

Fat Melting Injections

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Injection-Lipolysis, Lipodissolve-Injections, Lipomelt-Therapy, Flab-Jab - new methods of body contouring

Injection Lipolysis is experiencing growing worldwide popularity in the field of aesthetics.

Originally criticized by established cosmetic surgeons, it has now gained a foothold due to very good results and almost hardly any unwanted side effects.

The short history of Lipolysis began in 1988 when Sergio Maggiory, an Italian doctor, reported his results at the 5th Mesotherapy Congress in Rome after having injecting the substance phosphatidylcholine in xanthelasma around the eyes. In 2001 Dr. Rittes from Brazil published her successful work on lower eye bulges. In 2002, Dr. Franz Hasengschwandtner, the owner of a diet and nutrition clinic in Austria, began a new treatment protocol using a new compound mixture with a wider range of application. He initiated research groups and in 2003 became first a member and soon after research and medical director of the now worldwide Network Lipolysis.

Network Lipolysis was founded by two public relations experts (Mr. Brandl and Mr. Bunzek – Germany) who worked in medical management at that time and whose aim it was to initiate research into Lipolysis and furthermore to hold workshops around the world to teach the most effective Network treatment protocol. This was necessary because at that time the pharmaceutical industry did not see any potential in this field - biopsies, ultrasound findings, blood values, animal trials – all had to be paid for through the membership fees of Network members.

The first workshops were held in Germany, Austria, and were soon followed by England, USA, France, Europe, India, Asia Australia and Africa.

Nowadays Network Lipolysis has approximately 1000 members in 44 countries.

How does it work?

At present what we know of the function of Lipolysis is like a patchwork, it is a scientific jigsaw in which only a few small pieces are still missing. To uncover the last secrets of the effect of the enzymes and hormones involved, we need to learn about the transportation of the monoglycerides and their metabolism.

The injected active agent phosphatidylcholine is a lecithin which contains two unsaturated fatty acids (Linoleic and alpha Linoleic acids) extracted from the soya plant.

Phosphatidylcholine is a body own product, produced by the body itself, but which includes saturated fatty acids (Palmitic-, Oleic- and Stearic-acid). It is found in all cell membranes, is highly concentrated in the membrane of liver cells and adipocytes and surrounds as sphingomyelin the nerves.

It occurs naturally, for instance, in the lungs of embryos from the 4th month on. In this case it is loaded with Palmitic acid and enables the inflation and deflation of the lungs preventing them sticking together. It performs a similar function as a lubricant in the intestines to avoid adhesions.

To make phosphatidylcholine injectable it requires a solvent which also needs to be a detergent substance. In the case of phosphatidylcholine it is deoxycholic acid which is a gallic acid.

Benzylalcohol in a small concentration is used as a preservative.

PPC (phosphatidyl-choline, deoxycholic acid and benzylalcohol), which is injected into the subcutaneous fatty tissue with very thin needles, spreads like a table tennis ball. The double layer of the adipocyte's membrane dissolves itself and the agent, functioning like a detergent, finally produces tiny little fat particles of nano-size (one millionth of a millimetre). Simultaneously, a release of enzymes, stored in the mitochondria of the adipocyte's nucleus, takes place which break down the triglycerides into monoglycerides by means of an active enzyme cascade in the tissue over a period of eight weeks. The final step is the transportation into the liver, mostly over high density lipoproteins (HDL) and metabolism via the citric acid cycle through beta-oxidation. The endproduct is CO₂ and H₂O, a small amount (less than 1%) is excreted via the renal system in the form of very short-chained fatty acids. The histopathology shows a liquefying necrosis and, to a lesser extent, an apoptosis without forming granulation tissue, necrotic tissue and pus.

Injections into the wrong tissue, due to carelessness or lack of proper training, i.e. injections into muscular tissue or connective tissue lead to an irritation and inflammation because of a PH value of 8,2. However, a dissolution of hetero-tissue has never taken place and these side effects caused by an incorrect technique disappear after a short time.

