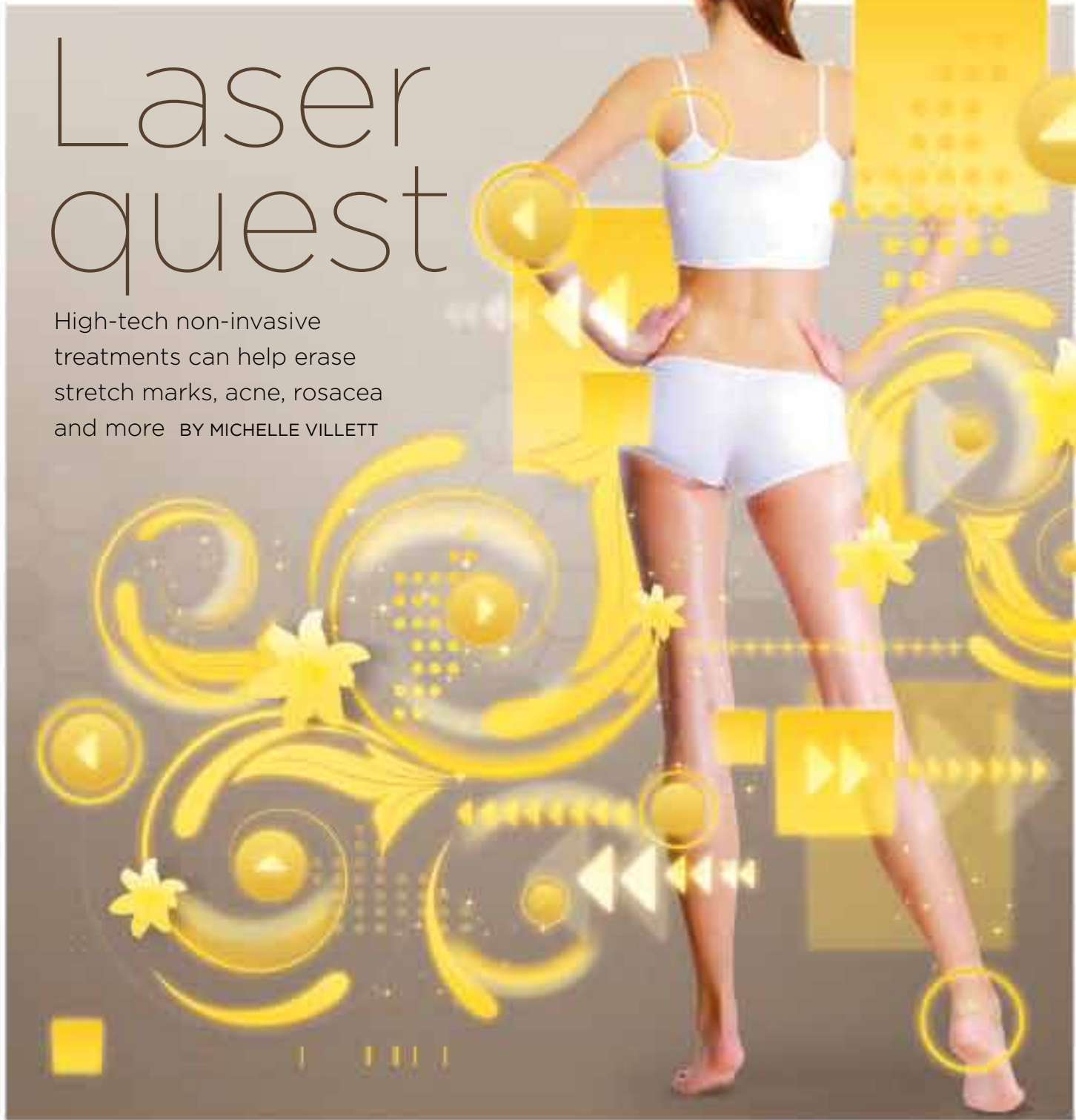


Laser quest

High-tech non-invasive treatments can help erase stretch marks, acne, rosacea and more BY MICHELLE VILLETT



WHETHER IT'S A WRINKLE you'd like to smooth out, breakouts you wish would clear up or a birthmark you would like to banish, chances are that one of a new generation of cosmetic treatments can help. Available at doctors' offices and medical spas, energy-based cosmetic procedures—an umbrella term that includes laser, intense pulsed light (IPL) and radio-frequency treatments—work by heating the epidermis (the outer layer of skin) and dermis (the deeper layer of skin below the epidermis).

