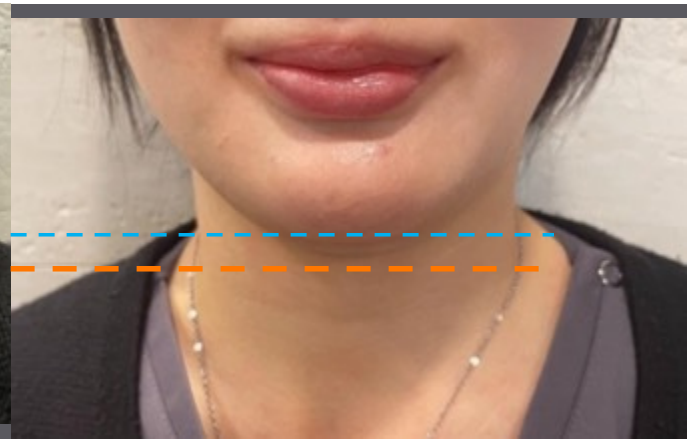
Before>



After 2 weeks>



After 4 weeks!



* * Results may vary



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WELLSTOX