Nerves are surrounded by sphingomyelin, which, apart from phosphatidylcholine, is the second most important phospholipid in the body. The relation between phosphatidylcholine and sphingomyelin is 70:30. Due to a different composition with long-chained fatty acids and the esterification of

phosphatidylcholine on the –OH group, sphingomyeline is resistant against the detergent effect of phosphatidylcholine and deoxycholic-acid.

Phosphatidylcholine, used for aesthetic purposes, is already widely accepted in the intravenous and partially oral treatment of fatty embolism, as a liver medication and for severe disturbances in fat metabolism. The daily administered intravenous dose is many times higher than the dose used in lipodissolving treatments. The highest dosage recommended by Network Lipolysis is 2500mg Phosphatidylcholine per session with a time gap between treatments of eight weeks. Depending on the body region injected, one to four treatment sessions are necessary. The majority of patients need either one (17%) or two (72%) injection sessions to achieve the desired results.

The subcutaneous use of phosphatidylcholine is still “off-label”. This means that the subcutaneous injections are totally legal. The responsibility lies with the physician after having explained and discussed the treatment with the patient and a disclaimer form has been signed.

Phosphatidylcholine research boomed after the substance was first discovered in 1959 until the early eighties and was then stopped for some unknown reasons. All investigations into earlier uses of phosphatidylcholine showed excellent treatment and research results even a death cap mushroom poisoning was cured by it. The only explanation for a stop in research was a lack of interest shown by the pharmaceutical industry because the substance was too cheap and the production of statins and other substances promised higher profits. But this can surely not be a valid argument.

Today we can find new neurological research reports concerning phosphatidylcholine in the treatment of bipolar depression (phosphatidylcholine activates acetylcholine three times more effectively than any up to now known substance), for the treatment of the side effects of bacterial meningitis, and as an adjunct of chemotherapies. In gastroenterology, it is used orally for the treatment of colitis ulcerosa and Crohn’s disease, in cardiology for the treatment of coronary heart diseases and cardiosclerosis, and in hepatology for the treatment of fatty liver and non-alcohol based fat liver hepatitis. The most recent use of PPC is in anti-ageing medicine as a radical catcher and as an antisclerotic agent and for cell rejuvenation.

In the use of PPC for aesthetic medicine one has to be aware of the bounds of possibilities to melt fat accumulations. The ideal patient is of almost normal weight, exercises and practices sports and watches their diet. They have small problems with fat accumulations that refuse to disappear through the measures just mentioned.

For the treatment of jowels, double chin, axillary folds, backrolls, upper arms, abdominal fat protrusions, outer and inner thighs, region above knee, cellulite and for the treatment of lipomas, the trained physician now has a safe and most effective weapon against these unwanted fat pads.

Only about 1% of all cases are stubborn and need further measures (Hypothyreosis) or surgical intervention. Lipolysis is a very good method to correct slight unevennesses after liposuctions or even before liposuctions to pre-treat known problem areas around the umbilicus or the inner thighs.

The known side effects after injection-lipolysis are swelling, reddening, bruising, slight circulatory problems and increased stools during the first few days after the injections. The conjured up side effects such as dents or bulges, severe allergies and necrosis or whatever has never occurred after treatments in keeping with the standards laid down by Network and should by now have become apparent after more than 60,000 documented treatments.

Altogether nine research groups have been established within Network Lipolysis which deal with different methods, regions, medicaments etc. One of these groups deals with the detailed investigation of side effects, the observation of which was only possible by means of self treatments by mostly young people (PPC was, for example, freely available in Germany up to April 2006) or after wrongly administered injections given by untrained doctors.

In summary, it can be said that injection lipolysis using phosphatidylcholine is well developed. It is an effective and non-dangerous method in the fight against unwanted fat accumulations and has rightly won its position in aesthetic medicine. More research is on the way, more safety findings and publications are found in the United States, and in cooperation with partners living there, we have initiated winning the acknowledgement of the FDA. www.network-lipodissolve.com

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