

# Knowledge is power

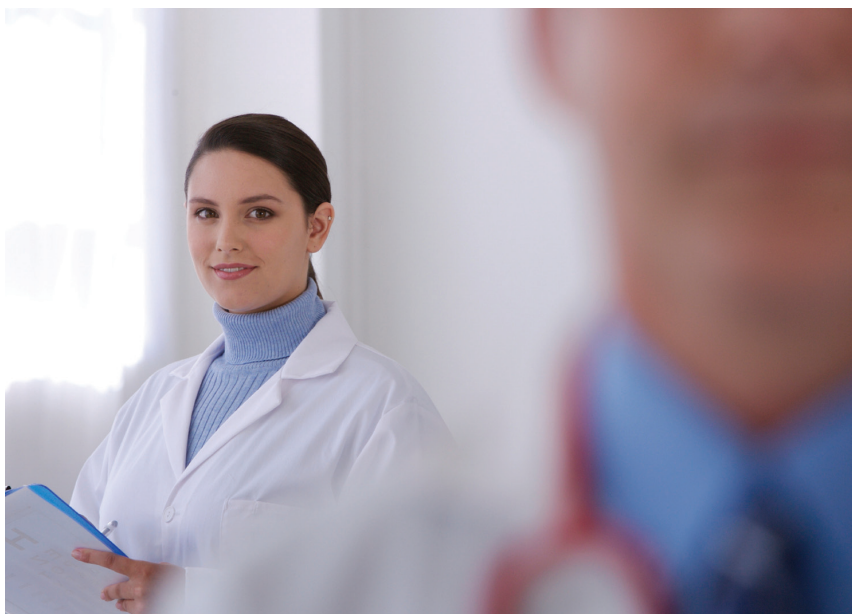
The learning curve for laser-assisted lipolysis is steep, and patients are unforgiving of ignorance caused by inadequate training. It is vital that laser liposculpture operators have a detailed understanding of the procedure, says **Dr Paul Steventon**

**L**aser-assisted lipolysis has the potential to be the biggest development in surgical fat-reduction procedures ever seen in the UK. In an American Society for Dermatologic Surgery (ASDS) study of laser lipolysis in 15,336 patients, there were no reports of deaths, pulmonary emboli, viscus perforation, thrombophlebitis, hypovolaemic shock, seizures or toxic reactions. Overall, the prevalence of infection was 0.4%, skin irregularity around 1%, haematoma or seroma 0.7%, unacceptable scarring 0.02%, sensory nerve impairment 0.9%, and contact dermatitis 0.12%.

During liposculpture, the physician makes a 2–3mm incision through which Klein's solution is injected to produce tumescent anaesthesia. A small diameter laser probe is then inserted and manipulated, causing rupture of adipocytes and releasing liquid fat.

In most cases, the liquefied fat is removed using light aspiration but a small amount can be left to be absorbed and metabolised naturally. A skin-tightening effect takes place as the laser heats the skin from below, stimulating the formation of new collagen. For most patients, normal activities (excluding deliberate physical exercise) are resumed within 48 hours.

When a clinician new to the procedure begins treating patients, the pitfalls become apparent. The aim is a safe, painless and precise improvement in body appearance, but the learning curve is steep and patients are unforgiving of ignorance and mistakes produced by inadequate training. A detailed understanding not only of the basics of laser lipolysis, but also of the fine details of the procedure, including all the "tricks of the trade" and how to vary the treatment for different cases are essential for early and sustained success.



I have carried out more than 300 liposculpture procedures. My results and side-effects profile approximate those of the ASDS study. As I gained experience, I became aware of the low standards that characterised my initial training in lipolysis.

The absence of pertinent information and misinformation about the effectiveness of the treatment meant I had a difficult introduction to the procedure—like many of my colleagues, I came close to abandoning it as flawed.

After careful reappraisal of my resources and goals, and research into outpatient liposuction carried out in the USA, I put together a series of protocols aimed at allowing a high success and low failure rate during the early stages of a clinician's practice of liposculpture.

The first aim was to improve the anaesthetic. No careful and considered body reshaping is possible if the patient is intolerant of the procedure. Papers on tumescent analgesia published in the USA and Taiwan provided insights leading to the development of a formulation that allowed the necessary time

and care to obtain good results, along with a wide margin of safety. The skills necessary for correct administration of the anaesthetic were also identified.

Subsequently, an integrated clinical team approach to liposculpture was developed, relying on good protocol-driven nursing care before, during and after the procedure.

When clinicians train, it is essential that the lipolysis nurse—whose ability to facilitate is vital—is trained alongside the physician. Efficient and proactive ordering of equipment garments and supplies is a *sine qua non*.

After an uncertain start, our in-house team approach to laser-assisted liposculpture is a successful part of our clinical portfolio. We train, advise and assess medical and nursing colleagues. Students from the UK, Sweden, Israel and Poland have attended courses—and (most) have passed an assessment to gain a useful clinical skill.

*Dr Paul Steventon is medical director of the Epsom Skin Clinic in Surrey. W: [www.fyma.co.uk](http://www.fyma.co.uk)*