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Why Cold Lasers Are the Hottest New Skin Treatment



Heat-based treatments are popular, but they're not for everyone. Here, Jessica Ourisman reviews her experience with UltraClear®, a so-called "cold" laser.

eat has its time and place at the derm's office, with treatments like radiofrequency microneedling and skin-tightening ultrasound gaining popularity. But I tend to favor non-heat-based treatments paced over multiple sessions and coupled with regenerative ingredients. Why? It comes down to my skin type. I have personally experienced breakouts of acne, milia, and rebound pigmentation from the delivery of deep heat treatments, making the rewards not worth the risk. Celebrity esthetician Celeste Rodrigues once had to help me through months of purging, after my treatment with a radiofrequency microneedling device. We both noticed that the pigment on my face had worsened rather than improved.

The more common complaint about heat-based treatments is that they are quite painful, requiring numbing or laughing gas, and often downtime. Board-certified plastic surgeon Jason Roostaeian has seen firsthand how the deep delivery of heat can cause scar tissue and deteriorate subcutaneous facial fat that is critical for longevity. "When you're attacking that fat [with deep heat], you're ruining the layer that makes everything look smooth and plush on the face," he tells Bazaar.com. "That's a lot of what youth is: smooth transitions of highlights and convexity, avoiding harsh transitions on the face."

The gist is that aggressive, heat-based devices work great for some, but not for all. Deeper skin tones, a predisposition to melasma, and skin conditions like acne can all lead to hit-or-miss results when it comes to certain lasers. This is what piqued my interest in UltraClear, a "cold" ablative laser device that launched last year.

What is a "cold" laser?

"A cold laser utilizes low-energy or low-wavelength light, and most importantly, is not heat-based," says board-certified plastic surgeon Cat Chang, founder of NakedBeauty MD. "The lack of heat makes technically every Fitzpatrick [skin] type a candidate for a cold laser, as opposed to heat-based lasers, which you have to be more careful about for darker skin tones."

The UltraClear laser operates at the 2,910-nanometer wavelength using an erbium diode fiber, purportedly at the sweet spot where both pain (0–3 on a scale of 1–10) and downtime (roughly four days) are minimized. "Compared to conventional lasers, the UltraClear should be a bit less painful during the actual treatment," says board-certified plastic surgeon Steven Cohen, medical director of Faces+ Plastic Surgery, Skin, and Laser Center and co-founder of the London Regenerative Institute. On the UltraClear's gentlest settings, he says, the results could be comparable to a Cosmelan or Obagi chemical peel.

The cold laser's underlying mechanism for skin rejuvenation is the same as a conventional resurfacing laser's. "The theory behind controlled injuries and inflammation for skin anti-aging is that the tissue is primed by the injury, which then begins the healing [cascade]," Cohen says. Over time, newer technologies are becoming quicker, more precise, and more efficient, harnessing specific wavelengths of fractionated energy to target parts of the tissue more strategically.

Board-certified aesthetic dermatologist Glynis Ablon of Ablon Skin Institute & Research Center explains that it is UltraClear's fractionated nature and the speed of its emission that makes the device so much less painful. "What distinguishes UltraClear's cold fiber laser technology is that it relies on very fast and precise multilevel micro pulses to ... balance cold and thermal energy to safely treat all skin types," says Ablon, who offers the treatment at her Santa Monica—based practice. "It is this balance between cold and heat that minimizes unwanted thermal damage, and thus skin damage."

My Experience with the UltraClear Laser

Because of my concerns about rebound pigment, Ablon had me preemptively incorporate pigment-treating ingredients like niacinamide, tranexamic acid, kojic acid, and arbutin into my skincare regimen leading up to UltraClear treatment. In addition to my vitamin C during the day (I alternate between DMK Melanotech Drops and Luzern Serum Absolut V15), I used the SkinMedica Even & Correct Brightening Treatment Pads, or Sarah Ford Pigment Pads on nights I didn't want to exfoliate.



At my consultation, we decided on a more surface-level setting, with the goal of reducing fine lines, refining the texture of my skin, and evening out my skin tone. However, on the day of my appointment, I had an unexpected breakout of dermatitis from my nose to my chin, so we were only able to treat my cheeks. To get the full experience, I used no numbing cream prior to the treatment, but held a tube blowing cold air to soothe as needed.

