RIBOFLAVIN ACTIVATION BOOSTER

IT'S YOUR TIME TO SHINE.

CHAPTER 01: PRODUCT INTRODUCTION

INTRO

LEMONBOTTLE

LEMONBOTTLE AMPOULE SOLUTION FOR FACE & BODY

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ADVANCED

NEW LIPOLYSIS SOLUTION!

IT IS A HIGH-CONCENTRATION PREMIUM LEMONBOTTLE SOLUTION THAT COMBINES RIBOFLAVIN(VITAMIN B2) AND EXCELLENT INGREDIENTS FOR FAT DECOMPOSITION TO INCREASE METABOLISM OF FAT CELLS AND ACCELERATE IT. LEMONBOTTLE IS A HIGH-QUALITY PRODUCT THAT IS DIFFERENT FROM THE PREVIOUS ONE.

CHAPTER 01: PRODUCT INTRODUCTION

MAIN FUNCTION

THE METABOLIC ACTIVATION EFFECT OF RIBOFLAVIN

SEPARATE AND SEND OUT THE FAT CELL

FAST LIPASE ACTIVITY AND INFLAMMATION RELIEF

CHAPTER 01: PRODUCT INTRODUCTION

KEY INGREDIENTS

RIBOFLAVIN (VITAMIN B2)

BROMELAIN ANANAS SATIVUS (PINEAPPLE)

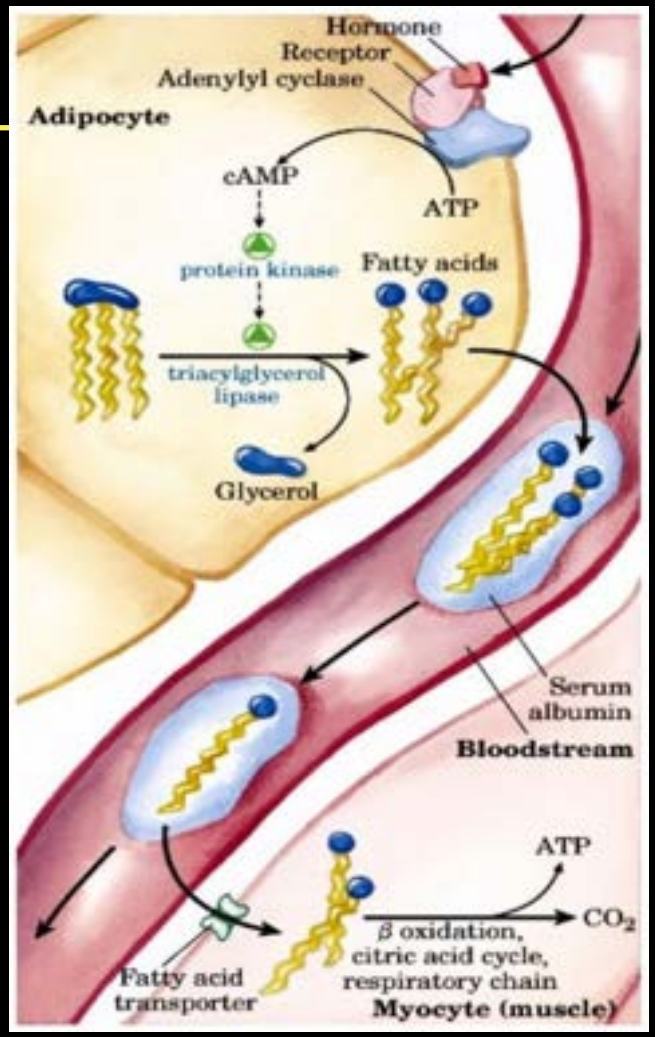
LECITHIN

CHAPTER 02: PRODUCT MECHANISM

HOW LEMONBOTTLE TREATMENT WORKS

LECITHIN
RIBOFLAVIN
BROMELAIN

1. VITAMIN B2 INDUCES ACTIVATION OF FAT METABOLISM
2. LECITHIN DESTROYS AND TRANSPORTS UNNECESSARY FAT CELLS
3. BROMELAIN HELPS TO BREAK DOWN FAT AND REMOVE INFLAMMATION



