

ALMA ZERO°



Alma Zero uses the power of cryo-thermal therapy to treat hyperactive glands of the body, specifically those associated with acne and hyperhidrosis.

Using a freeze-thaw approach, the treatment inhibits gland activity by freezing the cells within the glands, resulting in necrosis and diminished gland function.

The treatment is designed to target the sweat-producing activity of the eccrine glands as well as the sebum-producing activity of the sebaceous glands, achieving immediate improvement with lasting results.

INDICATIONS

Hyperhidrosis

Treatment begins with a cold cycle where skin temperature is gradually lowered to between +5° C and -5° C, the point at which tissue freezes. This low temperature destroys the eccrine glands through ischemia and crystallization of extracellular fluid, leading to cell leakage and wall rupture. During the heat cycle, the reperfusion of previously ischemic tissues causes free radical formation which further damages cells and ultimately reduces the glands' rapid rate of sweat production.

Acne

Treatment begins with a cold cycle where skin temperature is gradually lowered to between +5° C and 0° C, the point at which lipids crystallize. Due to the tendency of lipids to crystallize at temperatures higher than the water ice-point and the relatively low water content of sebocytes in the sebaceous gland, the Zero applicator may predispose these sebocytes to combined lipid and water crystallization and eventually to sebocytes loss and subsequent reduction in sebum rate.

TECHNOLOGY

Alma Zero features a plate type thermo-electric conductor (TEC) that gradually raises or drops its temperature in accordance with two modes of action. In cold mode, the temperature ranges between +5° C and -10° C, and in heat mode between +25° C and +45° C. These temperature cycles are automatically controlled by the system's software according to the defined treatment protocol.

The Zero applicator includes an integrated temperature sensor that continuously measures skin temperature throughout the treatment cycles. A special, single-use antifreeze membrane pad serves to protect the skin from frostbite during treatment. This membrane pad is clamped to the applicator by a crowned clip.

The antifreeze gel consists of: water, butylene glycol, portulaca oleracea extract, panthenol, ammonium acryloyltaurate, caffeine, pentapeptide-1, centella asiatica extract, PEG-40 castrol oil, carnitine, iodopropymyl butylcarbamate, menthol.



"Alma Zero has shown to be a superior approach for the treatment of axillary hyperhidrosis, without the pain or side effects associated with standard treatments. Iodine tests showed a significant reduction in the production of sweat, lasting for several months following the final treatment session. Alma Zero has dramatically improved the quality of life of my patients."

Dr. Lehaviv Akerman, Hertzeliya, Israel

MECHANISM OF ACTION

Cryotherapy may be used to disrupt cellular architecture, membrane integrity and enzymatic activity.

During the freeze phase, the Alma Zero treatment destroys gland cells primarily through the crystallization of intracellular fluid, leading to cell wall rupture.

This is followed by a thaw phase which maximizes cellular destruction by prolonging halted blood flow within the tissue as well as exposure to toxic cellular substances resulting from the freezing process.

The treatment effectively damages the neurological action of the eccrine or the sebaceous glands and inhibits their activity by reducing nerve conduction and action potential.

This results in decreased sweat production in the area of treatment as well as the effective clearing of acne.

Hot-Cold Skin Interaction

Cold Mode	Heat Mode
Reduces blood flow	Increases blood flow
Decreases capillary permeability	Increases capillary permeability
Decreases cellular metabolism	Increases cellular metabolism
Decreases nerve impulse conduction	Increases nerve impulse conduction
Increases the viscosity of the blood	Facilitates
Reduces edema and inflammation	Repairs
Relieves pain	Strengthens

BENEFITS

-  QUICK PROCEDURE
-  NO ANESTHESIA
-  NO DOWNTIME
-  NO TOXINS
-  IMMEDIATE RESULTS

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