"In the right hands, they're very safe and effective for a number of skin conditions," says Jaggi Rao, an associate clinical professor and the director of laser and surgical teaching at the University of Alberta. Rao explains how the process works: The energy (light, radio frequency or other) heats up the tissue. When the heat reaches a certain temperature, this "injures" or destroys the target. If enough "injury" occurs, the skin will repair it, creating rejuvenated skin that is tighter, thicker or smoother than before.

According to the Canadian Women's Health Network, almost 90 percent of women and girls experience body image dissatisfaction, which may explain why demand for these treatments is on the rise. While no Canadian statistics are available, the number of non-surgical cosmetic procedures in the U.S. has increased by more than 600 percent since 1997.

A word of caution, though: While most energy-based procedures have few side effects and require minimal downtime, they can be dangerous and lead to burning, scarring or increased pigmentation if performed incorrectly, so choose an experienced, qualified practitioner. Treatments are most often done by a doctor, or by a nurse or esthetician under a doctor's supervision; make sure the doctor is a dermatologist, plastic surgeon, or GP with specialized knowledge in skin conditions. While results can last up to one year or more depending on the procedure and skin condition, most people will require periodic touch-ups for maintenance.

Here's our guide to some of the most effective techniques—no scalpel required.

The problem Loose or sagging skin
THE TREATMENT Titan laser skin tightening

HOW IT WORKS "Using infrared technology, the laser heats the dermis well below the skin's surface, causing collagen to contract and resulting in tighter skin," says Dr. David Ellis, a facial plastic and otolaryngology surgeon, and professor in the department of otolaryngology at the University of Toronto. It can firm up slack areas on the face, neck, jowls, abdomen, arms and knees, but isn't recommended for patients

over 45—because they lack enough collagen in the skin to cause a significant amount of shrinkage—or for those with a great deal of excess skin due to dramatic weight loss.

NEED TO KNOW The procedure is virtually pain-free and no downtime is required, although you may notice some redness and mild swelling in the treated area. Expect to see an improvement immediately and over the subsequent three to six months as new collagen continues to form. For best results, Ellis recommends a series of two to three treatments, one month apart.

COST \$800-\$1,200 per session, depending on the size of the area being treated.

The problem Scars, sun damage, fine lines and wrinkles

THE TREATMENT SmartXide DOT fractionated laser skin resurfacing or Pellevé radio-frequency therapy

HOW THEY WORK SmartXide DOT is one of a recent generation of fractionated CO₂ lasers that ablate, or vaporize, tissue to a

time) and risk. The new fractionated lasers, such as SmartXide DOT, deposit light energy through hundreds of microscopic holes in the skin, but leave the surrounding tissue intact, says Rao. "The 'injury' it causes promotes the formation of new collagen, which causes tightening of the tissues underneath the skin and improvement of skin quality," says Dr. Andres Gantous, a facial plastic surgeon and assistant professor in the department of otolaryngology-head and neck surgery at the University of Toronto.

Treatment with the SmartXide DOT laser targets wrinkles, minor scarring and pigmentation for any age group. However, like the older lasers, it isn't suitable for very dark skin tones.

Pellevé is a device that uses radio-frequency energy to heat and then contract collagen to tighten the skin. It requires little to no downtime and is best for wrinkle smoothing in patients age 35 and older.

NEED TO KNOW Pain is rarely associated with Pellevé, but you can expect a mild sensation of heat. SmartXide DOT, when

THIS JUST IN: Health Canada recently approved a new cellulite-reducing laser. Cellulaze is the first laser that promises long-term (more than one year) improvement in the look of cellulite in just one treatment. But it's pricey, with an average cost of \$5,000 per session. Currently, only five Canadian doctors offer it. How it works: A tiny laser inserted under the skin heats and melts the fat. Then the laser releases fibrous tissues that pull down on skin and cause that dimpled look. Finally, it stimulates collagen production.

controlled depth. In the past, CO₂ lasers removed the entire upper layer of skin to treat wrinkles, scarring and age spots. Those laser treatments required weeks of recovery time because the skin "wept" for several days and then crusted over, and they could be used safely only on Caucasian skin. CO₂ lasers have since improved, meaning minimal downtime (less than a week of recovery

performed correctly, has very little risk, but a topical anesthetic cream must be applied 45 minutes before treatment; after about five days, you can return to work. If either treatment is performed incorrectly, there is risk of burning and tissue sloughing.