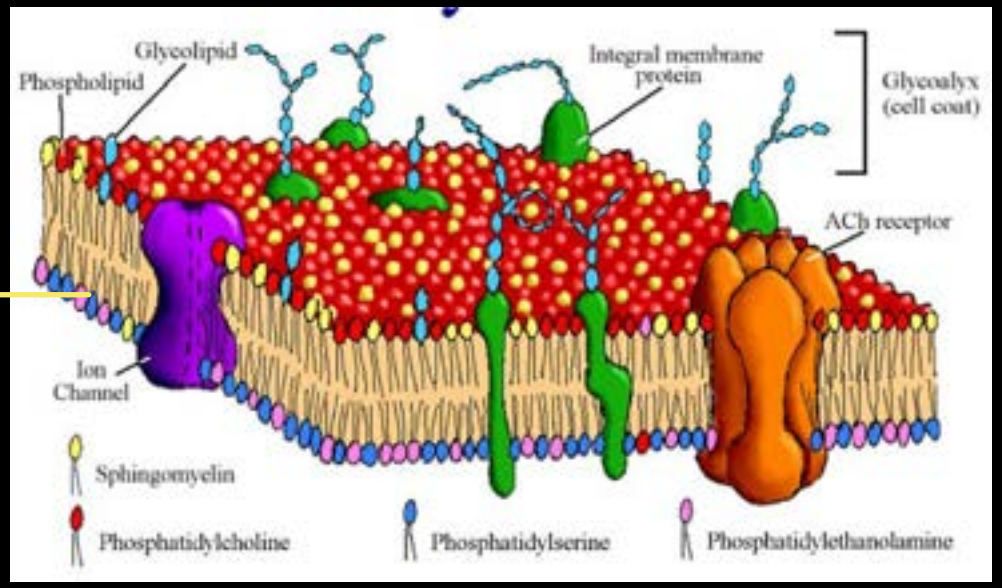
CHAPTER 02: PRODUCT MECHANISM

BROMELAIN & LECITHIN DUAL ACTION

- LECITHIN
- BROMELAIN
- FAT LIPOLYSIS
- PROTEIN LYSIS

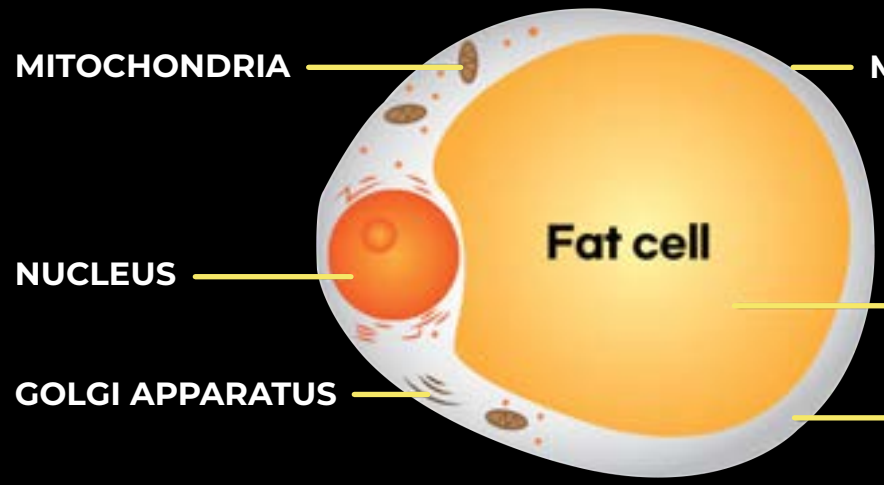
FAT CELL

FAT CELL MEMBRANE



CHAPTER 02: PRODUCT MECHANISM

BROMELAIN & LECITHIN &RIBOFLAVIN TRIPLE EFFECT

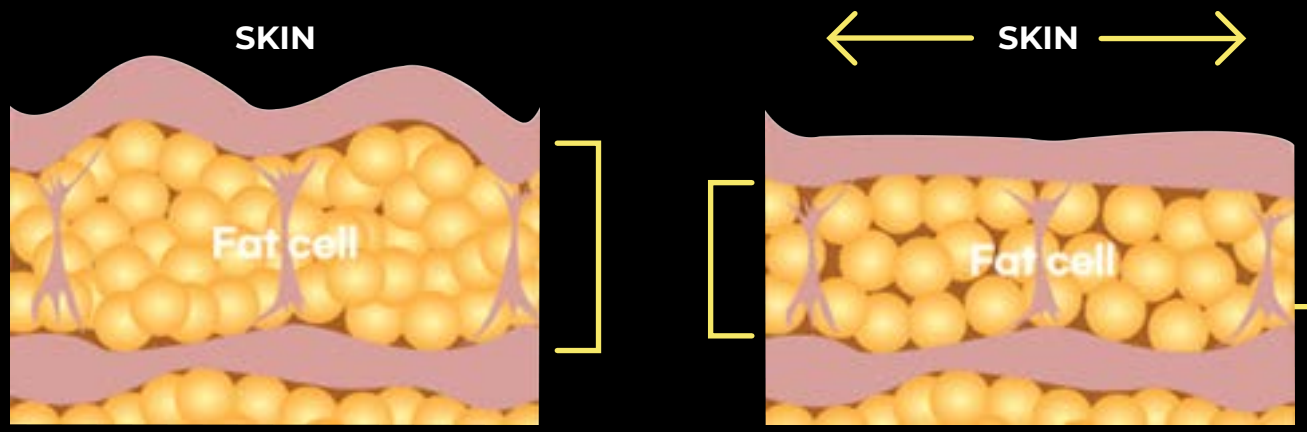


1

BROMELAIN
PROTEIN LYSIS

2

LECITHIN
FAT LIPOLYSIS



3

RIBOFLAVIN
FAT METABOLISM
BOOSTER

SKIN
REGENERATION

ANTIOXIDANT

CHAPTER 02: PRODUCT MECHANISM

RIBOFLAVIN(VITAMIN B2)

INDUCE ACTIVATION OF FAT METABOLISM AND REDUCE BLOOD FAT

CARBOHYDRATES AND FATS ARE LEAD TO ENERGY

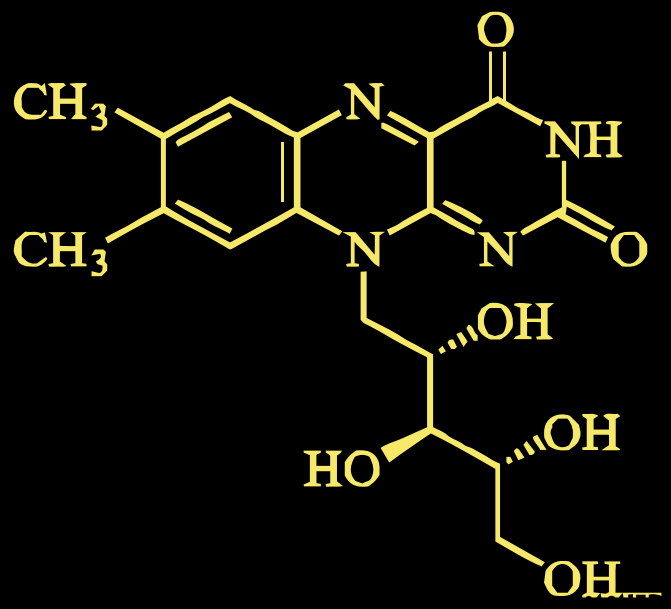
REDUCTION OF EDEMA DUE TO INCREASED BLOOD FLOW

CHAPTER 02: PRODUCT MECHANISM

RIBOFLAVIN(VITAMIN B2)

RIBOFLAVIN - VITAMIN B2

"VITAMIN B2, OR RIBOFLAVIN, IS NATURALLY PRESENT IN FOODS, ADDED TO FOODS, AND AVAILABLE AS A SUPPLEMENT. BACTERIA IN THE GUT CAN PRODUCE SMALL AMOUNTS OF RIBOFLAVIN, BUT NOT ENOUGH TO MEET DIETARY NEEDS. RIBOVLAVIN IS A KEY COMPONENT OF COENZYMES INVOLVED WITH THE GROWTH OF CELLS, ENERGY PRODUCTION, AND THE BREAKDOWN OF FATS, STEROIDS AND MEDICATIONS. MOST RIBOFLAVIN IS USED IMMEDIATELY AND NOT STORED IN THE BODY, SO EXCESS AMOUNTS ARE EXCRETED IN THE URINE. AN EXCESS OF DIETARY RIBOFLAVIN, USUALLY FROM SUPPLEMENTS, CAN CAUSE URINE TO BECOME BRIGHT YELLOW."



