

# BTL No-Needle Mesotherapy

## Enhances Portfolio of Body Recontouring Therapies

By Bob Kronemyer, Associate Editor

BTL Industries', aesthetic medicine division is currently engaged in the clinical testing of new active compounds designed to address multiple applications in body recontouring. Uniqueness of this solution consists in balanced active substance formulation and therapy protocol, enabling effective non-invasive transdermal penetration.

New formulations have been developed in cooperation with the department of pharmaceutical technology, faculty of pharmacy, Charles University, Czech Republic. The project utilizes the advanced transdermal delivery techniques employed by the BTL No-Needle Mesotherapy™ (NNM) system in combination with proprietary products designed to impact lipolytic processes in sub-dermal fat layers.

"It is obvious that this development program will be significant to one of the most dynamic segments of the aesthetic therapy market," said Tomas Boleslavsky, director of international marketing for BTL. "We strongly believe that we have the most complete solution to the challenge of treating cellulite and sub-dermal fat, and these new formulations only serve to reinforce our strong position in this market segment. We also continue to investigate potential uses for advanced actives across the entire spectrum of aesthetic applications."

BTL No-Needle Mesotherapy was developed to eliminate the downsides of injection Mesotherapy, and utilizes pre-programmed treatment protocols delivered under computer control. The first two protocols are dedicated to anti-cellulite treatment and facial rejuvenation promoted as an anti-wrinkle treatment. No-Needle Mesotherapy uses four specific sequences of laser and electrical waveforms to target congested areas of tissue commonly referred to as cellulite. Under physician control, a conducting gel containing active substance ingredients is combined with NNM treatment to address the underlying factors that contribute to the formation of cellulite. The active gel is mixed with highly conductive BTL gel just prior the start of a therapy session. This allows use of a formulation that is free of preservatives, or other non-active ingredients that do not contribute to the end result of the therapy.

A typical NNM protocol consists of ten sessions (about 30 minutes each) delivered in a series lasting four to five weeks. Treatment protocols used are completely non-invasive, pain free and free of bruising, erythema and the potential for allergic reaction common with needle injection mesotherapy.

"Problems of patient acceptance, related to bruising, infection, pain, oedema, allergic reactions to pharmaceuticals, hyperpigmentation and potential tissue necrosis, is a negative factor in making injection mesotherapy the choice of large groups of consumers," noted Mitchell Chasin, M.D., medical director of the Reflections Center for Skin and Body in Livingston, N.J., U.S.

"We always perform NNM first since this offers an excellent kick start to the session in terms of increasing metabolic rate and therefore blood flow, the circulatory process and lymphatic drainage."

Treatment protocols used at Dr. Chasin's practice are completely non-invasive – combining No-Needle Mesotherapy with other non-invasive therapies. Typical treatment time is about an hour and a key part of the treatment strategy is to focus on specific zones of the body rather than attempt large area coverage. "We always perform NNM first since this offers an excellent kick start to the session in terms of increasing metabolic rate and therefore blood flow, the circulatory process and lymphatic drainage," said Dr. Chasin. The average number of sessions scheduled for patients is 8 to 12, depending on the severity of the condition. "We can del-

egate the treatment to ancillary personnel which is a huge saving of time and resources."

No-Needle Mesotherapy technology is scientifically and clinically proven as a transdermal penetration device and is used effectively in all major world markets. It is positioned as the first completely non-invasive solution for the body recontouring market. Many studies have been carried out using the BTL No-Needle Mesotherapy system, including radioisotope lymphography, to prove penetration depth in tissue.

New therapy is currently running through clinical and CE authorization and should be available commercially in Autumn 2007. For full information and a selection of clinical studies, please contact BTL at [sales@btlnet.com](mailto:sales@btlnet.com).

# BTL No-Needle Mesotherapy

## Unique Transdermal Penetration Concept – How it Works

### Program 09 – Cellulite Treatment – Flanks

Below is a sample of the BTL No-Needle Mesotherapy™ (NNM) treatment protocol. Each part of the body, and specific gel formulations require a special program with waveform variations in order to maintain penetration at an optimum level.

