

# FROM CLINIC TO HOME: HAIR REMOVAL PROCEDURES MAINTAIN POPULARITY

**Rosalind Hill** reviews some of the hair removal devices on the market and speaks to industry experts about the increasing popularity of at-home beauty devices



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**H**AIR REMOVAL IS BIG business. Gone are the days in which women—and men—solely relied on razors and shaving foams to remove unwanted body hair. Consumers want something that is longer lasting, won't break the bank, and a treatment that won't take up too much time—lunchtime procedures are a must.

Americans spent almost \$11 billion on cosmetic procedures in 2012; \$6.7 billion on surgical procedures; \$2 billion on injectable procedures; \$1.8 billion on skin rejuvenation procedures; and over \$483 million on other non-surgical procedures, including laser hair removal!

According to the most recent statistics from the American Society for Aesthetic Plastic Surgery (ASAPS), laser hair removal treatments were the third most popular non-surgical cosmetic procedure in 2012<sup>2</sup>.

'Laser hair removal is the largest segment of the laser and light treatment market, with some market research sources reporting that up to 45% of laser treatments in the US are for hair removal,' said Kirsten Doerfert, Senior VP of Global Marketing at Ellman International, Inc. (Hicksville, NY). It is the mainstay of many medspa practices and a core element of many aesthetic physician practices.'

Denver, CO, board-certified dermatologist Dr Stephen Eubanks agrees: 'Hair removal constitutes approximately 30% of our cosmetic business overall, and 70% of the business generated by our aestheticians. This has remained stable for a number of years.'

Indeed, Millennium Research Group reports that the US laser, light, and energy device market will experience strong growth to 2017 owing to the fast-growing multi-application system and handpiece markets<sup>3</sup>. This is expected to be driven by increased adoption of devices by non-core physicians looking to meet growing demand for the associated procedures<sup>3</sup>.

'More and more physicians are adding aesthetic treatments to their practices, and hair removal is a logical entry point for many,' said Kirsten Doerfert.

## Technology development

Since the introduction of laser, light and energy-based devices for the removal of unwanted hair, aesthetic physicians and dermatologists have been able to offer effective treatments to patients that have withstood the test of time.

The main laser and light sources developed for the removal of unwanted hair are<sup>4</sup>:

- Normal and long-pulsed ruby lasers (694nm)
- Long-pulsed alexandrite lasers (755nm)
- Diode lasers (800–810nm)
- Nd:YAG (1064nm), both in the long-pulsed and Q-switched modes
- Intense pulsed light (IPL) (500–1200nm).

Grossman et al<sup>5</sup> are often credited with the first use of a laser for unwanted hair in 1996, when they used a normal mode ruby laser at 694nm. Dierickx et al shortly followed this in 1998<sup>6</sup>, publishing a long-term follow-up on the use of the ruby laser for permanent hair removal.

At the same time, an IPL device (EpiLight) was developed and found to show efficacy for the long-term removal of unwanted hair. *PRIME* editorial board member and Tennessee-based dermatologist Dr Michael Gold was one of the first to use IPL for hair removal.

'I don't think the IPL market for hair removal is as big today as it once was, but with some of the newer IPLs, in some of the platform devices, there is still a great place for the technology. Many, including me, use lasers more than IPLs, but IPLs are still something to consider for one's practice.'

To meet the demand for a laser product in the market, Ellman International, Inc. has developed the Medley™ System, a multi-wavelength device that combines IPL with other wavelengths (Er:YAG, Q-switched Nd:YAG and KTP) in a single console for those who want the flexibility to choose specific technologies in a single device.

'IPL is popular because it can do many things, including hair removal,' said Kirsten Doerfert from Ellman. 'Our new Medley Multifunction Laser Platform offers a lot of flexibility and can be configured with the precise capabilities that a practice wants, including IPL. We continue to enhance the system and are soon introducing an 810nm diode module for hair removal using the Medley System.'

However, there is now a vast range of laser devices available on the US market, encompassing a full range of wavelengths, pulse widths and spot sizes.

'I think we have more of a sophisticated audience now than previously, because the machines are better,' said Dr Gold, who has been performing hair removal treatments for approximately 20 years, and treats up to 12 people for this indication on a daily basis. I think it's also a demanding market and people are expecting results in one or two sessions, but the science works over time.'

Dr Gold sees the main advantages now—compared with 20 years ago—as better computerised technology, better cooling capabilities, and faster machines have become available. This aside, there remains a gold standard of treatment throughout the industry.

### The gold standard

While some physicians may prefer an alexandrite, others a ruby and some the Nd:YAG, there is general consensus that >



“According to the most recent statistics from the American Society for Aesthetic Plastic Surgery (ASAPS), laser hair removal treatments were the third most popular non-surgical cosmetic procedure in 2012.”