RIBOFLAVIN, A WATER-SOLUBLE VITAMIN, PLAYS A ROLE IN TURNING CARBOHYDRATE PROTEIN FAT INTO ENERGY IN THE BODY AND CANNOT STORE MUCH OF IT.

VITAMIN B2 IS INVOLVED IN THE OXIDATION OF FAT AND HELPS FAT METABOLISM BY PROMOTING FAT BURNING

?

WHAT IS FAT METABOLISM?

FAT METABOLISM REFERS TO THE REACTION OF SYNTHESIS AND DECOMPOSITION IN VIVO, ITS ACTIVATION HELPS TO BREAK DOWN FAT IN THE BODY AND ENABLES MORE EFFECTIVE LIPOLYSIS.

CHAPTER 02: PRODUCT MECHANISM

RIBOFLAVIN(VITAMIN B2)

612 *Chapter 37*

37.1.1 Riboflavin Metabolism

Riboflavin needs to be present in the human typical diet, as animals, unlike many plants, fungi and bacteria, are unable to synthesize this molecule. Dietary intake of this vitamin includes free riboflavin and also its protein bound form, as FAD and FMN in flavoproteins (Figure 37.1A). In the latter case, flavins need to be first released from carrier proteins during digestion and then hydrolysed to riboflavin by alkaline phosphatases and FMN/FAD pyrophosphatase in order to be absorbed at the small intestine.

Apart from dietary intake, riboflavin is also obtained from endogenous synthesis by microflora in the large intestine and is subsequently absorbed. Inside the cell, FMN is formed from vitamin B2 *via* adenosine triphosphate (ATP) phosphorylation and a flavokinase. FMN can be subsequently converted to FAD through a FAD synthetase also in the presence of ATP (Figure 37.1B).

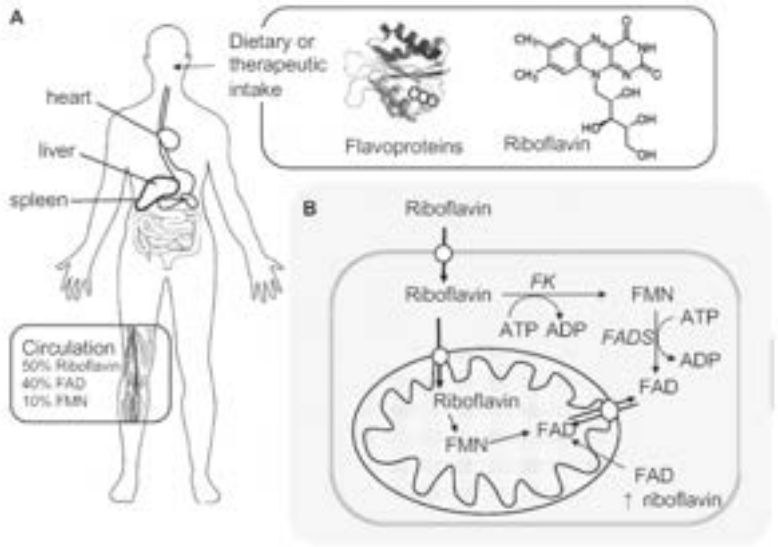


Figure 37.1 Riboflavin metabolism and cellular processing pathways. (A) Riboflavin and flavin intake is made *via* the diet, either in riboflavin-rich aliments or flavoproteins. In the latter, digestion in the stomach releases FAD and

IT HELPS WITH ATHEROSCLEROSIS AND OBESITY BY REDUCING LIPIDS PEROXIDE, TRIGLYCERIDES AND CHOLESTEROL BY LEADING TO REACTIONS OF OTHER ENZYMES TO TREAT OBESITY.

IT ACCELERATES THE ACTIVATION OF FAT METABOLISM BY QUICKLY INDUCING CARBOHYDRATES, PROTEIN, FAT AND PROTEINS TO ENERGY. IT ACTS AS A CATALYST AND IS INVOLVED IN LIPOLYSIS AS A COENZYME OF VARIOUS OXIDATION AND REDUCTION REACTIONS WITHIN THE TISSUE.

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

BROMELAIN ANANAS SATIVUS (PINEAPPLE)

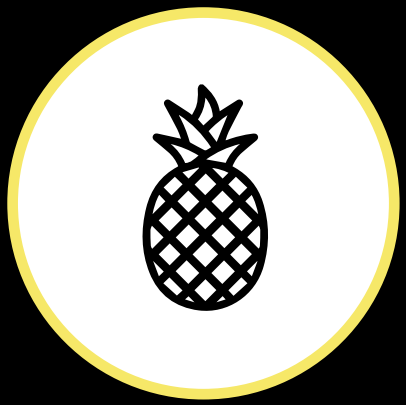
1. BROMELAIN IS A POWERFUL DIGESTIVE ENZYME COMMONLY FOUND AND EXTRACTED FROM PINEAPPLES' FRUITS, LEAVES AND STEMS.

2. ALL CRUDE PAPAYA LATEX REPRESENTS PROTEOLYSIS, LIPOLYSIS AND INTERESTERIFICATION ACTIVITIES

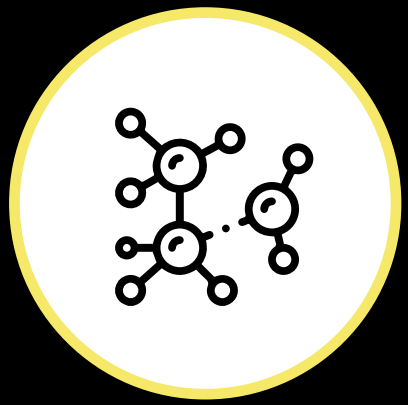
3. BROMELAIN PLAYS A ROLE IN MANY PHYSIOLOGICAL PROCESSES AND CAN ALSO AFFECT THE DISEASE TREATMENT PROCESS.

