

# MESOTHERAPY WORLDWIDE

## THE FUNCTIONS OF MESOTHERAPY INGREDIENTS



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THE ACCURATE CUSTOMIZED MIXTURES OF MINERALS, VITAMINS, AMINO ACIDS & MEDICATIONS...



### WEIGHT LOSS/CELLULITE

#### PHOSPHATIDYLCHOLINE

Phosphatidylcholine (PPC) is an antioxidant that is derived from natural soy lecithin. PPC alters the metabolism of fatty substances like cholesterol and triglycerides in the body. PPC has been used intravenously to break down fatty deposits (lipolysis) in patients with high cholesterol, fatty liver disease and heart vessels filled with fatty plaques. PPC is purported to penetrate the adipocyte (fat cell) through the double lipid layer (cell wall) where it acts as a detergent (emulsifying and tensoactive agent). This means that fat affected by PPC becomes water soluble. Fat soluble and water soluble substances are not compatible (a good example is oil and water). Therefore your fat cells that are altered by PPC must be eliminated. In a nutshell, PPC breaks down fat much like hot water and dish soap break down grease in a frying pan. The fat dissolves and is carried through the bloodstream and excreted by the kidneys and bowel. It is just common sense that if you are exercising and dieting properly, this process occurs much more rapidly and efficiently.

#### AMINOPHYLLINE

A common asthma medicine, Aminophylline is a mixture of theophylline and ethylenediamine. It has been discovered that Aminophylline's mode of action and efficacy is similar to caffeine as it promotes fat breakdown and increases blood flow by dilating blood vessels

On the surface of fat cells are Alpha and Beta receptors. Receptors that burn fat are known as Beta receptors, and those that cause fat storage are known as Alpha receptors. Above the waist, the number of Alpha and Beta receptors occurs in an equal 1:1 ratio in both women and men. However, below the waist, women have approximately 6 to 8 Alpha receptors to every Beta. This is the reason why it is so incredibly difficult for women to lose weight in this area. Alpha receptors are stimulated by carbohydrates, fat ingestion, amino acids and alcohol.

Aminophylline allows your beta receptors to burn your fat more efficiently. To burn fat your Beta receptors must first create a chemical called cyclic AMP which allows a second step to occur. Without mesotherapy, your Beta receptors cannot proceed to the second step because of a chemical called phosphodiesterase. Phosphodiesterase breaks down cyclic AMP and stops fat burning. Aminophylline inhibits phosphodiesterase, preventing it from interfering with the cyclic AMP and fat breakdown.

#### YOHIMBINE

Yohimbine is an alkaloid found in the inner bark of a tree that grows in southern Africa, *Corynanthe yohimbe*. Although Yohimbine has been used for centuries as an aphrodisiac, in Mesotherapy it is excellent for targeting localized fat as its mode of action is blockade of alpha2-adrenergic receptors thus increasing blood flow via vasodilation.

#### L-CARNITINE

L-Carnitine has been shown to facilitate long-chain fatty acid entry into cellular mitochondria, therefore delivering substrate for oxidation and subsequent energy production. Fatty acids are utilized as an energy substrate in all tissues except the brain. In skeletal and cardiac muscle they serve as major fuel. Its primary role in cellulite and weight loss is to help metabolize stored fats into energy during physical activity.

In Mesotherapy, L-Carnitine transports liberated fat into the little power centres of the cells (called mitochondria) so that the fat can be burned for energy. Quite simply, without optimal amounts of L-Carnitine, there is not optimal fat burning taking place in Mesotherapy. Diet and exercise along with L-Carnitine will maximize fat removal.

