

NLite Laser: Nonablative Wrinkle Reduction

The NLite laser is promoted as a tool for painless wrinkle reduction without side effects, posttreatment care, "downtime," or complications. However, with only 1 published study, limited scientific data are available. The authors report generally disappointing clinical results based on personal experience and a survey of 8 physicians who were among the first in Dallas to incorporate NLite technology into their practices. (*Aesthetic Surg J* 2001;21:371-372.)

NLite (ICN Pharmaceuticals, Costa Mesa, CA) is a nonablative 585-nm laser treatment that is reported to reduce wrinkles by stimulating the growth of new dermal collagen. It is designed to selectively target the chromophores, oxyhemoglobin, and deoxyhemoglobin in the dermal blood vessels for quick delivery of optical energy that insults, but does not injure, the vessel. This is possible because the NLite pulse (350 ms) peaks at 175 ms, delivering sufficient energy to be effective at a relatively low fluence. It is believed that during the dermal repair, a new and improved collagen matrix is formed. (See Table for laser settings.)

According to the manufacturer, NLite accomplishes painless wrinkle reduction without the side effects or post-treatment care associated with other laser treatments. There is no "downtime," no preparation or anesthetic is required, and no complications have been reported.

Significant biochemical and clinical improvements were reported in a study from Wales, UK,¹ where trials were carried out over a 3-year period. Assays of procollagen in interstitial fluid, taken 72 hours after NLite exposure, demonstrated an 84% increase in type III collagen production. Clinical results included a 90% reduction of mild wrinkles and a 40% reduction of severe wrinkles. The results were assessed in a double-blind photographic format, as described by Fitzpatrick et al.²

Overall, NLite was reported to be 84% as effective as CO₂ laser resurfacing.

The first NLite laser became available for use in the United States in October 2000. It was offered to 13 Dallas physicians (5 dermatologists, 7 plastic surgeons, and 1 oral surgeon) on a daily rental basis in November 2000. The cost of a full-day NLite rental, delivered and staffed by a technician, was \$1500.

The manufacturer's treatment protocol called for performance of a single treatment without pretreatment other than alcohol-free facial cleansing. Suitable laser eyewear was required. It was recommended that a postauricular test site be used to determine the appropriate energy required to avoid purpura, which reflect unwanted vascular damage. Discrete wrinkles were targeted without overlap. Furthermore, it was emphasized by the company that a 3-month period was required to see maximum results.

We surveyed 12 of the participating physicians by fax or personal interview, and 8 responded, including 4 of the 7 plastic surgeons and 4 of the 5 dermatologists. Results reported by both types of specialists were strikingly similar. Three of the 4 dermatologists averaged 38 patients treated (range 30 to 60 patients), and 3 of the 4 plastic surgeons averaged 31 patients treated (range 18 to 40 patients). All reported subtle, minimal, or no improvement and that patients were generally displeased with the results. Three of the plastic surgeons no longer offer this treatment.



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Table. Settings for the NLite laser

Wavelength	585 nm
Pulse duration	350 ms
Energy density	2-4 J/cm ²
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The remaining 2 physicians treated significantly greater numbers of patients because of aggressive marketing of the NLite laser. The plastic surgeon treated 150 patients, noting a mild improvement only, and did not indicate whether he would continue to offer NLite. The dermatologist treated 250 patients with full-face NLite. At first, he was enthusiastic about the results, stating that most patients were pleased after comparing their pretreatment and posttreatment photographs. However, he now believes that a series of treatments, not simply a single treatment, are required.

Our personal experience, like that of most of the Dallas physicians polled, was disappointing. Results were subtle, at best, after the single recommended treatment. Although we are trying an additional treatment on some

of our first patients, the results will have to be much more impressive to justify continued use of NLite in our practice.

As with other new technologies, news releases from the manufacturer and enthusiastic marketing by some physicians have created instant consumer demand for NLite treatment. Unfortunately, limited scientific data are available to support its efficacy—there is only one published study.¹ Although NLite may ultimately prove to be effective for wrinkle reduction, our early clinical experience has been disappointing. ■

References

1. Bjerring P, Clement M, Heickendorff L, Egevisst H, Klemm M. Selective nonablative wrinkle reduction by laser. *J Cutan Laser Ther* 2000;2:9-15.
2. Fitzpatrick RE, Goldman MP, Satur NM, Topp WD. Pulsed carbon dioxide resurfacing of photoaged skin. *Arch Dermatol* 1996;132:395-402.

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