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

BROMELAIN ANANAS SATIVUS (PINEAPPLE)



PROTEASE IN PINEAPPLE



LIPOLYSIS EFFECT

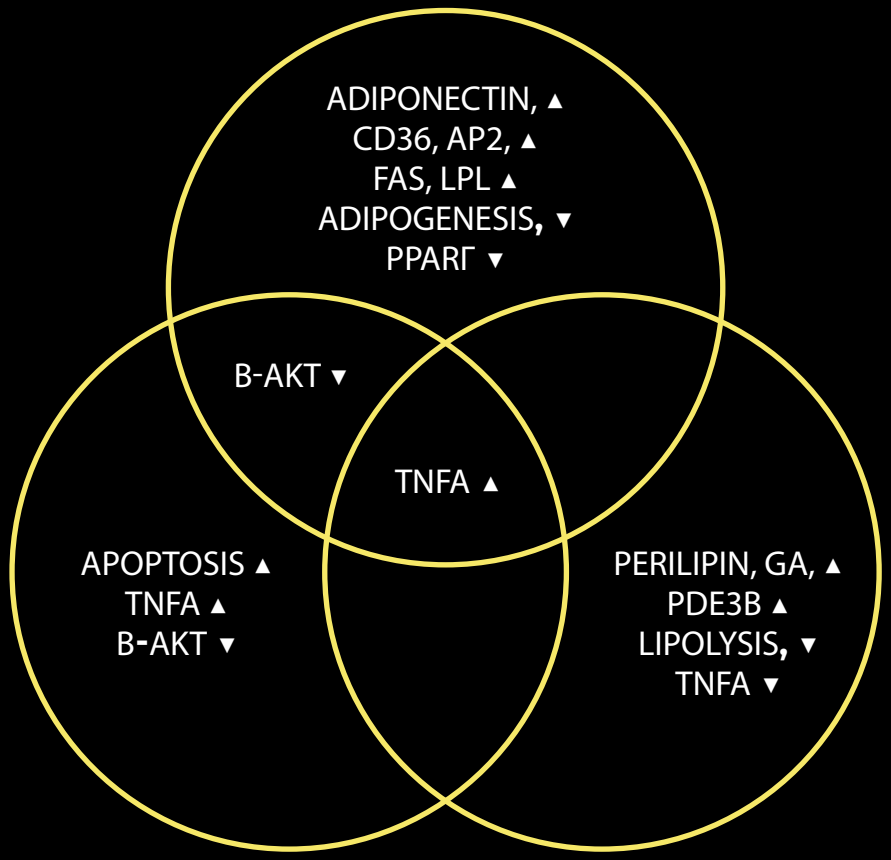
INFLAMMATION TREATMENT AND WOUND RECOVERY

EDEMA REDUCTION, PAIN REDUCTION

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

BROMELAIN

INHIBITION AND DECOMPOSITION OF LIPOGENESIS



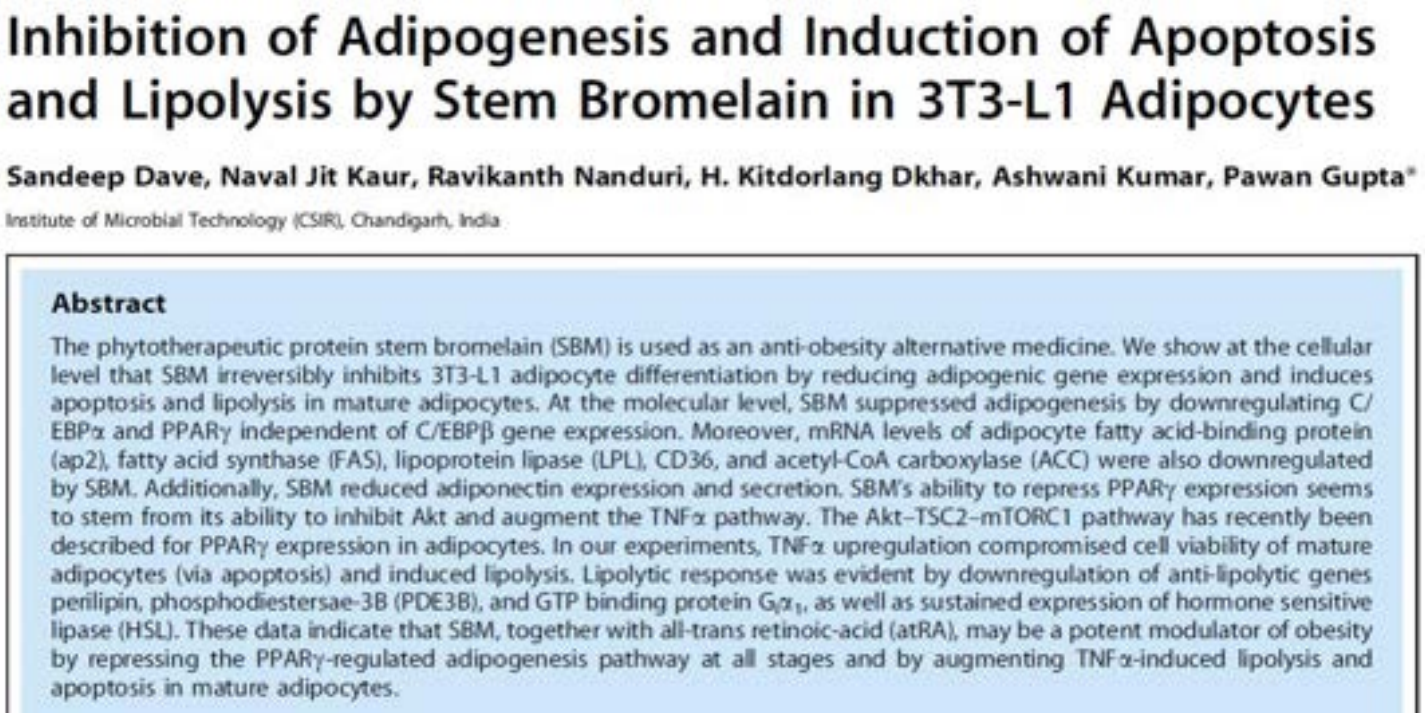
HOW BROMELAIN HELPS WITH WEIGHT LOSS BY INCREASING TNF-ALPHA SOURCE

BROMELAIN HELPS WITH WEIGHT LOSS DUE TO ITS EFFECTS ON FAT

"BROMELAIN HELPS WITH WEIGHT LOSS DUE TO ITS EFFECTS ON FAT (ADIPOSE) TISSUE. IN RAT CELL CULTURES, STEM BROMELAIN ADMINISTRATION INHIBITED THE FORMATION (DIFFERENTIATION) OF FAT CELLS. IT DOES THIS BY INCREASING GENES (C/EBPA AND PPARY) THAT ARE NEEDED FOR FAT CELL FORMATION. MOREOVER, IT BLOCKED AKT/MTOR SIGNALING (TRANSMISSION) AND INCREASED TNF-A LEVELS IN MATURE FAT CELLS. THIS CAUSED THE FAT CELLS TO SELF-DESTRUCT. ADDITIONALLY, TNF-A INDUCES THE BREAKDOWN OF FATS (LIPOLYSIS). ALL OF THESE FACTORS COMBINED TOGETHER HELP PREVENT AND ADDRESS OBESITY."