Because both procedures stimulate collagen, you'll need to wait up to six months to see the full effect of new collagen produc- →

tion. Gantous says most people need just one SmartXide DOT session, whereas Pellevé typically requires about two to four treatments. Results can last one year or longer, after which you may need periodic touch-ups.

COST Approximately \$1,500 per session for SmartXide DOT resurfacing, depending on the patient and the areas involved; \$600 per session for Pellevé.

The problem

Acne

THE TREATMENT Blue light or IPL therapy

HOW THEY WORK Suitable for teens and adults, “these devices emit a specific broadband of light that won’t cause UV or extensive heat damage, but will dry out oil glands and reduce redness,” says Rao. But get assessed by a doctor first.

Because acne varies in severity and is triggered by many causes, including bacteria, inflammation, excessive oil production and hormonal factors, you may need prescription oral medication in conjunction with light therapy for the best results. (Rao uses blue light along with Accutane or antibiotics to limit the dosage required for these drugs,

so unless they’re part of a multi-faceted treatment plan that includes prescription medication, your acne could return once you cease therapy. Most acne sufferers need four to eight sessions, each about 15 to 20 minutes long, twice weekly for the first two weeks and then once a month thereafter. IPL requires fewer sessions, says Rao, because it’s much more aggressive in its light delivery. There is no recovery time for blue light and only a couple of days for IPL. While blue light has no side effects, with IPL there is some risk of increased pigmentation as well as burns from the heat. Choose your practitioner carefully; ask your doctor for a recommendation.

COST \$50-\$100 per session for blue light; approximately \$500 per session for IPL plus photodynamic therapy.

The problem

Rosacea and birthmarks

THE TREATMENT Pulsed dye laser or IPL therapy

HOW THEY WORK Pulsed dye lasers seek out red pigment in the skin. As the light enters the epidermis and dermis, it is absorbed by blood vessels and causes them to close

20 to 30 minutes to do the entire face.

For both procedures, many see a 70 to 90 percent improvement in rosacea after at least two treatments. The effects could last one to two years, after which you may require maintenance visits. (Birthmarks will be removed permanently.)

Between sessions, keep out of the sun and avoid skin products that irritate.

COST Starts at \$200 per session for pulsed dye lasers, depending on the size of the treatment area; \$400-\$500 per session for IPL for the full face.

The problem

Stretch marks

THE TREATMENT Pulsed dye laser therapy or erbium fractionated laser skin resurfacing

HOW THEY WORK Because it targets the red pigment in blood vessels, the pulsed dye laser is ideal for red or pink stretch marks, which are usually new and occur in Caucasian skin. Brown, purple, silver or white stretch marks can occur on all skin tones; the older the stretch marks, the more difficult to fade, although fractionated laser skin resurfacing may be your best bet. Erbium is an ablative laser that stimulates and regenerates collagen by delivering a controlled amount of heat deep into skin. “When it creates microscopic thermal zones, skin contracts and shrinks around them, resulting in an improvement in how the stretch mark looks,” says Rao. “It also stimulates new collagen formation around the areas of thermal injury. This new collagen will hopefully replace the damaged collagen that is the reason for the stretch mark.”

NEED TO KNOW Most people will need between three and five treatments. For some, results will last two years or more; for others, results will be permanent. With darker skin, there is some risk of the marks going brown after treatment, but this is usually temporary.

COST \$200-\$500 per session for either procedure, depending on the size of the treatment area. □

A GROWING TREND: In the United States (numbers are not available for Canada), 1,126,177 non-surgical cosmetic procedures were performed in 1997.

By 2009, that number was 8,522,139—which is an unbelievable increase in these procedures of more than 600 percent.

which can have side effects.) A photosensitizing drug is used in conjunction with photodynamic therapy. When applied to the skin and activated by light devices, it is supposed to reduce bacteria and sebum production, and increase the effectiveness of the treatments. “Photodynamic therapy has been shown to rapidly reduce inflammation, but the results are variable and less reliable with acne treatment,” says Rao.

NEED TO KNOW On their own, blue light and IPL rarely offer long-term improvement,

off. Treatment feels like a rubber band snapping on the skin. While birthmarks and port wine stains respond best to pulsed dye lasers, both that procedure and IPL are suitable for rosacea or broken blood vessels on the face.

NEED TO KNOW Pulsed dye lasers can cause mild bruising, which should clear within seven days. (Bruising is less common with IPL.) Most people need at least two treatments for pulsed dye lasers, while IPL requires four to five. Treatments take about

TALK

Have you had a laser treatment? Tell us about it at besthealthmag.ca/facebook.