▷ the diode 810nm offers the gold standard of treatment for most hair removal procedures. Most companies will have their own versions of this device, as they penetrate deeper into the skin than the alexandrite lasers and, more importantly, have been cleared by the Food and Drug Administration (FDA) to treat all skin types. Diode devices will also have their own sophisticated cooling apparatus, usually on the tip of the laser device, and have proven to be safe and effective, are fast, and patients are left satisfied with treatment outcomes.

Lumenis Inc. (San Jose, CA) has just received FDA approval for an upgrade to the LightSheer® Duet™ System, and expects to launch the LightSheer® Desire™ at this year's AAD congress in Denver, CO.

'The Desire is a 805nm diode laser, with vacuum-assist and large spot size,' explained Jeff Knight, VP of Sales and Marketing at Lumenis. 'It allows users to treat a back in just 8-10 minutes, offering a good return on investment for physicians. Furthermore, the number one thing that physicians find their patients want is a relatively painless procedure, and with the vacuum-assist technology, we are able to provide this.'

The new LightSheer Desire is a table-top, mobile laser that offers high-speed treatments.

Dr James Spencer, a dermatologist in St Petersburg, FL, uses Ellman's Cheveux™ II device owing to its rapid treatment time and virtually painless treatment option. Ellman has cornered the affordable laser products category in the market, which has satisfied a great number of physicians when it comes to clinical efficacy coupled with return on investment.

'The Cheveux II 810nm diode laser is the mainstay of our laser hair removal offering,' said Kirsten Doerfert. 'This is a very popular laser system, as it provides the desired clinical outcomes and comes in a very small package that is easily movable from room to room, and takes up little space. In fact, it is the workhorse for permanent hair reduction in many aesthetic practices.'

While the diode is often the standard device everything is judged against, Dr Michael Gold recommends that physicians decide what is best for their

patient population and competitions—whos your competition, whats out there and what will work best for your practice?

Indeed, the 694nm ruby, 755nm alexandrite and 1064nm Nd:YAG are also all cleared for hair removal procedures.

'Our office uses three lasers for hair removal: the Candela GentleLASE Plus, the Candela GentleYAG, and the Syneron Candela GentleMAX Pro™,' said Dr Stephen Eubanks. 'Although these lasers are thought to be primarily hair removal lasers, I also use them for many other treatments including brown spot removal, blood vessel treatment, and wrinkle improvement.'

The GentleMAX Pro laser is designed to offer a range of treatments, and has a dual length platform that combines the fastest and most powerful 755nm Alexandrite laser with the 1064nm Nd:YAG laser.

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### Treating different skin types

Traditionally, laser hair removal could only be performed on those skin types at the lower end of the Fitzpatrick grading system. However, manufacturers are now keen to provide devices that can treat more skin types without the risk of scarring or changes to the skin's pigment.

Dr Gold believes that Nd:YAG devices are the safest for use on all skin types. 'With experience and knowledge you can use your diodes on everything but the

darkest of the dark; you can use IPL on everything but the darkest of the dark; but you have to be careful because if you don't have the right cooling systems the patient will scar.'

The majority of systems now have in-built cooling systems to protect the skin's surface and provide maximum comfort for the patient during treatment.

'The Candela products are all high output, solid-state laser systems with epidermal protection provided by our proprietary, cryogen-based Dynamic Cooling Device (DCD),' said Perry J. Tomasetti, VP of Products, Medical Aesthetics, at Candela Corporation (Wayland, MA). 'The laser wavelengths and epidermal protection have been selected to balance high efficacy treatments with safety across all Fitzpatrick skin types.'

The GentleMax Pro system from Candela provides both a 755nm alexandrite laser for the treatment of lighter-skinned individuals and a 1064nm Nd:YAG laser to treat darker-skinned individuals, for which the 755nm wavelength is not appropriate. Furthermore, the GentleLase Pro-U provides 755nm output for centres that primarily treat lighter-skinned clients, while the GentleYAG Pro-U provides 1064nm output for centres primarily treating darker-skinned clients.

It should be noted, however, that because of the melanin absorption, the 694nm ruby, 755nm alexandrite and 810nm diode need to be turned down almost completely when treating skin ▷



▷ types V and VI. 'The 1064nm Nd:YAG laser is the only hair removal modality that does not have significant absorption of melanin, and is the standard of care for hair removal in the darkest skin types,' said Perry J. Tomasetti.

## Home beauty devices

As technology becomes more advanced, and consumers have grown hungry for the latest gadget to improve their appearance without attending the dermatologist's office, it is no wonder that many have sought to fill this gap in the market by extending their physician-only device offerings to those that can be used at home.