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

EFFECT OF BROMELAIN



Inhibition of Adipogenesis and Induction of Apoptosis and Lipolysis by Stem Bromelain in 3T3-L1 Adipocytes

Sandeep Dave, Naval Jit Kaur, Ravikanth Nanduri, H. Kitdorlang Dkhar, Ashwani Kumar, Pawan Gupta*

Institute of Microbial Technology (CSIR), Chandigarh, India

Abstract

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. At the molecular level, SBM suppressed adipogenesis by downregulating C/EBPα and PPARγ independent of C/EBPβ gene expression. Moreover, mRNA levels of adipocyte fatty acid-binding protein (ap2), fatty acid synthase (FAS), lipoprotein lipase (LPL), CD36, and acetyl-CoA carboxylase (ACC) were also downregulated by SBM. Additionally, SBM reduced adiponectin expression and secretion. SBM's ability to repress PPARγ expression seems to stem from its ability to inhibit Akt and augment the TNFα pathway. The Akt–TSC2–mTORC1 pathway has recently been described for PPARγ expression in adipocytes. In our experiments, TNFα upregulation compromised cell viability of mature adipocytes (via apoptosis) and induced lipolysis. Lipolytic response was evident by downregulation of anti-lipolytic genes perilipin, phosphodiestersae-3B (PDE3B), and GTP binding protein $G_i\alpha_1$, as well as sustained expression of hormone sensitive lipase (HSL). These data indicate that SBM, together with all-trans retinoic-acid (atRA), may be a potent modulator of obesity by repressing the PPARγ-regulated adipogenesis pathway at all stages and by augmenting TNFα-induced lipolysis and apoptosis in mature adipocytes.

THE PHYTOTHERAPEUTIC PROTEIN STEM BROMELAIN IS USED AS AN ANTI-OBESITY ALTERNATIVE MEDICINE. AND IT INDUCES APOPTOSIS AND LIPOLYSIS IN MATURE ADIPOCYTES.

BROMELAIN MAYBE A POTENT MODULATOR OF OBESITY.

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

EFFECT OF PINEAPPLE

The consumption of a high-fat diet for 24 weeks led to an increase in the mice in all groups.

As the treatment began, the weight of the mice in the untreated group continues to increase, while weight loss reduction was noticed in both pineapple vinegar treatment groups.

3. Results

3.1. Pineapple Vinegar Reduces Bodyweight

Figure 1 shows that the consumption of a high-fat diet for 24 weeks led to an increase in the bodyweight of mice in all groups. As the treatment began, we can see that the weight of the mice in the untreated group continues to increase, while weight loss reduction was noticed in both pineapple vinegar treatment groups. The posttreatment assays revealed the significant ($p < 0.05$) reduction in the percentage of gonadal adipose tissue over the bodyweight was recorded in the mice of high-concentration pineapple vinegar group as compared to the untreated group (Table 2).

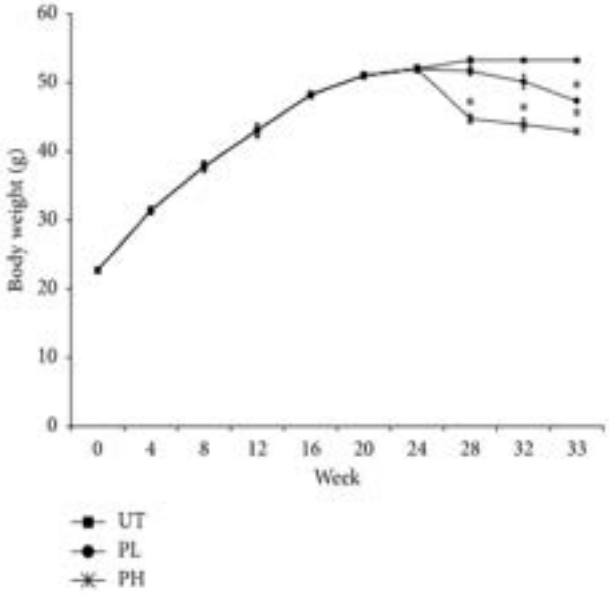


Figure 1

Bodyweight measurement (week 0–week 33) of untreated (UT), 0.08 mL/kg BW pineapple vinegar (PL), and 1 mL/kg BW pineapple vinegar (PH). The data presented are representative of the average biological replicate of mice from the same treatment group.

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

BROMELAIN ANTI-INFLAMMATORY

BROMELAIN DECREASES THE MAJORITY OF PRO-INFLAMMATORY MEDIATORS AND IS A POWERFUL ANTI-INFLAMMATORY AGENT. CYCLOOXYGENASE-2 (COX-2) IS A MAJOR CONTRIBUTOR TO INFLAMMATION. IT HELPS WITH THE SYNTHESIS OF PROSTAGLANDIN E2 (PGE-2), WHICH IS A PRO-INFLAMMATORY FAT (LIPID). PGE-2 ALSO SUPPRESSES THE IMMUNE SYSTEM AND PROMOTES TUMOR PROGRESSION.

BROMELAIN REDUCES COX-2 AND PGE-2 LEVELS IN MOUSE AND HUMAN CELL CULTURES.

WHEN INFLAMMATION CAUSES THE OVERPRODUCTION OF PROINFLAMMATORY CYTOKINES, BROMELAIN REDUCES IL, 1B, 1L-6 SECRETION. FOR EXAMPLE, BROMELAIN REDUCES IFN-Y AND TNF-A PRODUCTION IN INFLAMMATORY BOWEL DISEASE (IBD).

