

The State of Play

Mike Murphy airs his views on IPL Hair Removal



Mike Murphy is a physicist/bioengineer who has been involved in medical laser research since 1986 and in the commercial sector since 1989. His original research group developed the scar-free removal of tattoos by Q-switched ruby laser in Canniesburn Hospital, Glasgow. He now runs training courses on IPL systems and aesthetic lasers and their applications. www.dermalase.co.uk

Light based hair removal has been around since the mid 80s when we first noticed that our Q-switched ruby laser not only removed tattoos, but also vapourised surface hair. Back in those days we were quick to point out to our patients that it would soon grow back (which they generally wanted), as we had observed over the previous years.

Later, when I started working with the world's first IPL system from Sweden, we figured out how to remove hair on a more permanent basis – using longer pulses and higher powers. Since then I have continued to work on improving treatment applications with IPL systems by promoting the understanding of how these devices work in the skin – and why many of them do not! I have been asked many times by therapists and business owners why they can't achieve the results they see in the glossy sales brochures. For too long the manufacturers have been selling under-performing equipment for top-notch prices leaving the users and the clients high and dry.

The most important way to ensure good results is by having proper control over your system. Every client is an individual with individual needs. Many commercial systems do not allow the user the control they really need. There are three main points, which should be considered when thinking about IPL systems:

Firstly, to ensure good, consistent results it is imperative that the 'correct' system parameters are used. This means that the unit should be able to output the required wavelengths, energies and pulse durations – only the right combination of these will damage the follicle's germ cells to a point where they are irreversibly destroyed with no chance of re-growth. If your system delivers too low an energy or too short a pulse then the cells will remain viable and hair will grow back. If, however, the energy is too high or the pulse too long then you risk too much damage in the surrounding tissues. The user must also have a good understanding of what they are trying to achieve and how to do that. Hence good training is essential to ensure good results.

Secondly, you must be able to control the wavelengths coming out of your system. Some units on the market do not allow you to filter

out unwanted wavelengths which can lead to unwanted damage. In fact, I know of one unit which outputs a significant amount of ultra-violet light which is potentially very hazardous! If you cannot filter out unwanted wavelengths then you will inevitably end up destroying tissue structures that you want to leave alone such as blood vessels or epidermal melanocytes.

Thirdly, I have measured the energy output of a number of IPL systems through the years – all of them were under-spec. In other words, they were indicating one output energy while delivering a lower energy which translates to poor results! This appears to be commonplace throughout the industry. When challenged one manufacturer told me that "their customers wanted to show higher energies to their clients." Of course, most manufacturers/suppliers do not supply a meter to check the energy output. Why not? The fact that IPLs are regularly under-performing is the main reason why so many people achieve poor results. Ask yourself this – would you drive a car without a speedometer?

It is time for a shake-up in the IPL industry. Too many manufacturers have been 'hoodwinking' their customers for far too long, resulting in dissatisfied users and clients. The regulatory bodies are a joke – they do not manage the industry properly. The fact that the CQC withdrew from regulating IPL hair removal in the beauty industry in October 2010 just proves this. The playing field is now wide open to any spiv who wants to 'get on the bandwagon' and start injuring the public with a cheap, poorly designed, low-powered IPL to make a fast buck. I don't remember the last time I heard of an inspector checking a company's devices to see if they matched the claimed specifications or if their units were clinically safe, if ever! Until this happens people are going to continue to buy substandard equipment and provide a substandard service to their clients – without knowing, till it's too late!