

A close-up photograph of a pregnant woman's belly. She is wearing a white, ribbed, short-sleeved top with a buttoned placket. Her hands are gently cradling her belly. A single, bright yellow daisy flower is placed on her skin, centered on the lower part of her abdomen. The background is a soft, out-of-focus grey.

Lasers and Light Sources Offer Tx Options for Stretch Marks

By Shannon Fox, Contributing Editor

Striae disease, more commonly referred to as stretch marks, are a source of frustration for millions of men and women. An estimated 90% of pregnant women and 70% of adolescent women develop stretch marks. In addition, roughly 40% of adolescent males develop stretch marks, particularly those active in sports. Topical treatments have provided limited, if any, efficacy and despite huge market need, there are no medical devices with FDA clearance for treating striae. However, leading dermatologists and plastic surgeons have found success in utilizing existing laser and light-based modalities to address this common, yet poorly understood, cosmetic problem.

There are a number of theories as to what causes stretch marks. Most subscribe to the simple belief that stretch marks occur when the skin is stretched beyond its breaking point. The excessive stretching of the skin overtaxes the elastin and collagen fibers in the dermis, resulting in a tear. Others believe that stretch marks are a result of increased levels of a hormone called glucocorticoids. This hormone's presence in the body is increased during pregnancy and adolescence and may affect the dermis by preventing the fibroblasts from forming collagen and elastin fibers. Without this supporting material, dermal tears can occur when the skin is stretched.

Various studies have shown the benefits of using pulsed dye lasers, such as those manufactured by Candela Corporation (Wayland, Mass.) and Cynosure Inc. (Westford, Mass.) to treat early, red stretch marks. According to David Goldberg, M.D., director of Skin Laser and Surgery Specialists in New York and New Jersey, "The hypothetical argument is that if you can get the red to go away sooner, you can decrease the inflammatory reaction in the stretch mark, which ultimately may lead to less thinning of the skin, which is the hallmark of most stretch marks." For early, red

stretch marks, he recommends a series of five treatments with a pulsed dye laser, spaced roughly one month apart.

More commonly, however, a client presents with mature, white stretch marks. Studies by Dr. Goldberg and his colleagues have reported that treatment with UVB lasers and light sources increase both the melanin content and the number of melanocytes, producing improvement in the loss of pigment seen with striae. At his various practice locations, Dr. Goldberg utilizes a variety of UVB laser and light sources including the XTRAC excimer laser from Photomedex, Inc. (Montgomeryville, Penn.), the ReLume from Lumenis (Santa Clara, Calif.) and the Pharos EX-308 from Ra Medical Systems, Inc. (Carlsbad, Calif.).



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Stretch Mark Tx Options



Striae before Tx



Striae three weeks after three Fraxel re:store treatments

Photos courtesy of Erica Kelly, M.D.

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Dr. Goldberg cautions that treating mature stretch marks with UVB sources is a tedious procedure with the typical client needing approximately 10 to 20 treatments, administered twice per week, to achieve optimal results. "You fire the laser or light source through a variety of grids to target the whitened area, not the surrounding normal skin," he said. "When we stop treatment, the pigment does wane, but it doesn't go totally away. People tend to come back one to three years later for some maintenance treatment."

In terms of outcomes, Dr. Goldberg says that sometimes the pigment achieved is perfect but, "more commonly, it is just much lighter than it was before." Darker skinned patients will see better results, according to Dr. Goldberg, because "they are going to have more pigment cells and, in a sense, what you are doing is waking up the pigment cells they have. Because darker skinned patients are generally those most bothered by stretch marks they are a good group to treat."

Mitchell Chasin, M.D., director of the Reflections Center for Skin and Body in Livingston and Bridgewater, N.J., takes a synergistic approach to treating stretch marks. Dr. Chasin draws from his arsenal of devices, including the Fraxel laser from Reliant Technologies (Mountain View, Calif), the Portrait PSR from Rhytec Inc. (Waltham, Mass.), and the Vbeam laser from Candela Corporation. "If you are hitting the stretch marks at multiple depths, I think the synergy is there," said Dr. Chasin. "For most of these treatments, when you include modalities that work with different pathways, your end result is usually better than the sum of the parts."

For patients where hypopigmentation is the primary concern, Dr. Chasin agrees that UVB laser and light sources are the gold standard. However, he notes that most

patients have a degree of both textural abnormality and hypopigmentation. "I tell them we will typically improve texture and our hope is that we also will improve the hypopigmentation, and most of the time it does," he explains.

Dr. Chasin's typical regimen includes a treatment with the pulsed dye laser, immediately followed by a Fraxel treatment. Patients are then treated a month later with a pulsed dye laser, followed by a Portrait treatment. He continues to alternate until a patient has undergone four combination treatments. "For the Fraxel, we are using fairly high energy and high density with one exception – when someone has hypopigmented scars. For those, I typically use high energy and medium density," he said. For the Portrait, Dr. Chasin uses moderate energy.

Dr. Chasin tells his patients to expect a 50% reduction in the appearance of their stretch marks, even though his personal goal is a 75% reduction. "For patients I set their expectations a bit lower because of the somewhat unpredictable nature in treating stretch marks," explains Dr. Chasin.

Due to their inability to penetrate the epidermis, both physicians agree that topical treatments offer limited value. However, one topical solution that has shown promise, according to Dr. Chasin, is a soon to be launched stretch mark gel that is used with the No-Needle Mesotherapy™ system from DermaWave, LLC (Loxachatchee, Fla.). The topical gel is transmitted through the skin using specialized electrical waveforms. "It won't help with color changes, but I will use it in combination with other treatments for textural changes," said Dr. Chasin. "It has shown promise for augmenting results, more formal studies are needed to prove the degree of efficacy, but anecdotally, it looks like it also has merit." ■