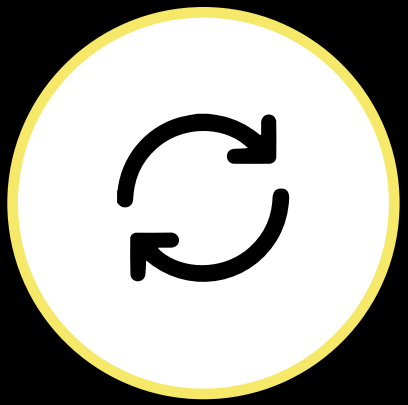
BROMELAIN ALSO LOWERS THE PRODUCTION OF TGF-B, ANOTHER MAJOR CONTRIBUTOR OF INFLAMMATION.

IN MOUSE CELL CULTURES, THE PROTEASES IN BROMELAIN INHIBITED ERK-2 TRANSMISSION. THIS INHIBITION BLOCKS CYTOKINE PRODUCTION AND HELPS PREVENT INFLAMMATION."

PROTEASE CONTAINED IN BROMELAIN INHIBITS ERK-2 PROPAGATION, HELPING TO BLOCK CYTOKINE PRODUCTION AND PREVENT INFLAMMATION.

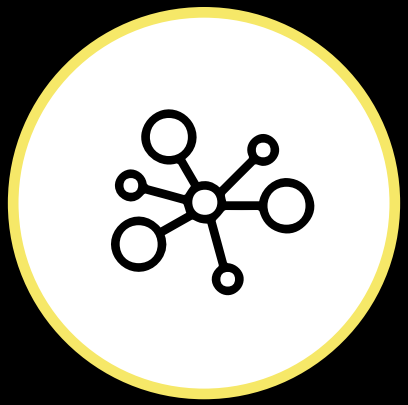
CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

LECITHIN

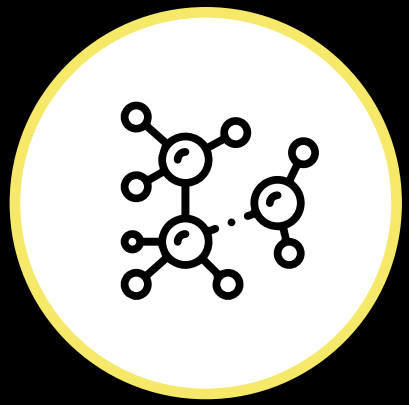


LIPASE (LIPOLYTIC ENZYME) ACTIVITY INCREASE (STIMULATION OF LIPASE ACTIVITY)

TRIGLYCERIDE DECOMPOSITION AND TRANSPORT IN FAT CELL (EMULSIFICATION AND TRANSPORT OF TRIGLYCERIDES)



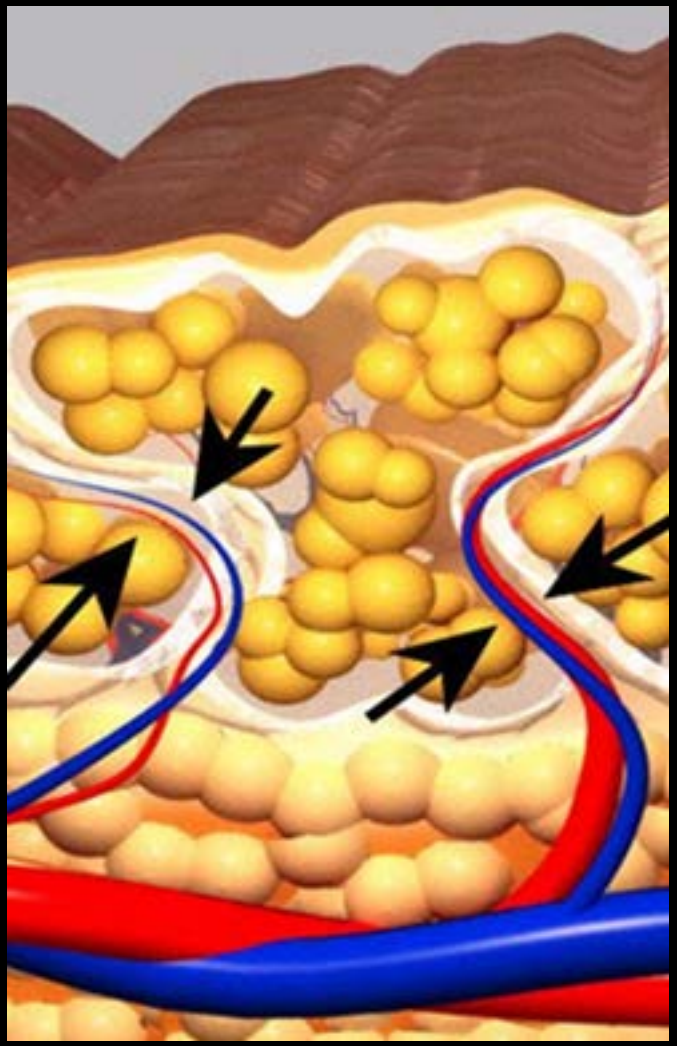
FAT CELL WALL DECOMPOSITION (DETERGENT ACTION)



DEGRADATION OF BAD CHOLESTEROL IN THE BLOOD SUCH AS WASTE AND NEUTRAL FAT IN THE BLOOD VESSELS (ELIMINATE UNNECESSARY ACCUMULATION ON FAT -> OBESITY PREVENTION EFFECT)

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

WHAT IS LECITHIN?



LECITHIN IS A GENERIC TERM TO DESIGNATE ANY GROUP OF YELLOW-BROWNISH FATTY SUBSTANCES OCCURRING IN ANIMAL AND PLANT TISSUES, WHICH ARE AMPHIPHILIC - THEY ATTRACT BOTH WATER AND FATTY SUBSTANCES (AND SO ARE BOTH HYDROPHILIC AND LIPOPHILIC).