Source: BTL NNM Training Video, BTL NNM Treatment Encyclopedia



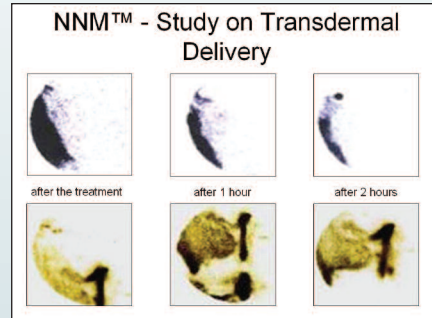
#### Phase One – Laser Stimulation

Dual laser wavelengths (685 and 830 nm) are applied simultaneously via a laser cluster applicator. This has a bio-stimulative effect prior to the active transport phase. Cell membrane permeability and metabolic rate is increased.

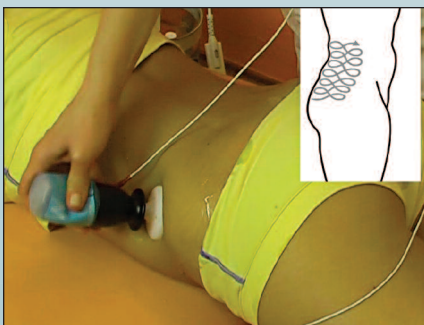


#### Phase Two – Active Transport

Electroporation uses electrical pulses that exploit pores in the lipid bi-layers of the stratum corneum. Pore dilatation does not exceed 10 ms, during which time molecules of active substances are delivered through these pores into the corium. Since, the skin structure of each patient is different on each part of the body, waveform frequency, modulation and other parameters are pre-programmed in the software for each tissue area. These modulation factors are key in maintaining optimum ingredient penetration.

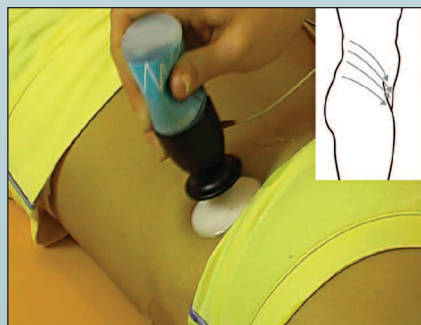


The penetration level of the BTL No-Needle Mesotherapy device has been verified through radioisotope lymphography. Active substances are mixed with 99 mTc and the area is treated with standard NNM protocols. The presence of the isotope material is readily detected in the lymphatic system in less than 20 minutes and remains visible up to 24 hours.



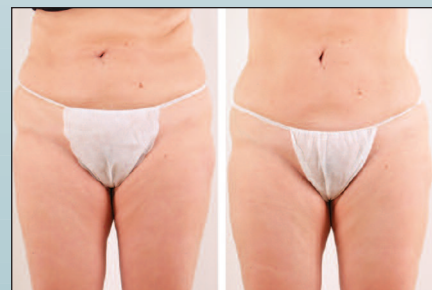
#### Phase Three – Muscle Tonization

The muscle mass under the tissue area being treated is toned using a unique electrical waveform. Microcirculation and metabolic rate blood flow is increased. This phase complements the delivery of active substances in previous stages.



#### Phase Four – Local Lymphatic Drainage

H-wave electrical waveforms have neurovegetative muscle tissue stimulation effects, resulting in considerable vasodilatation and lymphatic drainage in the treated tissue area as well as reduction of oedema. Nutrient flow to the tissue is maximized as well as the dispersion of waste products.



Before Tx

After ten treatments  
Program: Flanks  
AS: Anti-Cellulite

No-Needle Mesotherapy sessions last up to 30 minutes according to the area treated, client size and application. A treatment series consists of ten sessions at the rate of two or three sessions per week. A follow-up maintenance visit is recommended after nine months.