#### HYALURONIDASE

Hyaluronidase is a natural enzyme which increases tissue permeability and promotes the spread or dispersion of other drugs. Used in Mesotherapy it helps to break down the connective tissue bands that create the dimpled appearance of cellulite. Hyaluronidase also enhances the absorption and dispersion of PPC to enhance the breakdown of fat cells between the connective tissue bands

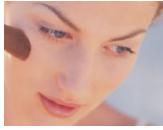
Cellulite occurs when connective tissue bands that hold down the skin trap bulging bundles of fat and create the "dimpling" effect. Connective tissue contains a large amount of hyaluronic acid and hyaluronidase is able to break down the hyaluronic acid.

#### ARTICHOKE

Artichoke is an actual plant extract and acts as a diuretic, and stimulates the lymphatic draining system. In Mesotherapy it is a complementary product in cocktails for the treatment of fat and cellulite. It has a direct lipolytic effect and is very effective in fat and cellulite treatments where there is a presence of edema.

## PENTOXIFYLLINE

Pentoxifylline is a synthetic dimethylxanthine derivative that is structurally related to theophylline and caffeine. The actions of Pentoxifylline include increased erythrocyte flexibility and decreased blood viscosity.



## FACIAL REJUVINATION

## GLYCOLIC ACID

AHAs, the a group of naturally occurring acids derived from certain plants and fruits, can be a very effective ingredient in Mesotherapy. Glycolic acid, the most commonly used form which comes from the sugar cane, works by stimulating new growth of skin and collagen. Glycolic Acid is also documented to decrease the bond that holds dead skin cells on the skin surface, which makes it perfect in Mesotherapy skin rejuvenation protocols.

## HYALURONIC ACID

Hyaluronic acid is a natural substance that is found in all living organisms. It is also indicated in the treatment of aged and dehydrated skin. Injected using the point-to-point technique while following the passage of the facial muscles, hyaluronic acid can dramatically improve skin tightening and reduce the appearance of wrinkles.

## VITAMIN C

Vitamin C, in its use of over 65 years, has come to be known as a "wonder worker." Understandably when you consider that in addition to its role in collagen formation, improvement in skin tone and texture and other life-sustaining functions, it serves as a key immune system nutrient and a potent free-radical fighter. In Mesotherapy, Vitamin C is used for the effective treatment of stretch marks and skin tightening and skin rejuvenation.

## INGREDIENTS FOR THE APPLICATION OF EFFECTIVE MESOTHERAPY:

17B Estradiol  
Aminophylline  
Arnica  
Artichoke Extract  
Biotin  
BLT Cream  
C-AMP  
Caffeine  
Calcium Pyruvate  
Cellulyse  
Collagenase  
Coumarin  
Deoxycholic Acid

Dexamethasone  
DMAE  
Dutasteride  
Glycolic Acid  
Hyaluronic Acid  
Hyaluronadase  
Isoproterenol  
Ketorolac  
L-Carnitine  
Lidocaine  
Melatonin  
Melilotus  
Multi Vitamin Formula

Multi Mineral Formula  
Minoxidil  
Phosphatidylcholine  
Piracetam  
Procaine  
Retinoic Acid/Tretinoin  
Salicylic Acid  
Silicia  
Sodium Hyaluronate  
Triamcinolone  
Yohimbine

## TOOLS FOR THE APPLICATION OF EFFECTIVE MESOTHERAPY:

4mm 30G Mesotherapy Needles (for face and neck)  
6mm 30G Mesotherapy Needles (for cellulite, body and face fat)  
Circular Multi Injectors (suitable for all body parts)  
Linear Multi Injectors (suitable for all body parts)  
MesoMega Mesotherapy Gun (suitable for all body parts and different injection technique)



## HOW CAN I GET THE RIGHT INGREDIENTS TO ACHIEVE EFFECTIVE RESULTS?

Mesotherapy Worldwide can supply you with wide array Mesotherapy Injectable Ingredients to ensure you achieve excellent results in your practice of Mesotherapy.

For a complete product listing Mesotherapy products please email us at [info@mesotherapyworldwide.com](mailto:info@mesotherapyworldwide.com) and let us know which country you are enquiring from so we can best advise you on the products that are available to you.