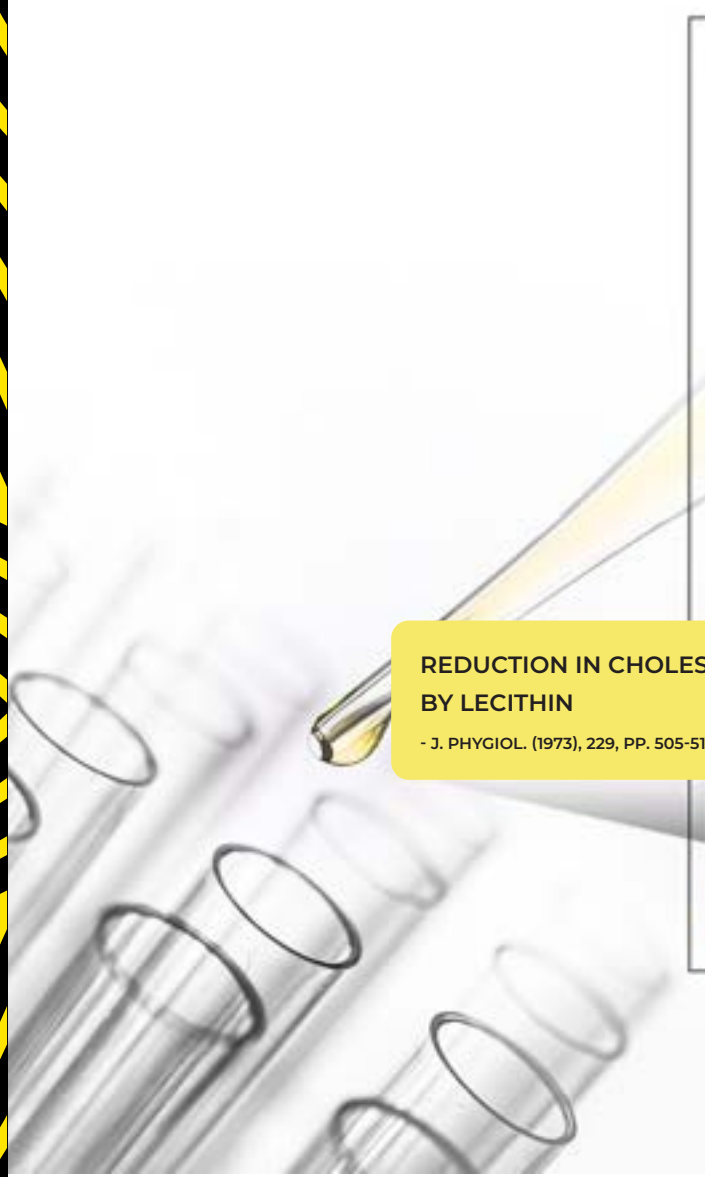
IT IS USUALLY AVAILABLE FROM SOURCES SUCH AS SOYBEANS, EGGS, MILK, MARINE SOURCES, RAPESEED, COTTONSEED AND SUNFLOWER. IT HAS LOW SOLUBILITY IN WATER, BUT IS AN EXCELLENT EMULSIFIER. IN AQUEOUS SOLUTION, ITS PHOSPHOLIPIDS CAN FORM EITHER LIPOSOMES, BILAYER SHEETS, MICELLES, OR LAMELLAR STRUCTURES, DEPENDING ON HYDRATION AND TEMPERATURE.

THIS RESULTS IN A TYPE OF SURFACTANT THAT USUALLY IS CLASSIFIED AS AMPHIPATHIC. LECITHIN IS USED TO TREAT LIVER AILMENTS AND HYPERCHOLESTEROLEMIA. THE MECHANISM APPEARS TO BE ENHANCEMENT OF CHOLESTEROL METABOLISM IN THE DIGESTIVE SYSTEM.

LECITHIN POSSESS BENEFICIAL PROPERTIES IN REDUCING CHOLESTEROL LEVELS AND CONTROLLING OR PREVENTING ATHEROSCLEROSIS.

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

EFFECT OF LECITHIN



THE EFFECT OF LECITHIN ON INTESTINAL CHOLESTEROL UPTAKE BY RAT INTESTINE *IN VITRO*

By ALFRED J. RAMPONE

From the Department of Physiology, University of Oregon Medical School, Portland, Oregon 97201, U.S.A.

(*Received 25 September 1972*)

SUMMARY

1. Sacs 20 cm long were obtained from the upper half of the small intestine of bile fistula rats (bile duct cannulated 48 hours previously). The sacs were everted, filled with oxygenated phosphate buffer and incubated 1 hr at 37°C in 25 ml. of a buffered micellar solution of oleic acid (0·6 mM), mono-olein (0·3 mM), sodium taurocholate (4·8 mM) and ^{3}H-labelled cholesterol (0·15 mM) plus glucose (28 mM).

2. After incubation the amount of [^{3}H]cholesterol taken up by the mucosal tissue was measured. It averaged 200 n-mole/hr.g tissue wet wt. ± 6 (S.E.).

3. Adding 3 ml. whole rate bile with other factors unchanged caused cholesterol uptake to decrease by 50 % in confirmation of previous studies. m rat liver tissue, and from egg ake. A significant response was entration 0·13 mM) and a near ration 0·80 mM). 10 mg lecithin nt to that obtained with 3 ml. whole bile.

5. Lecithin is an active component of whole bile causing reduced intestinal cholesterol uptake from micelles.

6. The decreased uptake of cholesterol in the presence of lecithin may have been the result of expansion of the cholesterol-containing micelles with consequent reduction in cholesterol permeability.

REDUCTION IN CHOLESTEROL PERMEABILITY BY LECITHIN

- J. PHYGIOL. (1973), 229, PP. 505-514

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CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

EFFECT OF LECITHIN

CENTELLA ASIATICA, COMMONLY KNOWN AS CENTELLA, ASIATIC PENNYWORT OR INDIAN PENNYWORT OR GOTU KOLA, IS A HERBACEOUS, FROST-TENDER PERENNIAL PLANT IN THE FLOWERING PLANT FAMILY APIACEAE, SUBFAMILY MACKINLAYOIDEAE. IT IS NATIVE TO WETLANDS IN ASIA. IT IS USED AS A CULINARY VEGETABLE AND AS MEDICINAL HERB.

IN TRADITIONAL MEDICINE, CENTELLA ASIATICA HAS BEEN USED IN AN ATTEMPT TO TREAT VARICOSE VEINS, CHRONIC VENOUS INSUFFICIENCY....
CENTELLA ASIATICA IS RICH IN AMINO ACIDS, BETA CAROTENE, FATTY ACIDS, AND PHYTOCHEMICALS. THIS SUPER BLEND OF NUTRIENTS OFFERS FANTASTIC BENEFITS FOR THE SKIN, INCLUDING POWERFUL ANTI-AGING PROPERTIES – READ ON!