The UltraClear treatment itself was genuinely not painful to me; it was more comfortable than the ultra-mild Clear + Brilliant (or "Baby Fraxel") treatment delivered with numbing. It felt a bit like getting acupuncture, with hints of spiciness on certain passes. Because only my cheeks were treated, I cannot say whether it would have been equally painless in more-sensitive areas like my forehead or upper lip. The entire appointment was over in a matter of minutes.

UltraClear Aftercare

Once I got in the car and began to drive home, my cheeks flushed red and began to sting, but I found it bearable. Typically after a laser treatment, I go home and stay in, but I had two events to attend that day. I was concerned about keeping my delicate skin clean while in public, so I continually spritzed my hands and face with antimicrobial hypochlorous acid (an active ingredient recommended by Ablon), which I made fresh with the portable TheiaMD Antimicrobial Facial & Eyelid Cleansing System. I also began slathering my skin in iS Clinical Sheald Recovery Balm, a barrier cream with ceramides, beta-glucan, and soothing oat extract, before popping into Remedy Place for a healing session of hyperbaric oxygen therapy.



When I got home that evening, I began applying my aftercare regimen in earnest. Maximizing any treatment comes down to what is introduced to

skin following the micro-injury, as the micro-channels in the skin remain open for the first 24 hours. Regenerative medicine expert Cohen explains that "by creating a small injury, setting healing in motion, and then introducing [regenerative] compounds that limit inflammation and promote collagen deposition, we are able to repair the skin and make it more youthful."

I opted to use Biopelle Tensage Intensive Serum 40 ampoules containing growth factors, glycoproteins, and antioxidants to promote healing, reduce pigmentation, and optimize my results. I also reached for DMK Beta Gel throughout the healing process, which contains the hydrating and healing active ingredient beta-glucan, which cues the Langerhans cells to promote healing in the skin. I put on Solara Guardian Angel Super Peptide Sunscreen Milk SPF 50 and wore sunglasses and a hat to protect my skin from UV-rays.

For the first day after the treatment, applying actives stung like crazy. (Cohen says this was likely due to the pH of the products I applied.) That first night, the stinging surprised me so much, I ran down the hallway of my house as my dogs watched in surprise. To help soothe the stinging, I opted for my favorite post-treatment sheet mask, Velež by Vesna Intense Hydration Mask, which imparts a cooling effect for up to two hours using only sterile water and biocellulose, and also helps the active ingredients I had applied to penetrate.

I also regularly used healing LED therapy via MMSphere2GO—20 minutes of green light in the morning, 20 minutes of red light in the evening—which simultaneously treated my dermatitis and soothed the lasered skin.



My Results

As with any peel or laser treatment, the healing process involves mild scabbing of the skin, which then dries and flakes off. By day two, I was mildly swollen and the scabbing process had begun; my skin looked red, with brown patches in places (as is typical). The interesting thing to me about the healing process after UltraClear treatment was that I could see the pixelated pattern of the laser in my scabbing. The skin darkens before it peels (which completely resolved by day five). I was impressed by the degree of resurfacing that took place, particularly in comparison to other treatments I have tried.

By day four, when the majority of the peeling had finished, I was able to see patches of the new skin. It looked smooth, soft, glowing, and I could not even spot my pores. The interesting thing

about treating only my cheeks is that it allowed me a close-up look at the difference in texture between my treated and untreated skin. On my forehead, which was untreated, I could see faint lines—not wrinkles, simply texture—with more prominently visible pores and slight unevenness in tone in spots. My cheeks, on the other hand, looked (to me) like a baby's bottom. I am so thrilled by the comparison, I cannot wait to go back for the full treatment.

What does UltraClear Cost?

For a treatment like mine, it would cost around \$800 per session, or up to \$2,000 if you opt for a deeper treatment. In the right hands, the device can be adjusted to treat many more skin types and concerns. "I have had my device for almost a year, and I love it for skin issues [such as] acne scars, textural changes, sun damage, rhinophyma, stretch marks, hypertrophic scars ... the options are endless," says Ablon, who has started offering the laser treatment beyond just the face, neck, and chest to other areas of the body.

To be clear, UltraClear is not the first cold laser to hit the market. The CO₂ CoolPeel has been around since 2019, offering a less-invasive "peel" for patients looking to reduce fine lines, sun damage, and pore size. But I was curious about whether the UltraClear's launch indicated a general industry trend toward cold lasers. "I myself am a fan of treatments without heat, like microneedling and microchanneling, given my Fitzpatrick type," Chang says, noting that laser treatments that require less downtime typically involve more sessions. "I definitely think that the overarching direction of aesthetics treatments is to maximize results and minimize downtime."