

# Light and Heat Combo Removes Hair on Dark Skin

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ORLANDO — Combining intense pulsed light and heat energy appears to be an effective hair removal technique for individuals with dark skin, according to a study presented by Dr. Neil S. Sadick at the annual meeting of the American Academy of Cosmetic Surgery.

“By using two different energies ... you can use less light energy, which means

there is less chance of burning the skin,” said Dr. Sadick, professor of dermatology at Cornell University, New York.

This is especially important when treating dark-skinned individuals, because using intense pulsed light alone can cause burning hyperpigmentation. “We try to use two energies to deliver more energy more gently,” he said.

For his study, Dr. Sadick recruited 23 women and 3 men. Of these, 8 participants had Fitzpatrick skin type V and 18

had skin type VI. The participants’ mean age was 36 years.

Patients underwent one treatment and were seen again at 6- and 12-week follow-ups, he said.

Mean hair clearance at 6 and 12 weeks was 42% and 36%, respectively. On average, hair removal after a single treatment was 36%. Hair clearance rates at 6 and 12 weeks were “lower than those seen with other, more classic, chromophore-targeting technologies, such as lasers of the

past, but still were much more efficient than anything else in the past,” Dr. Sadick explained.

In terms of side effects, “when you look at hypo- and hyperpigmentation, there was actually quite a low percentage—much lower than was noted using laser sources for dark-skinned individuals,” he said. There were two cases of hypopigmentation noted at 6 weeks, which resolved by week 12.

Erythema and edema were transient, with 11 patients experiencing erythema and 2 experiencing edema at the time of treatment. Erythema and edema resolved by week 6.

For use in this study, Dr. Sadick used the Radiance SkinStation, which utilizes a broad spectrum of light wavelengths (500-900 nm). Heat output for the device ranges between 8 and 55 J/cm<sup>2</sup>, and optical fluence ranges between 2 and 10 J/cm<sup>2</sup>, for a total energy range of 10-65 J/cm<sup>2</sup>. Radiance Inc. sponsored this study; Dr. Sadick is a consultant to the company.

The light and heat energy are emitted from a lamp, targeting specific skin structures based on selective photothermolysis plus direct heat conduction. There is targeting of melanin in the hair follicle, along with nonspecific heating by the thermal component. The advantage of this technique is that there is an additive effect and less competitive melanin absorption in the epidermis.

Dr. Sadick is now conducting a study looking at multiple treatments in a larger group of individuals. ■

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Right forearm of a male with skin type VI is shown at baseline.



The same patient is shown 6 weeks post treatment.