GOTU KOLA IMPROVES CIRCULATION AS WELL AS THE SYNTHESIS OF COLLAGEN AND SKIN TISSUE. COLLAGEN IS ABSOLUTELY SSENTIAL FOR MAINTAINING A TAUT AND YOUTHFUL COMPLEXION. THE NATURAL COLLAGEN WE ARE BORN WITH DIMINISHES AS WE AGE (AT A RATE OF ABOUT 1% PER YEAR). BY INCORPORATING THE BENEFITS OF CENTELLA ASIATICA INTO YOUR DAILY SKINCARE REGIMEN, YOU'LL BE SUPPORTING YOUR SKIN'S UNDERLYING STRUCTURE, THEREFORE FENDING OFF THE TELLTALE SIGNS OF AGING –WRINKLES AND LOSS OF FIRMNESS. CENTELLA ASIATICA IS ESPECIALLY BENEFICIAL FOR IMPROVING ELASTICITY – GOODBYE SAGGING SKIN.

CHAPTER 03: MAIN INGREDIENTS & FUNCTIONS

WHAT IS CENTELLA ASIATICA?

Centella asiatica in cosmetology

Wiesława Byłka, Paulina Znajdek-Awiżeń, Elżbieta Studzińska-Sroka, Małgorzata Brzezińska

Department of Pharmacognosy, Poznan University of Medical Sciences, Poland
Head: Prof. Irena Matławska

Abstract

Centella asiatica known as Gotu Kola is a medicinal plant that has been used in folk medicine for as well as in scientifically oriented medicine. The active compounds include pentacyclic triterpene side, madecassoside, asiatic and madecassic acids. *Centella asiatica* is effective in improving treatme hypertrophic wounds as well as burns, psoriasis and scleroderma. The mechanism of action involve fast proliferation and increasing the synthesis of collagen and intracellular fibronectin content and of the tensile strength of newly formed skin as well as inhibiting the inflammatory phase of hypertrophic scars and keloids. Research results indicate that it can be used in the treatment of [illegible] and ulcers.

...IT CAN BE USED IN THE TREATMENT OF CELLULITE

- POSTEP.DERM.ALERGOL 2013;XXX, 1:46-49

Centella asiatica (C. asiatica) plays a key role in traditional Ayurvedic medicine, t

C. asiatica`s ancient reputation earned its place in modern alternative medicine a number of clinical studies.

C. asiatica has many other practical uses because of its ability to improve circula varicose and spider veins. Also it is often used as an active ingredient in the cosm The purpose of this study is to analyse the effect of obesity treatment on abdom

This research divided 20-30`s women who have more than 30% higher percent b

Here we present that the group treated with C. asiatica extracts showed significa compositions and concentrations of trighyceride in blood in comparison with the

The C. asiatica treatment has positive influence upon physical slimming, body circumference reduction and so on. These imply that this ingredient is largely used for abdominal obesity management. It could be more helpful to preventing obesity related disease

...IT COULD BE MORE HELPFUL TO PREVENTING OBESITY RELATED DISEASE

- JOURNAL OF THE KOREAN SOCIETY OF COSMETOLOGY 2010; 16(1): PP.169-175

CHAPTER 04: PRODUCT R&D

CONCLUSION

BY CHANGING THE STORAGE FORM OF FAT COMPONENT AND INDUCING IT TO ENERGY SOURCE, IT REDUCES THE NUMBER AND SIZE OF FAT CELLS TO MAXIMIZE FAT REDUCTION.

DECREASES ADIPOCYTES AND PRODUCES COLLAGEN TO INCREASE SKIN ELASTICITY.

IT FACILITATES THE CIRCULATION OF THE LYMPHATIC FLUID AND CAN RAPIDLY RELEASE THE DEGRADED FAT CELLS, WHICH IS EFFECTIVE IN REDUCING EDEMA AND ELIMINATE CELLULITE.

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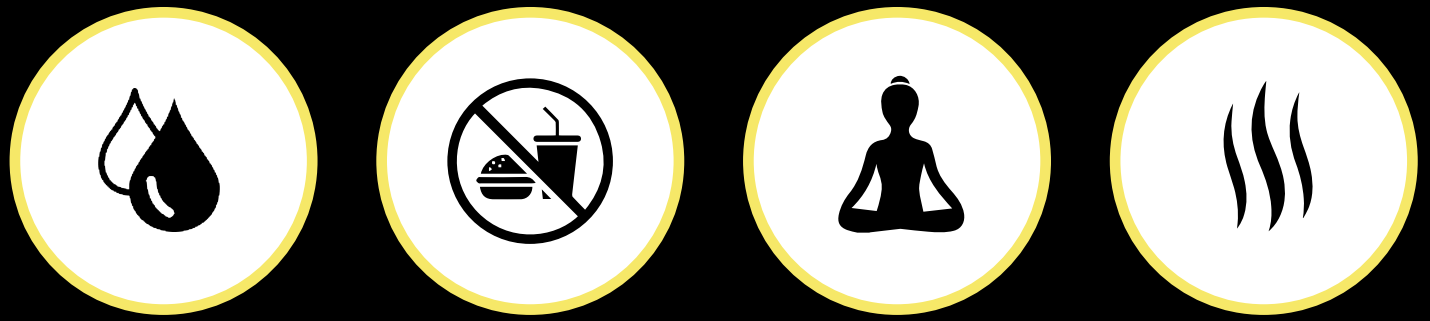
CHAPTER 05: PRODUCT USE PRECAUTIONS

POST PROCEDURE CAUTION



INTAKE SUFFICIENT WATER

NO LATE-NIGHT MEAL

DO LIGHT EXERCISE AND MASSAGE

FOR THE FIRST 2~3 DAYS, IT'S BETTER TO USE HOT TOWEL OR SAUNA

CAUTIONS

- AVOID THE AREA AROUND THE EYES
- THE AMPOULE SHOULD BE USED IMMEDIATELY
- STORE THE PRODUCT AT ROOM TEMPERATURE
- * THIS PRODUCT IS DISPOSABLE AND PROHIBITS REUSE.

CONTACT US

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