The nolo!™ Hair device has sold steadily since its launch, memorably selling over 40 000 units in one day in 2012 via TV Home Shopping. Not to be outdone, and extending its footprint beyond traditional medical equipment, Syneron Medical launched the mē smooth in 2013.

While nolo! uses Thermicon™ technology to conduct a gentle pulse of heat to the hair, Syneron's offering harnesses its patented elōs (electro-optical synergy) technology, combining IPL and radiofrequency (RF) energies. The mē smooth is the first professional at-home device that is FDA-cleared and clinically proven to be safe and effective on all skin types and tones.

The home beauty device market is a significant investment for Syneron, which announced a joint venture with Unilever to create Iluminage Beauty late last year. The joint venture combines the global business and expertise of Syneron's aesthetic home-use subsidiary, Syneron Beauty Ltd., and Unilever's luxury beauty subsidiary, Iluminage™ Inc. It aims to leverage Unilever's global experience in the development and marketing of consumer beauty products and Syneron Medical's expertise in professional aesthetic device technology.

While some companies are seeing success in this area, others are not concerned that it will take away from their physician-only device offerings, believing that it has actually created a positive impact and a great consumer

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awareness of the device technologies that exist to address hirsutism or unwanted hair.

'Our hair removal business has remained steady and strong,' said Jeff Knight of Lumenis. 'However, I think that the home beauty device market is raising public awareness of the treatment options available.'

Perry J. Tomasetti, from Candela, agrees: 'We believe the home beauty devices are increasing the awareness of energy-based hair removal devices and services, and have not had a negative effect on the high-efficacy hair removal market where our Syneron and Candela systems operate. Because the efficacy of the home devices is generally lower than professionally-administered hair removal devices, we think a person who believes

they really have a problem with unwanted hair will continue to seek treatment by professionals with systems like ours.'

Furthermore, the physicians who spoke to *PRIME* didn't feel that at-home beauty devices were taking away from their business, but can provide an added treatment benefit for patients.

'I think there are some wonderful at-home devices out there,' said Dr Gold. 'I think the biggest issue that we have is spending the time to educate patients and follow-up to make sure they're ok. Most of the time these devices are sold as an adjunct to what I do; my patients still need me, but they have the benefit of not having to come in every month.'

Dr Eubanks agrees: 'Most patients are looking for those with expertise to guide their cosmetic needs. This will continue to be true for most cosmetic treatments, and especially true for hair removal going forward.'

## The future

What is clear is that hair removal continues to be a popular procedure – whether the treatment is carried out by a physician or using an at-home device – and it seems almost certain that it will remain in the top five non-surgical procedures when the ASAPS releases its next round of annual statistics. This is likely owing to the development of technology as it becomes more advanced and safer for darker skin types. However,

there are still areas of the market and technology that could be further improved.

'I think what we're going to see is even faster machines that cover more of an area,' said Dr Michael Gold. 'Outside of that, we may look at different technologies for hair reduction such as microwave or ultrasound – they've been proven to work in the past, but no-one has ever commercialised them. If we can find something that works really well, then that would be helpful.'

Dr Spencer agrees that he would like to see faster machines that are less painful and allow for fewer treatments. He also believes that physicians will begin to see more and more men attending at the doctor's office for hair removal treatments.

For others, however, treating white and blonde hair is the only remaining 'holy grail' left to discover.

► *Thank you to the physicians and industry professionals who agreed to be interviewed for this article:*

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## References

1. Cosmetic Procedures Increase in 2012. American Society for Aesthetic Plastic Surgery, NY: ASAPS, 2013. <http://tinyurl.com/ce4widf> (accessed 26 February 2014)
2. Cosmetic Surgery National Data Bank Statistics 2012. American Society for Aesthetic Plastic Surgery, NY: ASAPS, 2013. <http://tinyurl.com/lzkzctm> (accessed 26 February 2014)
3. US Markets for Laser, Light, and Energy Devices 2013. Millennium Research Group, Ontario: MRG, 2013. <http://tinyurl.com/kw574bt> (accessed 26 February 2014)
4. Gold MH. An update on lasers and light sources for the removal of unwanted hair. *PRIME* 2012; 2(2): 56-68
5. Grossman MC, Dierickx CC, Farinelli W, Flotte T, Anderson RR. Damage to hair follicles by normal mode laser pulses. *J Am Acad Dermatol* 1996; 35(6): 889-94
6. Dierickx CC, Grossman MC, Farinelli W, Anderson RR. Permanent hair removal by normal mode ruby laser. *Arch Dermatol* 1998; 134(7): 837-42