

# Lasers, Ultrasound Expand in Diverse Directions

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PARIS — The latest developments in cosmetic dermatology showcase a range of new light sources, focused ultrasound, and home devices.

Here's a quick look at a few of the devices that were reviewed by experts in sessions at the Fourth International Academy of Cosmetic Dermatology World Congress.

► **Light emitting diode (LED) devices.** The latest generation of these lasers provides more focused light and can be used for a variety of indications such as wound healing and photo rejuvenation, said Peter Bjerring, M.D., Aarhus (Denmark) University Hospital.

Gentle Waves (Light BioScience, Virginia Beach, Va.), the first LED approved in the United States for the treatment of periorbital wrinkles and rhytids, uses non-thermal, pulsed shortwave light to stimu-

late collagen development. Large areas can be treated at once, with no anesthesia or downtime.

There is a synergistic effect when LEDs are combined with 5-aminolevulinic acid (5-ALA), suggesting that this combination also could be useful for acne vulgaris.

► **Photorejuvenation.** Dr. Bjerring noted that one of the most interesting developments in this area is to use the synergistic effect of the Ellipse Flex (Danish Dermatologic Development, Hoersholm, Den-

mark), a second-generation intense pulsed light source, and 5-ALA in low concentrations of 0.5% and 1%.

Unlike the first-generation lamp, it has an extra filter to remove infrared light, which ensures that the light directed at the skin contains only the required wavelengths.

The Fraxel SR laser (Reliant Technologies, Palo Alto, Calif.) was approved in the United States in late July for the treatment of melasma. This midinfrared laser also provides uncomfortable, but tolerable, therapy for aging or sun-damaged skin, with 10%-20% linear collagen shrinkage reported after three treatments, he said.

The Titan lamp system (Cutera Inc., Brisbane, Calif.) also uses midinfrared light to contract collagen while preserving the

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DR. BJERRING

epidermis with continuous cooling. The contraction effect was observed 3 months after two treatments in the periorbital area, providing an eye lift effect, he said.

The RelaxF radio frequency device (MSQ Ltd., Caesarea, Israel) is being touted for skin as well as fat tightening, said Moshe Lapidoth, M.D., laser unit head at Rabin Medical Center, Petach-Tikva, Israel.

► **Ultrasound.** Another promising approach is the use of focused ultrasound, which Dr. Lapidoth said "is going to be the next thing in medicine."

The Contour I ultrasound device (UltraShape Ltd., Tel Aviv) received European Union clearance in late July, and provides a temporary reduction in body circumference and the appearance of cellulite.

The ultrasonic energy causes the targeted rupture of fat cells, while residual fat tissue is cleared from the body through normal processes. The device lyses 500 cc of fat tissue per treatment, or about one-quarter the quantity removed in a single liposuction operation.

Patients lost an average of about 2.5 cm in circumference in a study of more than 300 people in the United States, United Kingdom, Japan, and Israel, according to the company's Web site. The company also claims there is no thermal damage, a hazard associated with some forms of liposuction. The treatment is safer than liposuction, but takes longer since sessions are spaced 1 month apart, Dr. Lapidoth said.

► **Hair removal devices.** A wave of next-generation personal hair removal devices is expected. Researchers at Radiance (Yavne, Israel) are in the final stages of developing NolNol, which combines light and heat for selective photothermolysis. Applisonix Ltd. (Be'er Sheva, Israel) is developing a device based on high-intensity focused ultrasound. The Applisonix machine has the most potential because it can be used in all skin types, since ultrasound is not color dependent, he said. ■