

The uRepublic Guide to Q-switch Lasers

In Australia, sun-damage is extremely common and frequently causes irregular brown pigmentation that may appear unsightly. The Q-switch laser is effective for a wide range of skin pigmentation disorders including sun-freckles. The Q-switch laser can also safely treat many forms of birthmarks ranging from brown to blue-gray in colour. The uRepublic Q-switch laser has a range of wavelengths that allow safe treatment of all skin types including dark skin. The Q-switch laser may also rejuvenate the skin by improving its colour and texture.

What is the difference between regular Lasers and Q-switch lasers?

Lasers utilise a single wavelength to deliver the energy to skin targets. The regular targets in skin are pigment, blood and water. Q-switch lasers are a special category of lasers that can deliver energy in extremely short bursts (within several billionths of a second). As a result this unique property makes it an ideal laser for treating pigment-related conditions such as sun-freckles, birthmarks or tattoos. The ultra-short bursts of energy delivered by the laser disrupts the pigment-containing cells within the skin, leading to fading and clearing of the treated area. The considerable energy delivered by the Q-switch laser can also remodel skin collagen and improve its texture.

What can Q-switch Lasers do for me?

Clears brown-black pigment blemishes

- Sun-freckles and brown spots
- Stubborn melasma
- Birthmarks of various colours including brown, blue, gray and black (eg Cafe-au-lait spots, Nevus of Ota and Hori's nevus)

Skin rejuvenation

- Laser skin toning
- Laser peels

Tattoo removal (refer to additional info)

- Professional and amateur tattoos
- Gravel tattoos

Hair removal (refer to additional info)

- For reversing paradoxical hair growth (hypertrichosis following standard laser hair removal)

Collagen remodelling of acne scars

- Collagen remodelling post resurfacing
- Acne scars
- Fine lines and wrinkles

What does the procedure involve?

Spot-treatment of most sun-induced brown blemishes may not require any anaesthetic as the procedure is often well tolerated. When the laser fires it feels like a rubber-band snap against the skin. Treatment of deeper pigment found in birthmarks and tattoos may be slightly more uncomfortable and may require cream or injectable anaesthetic. If required, anaesthetic cream may be applied 30 minutes before the procedure. Protective eyewear is required and provided during the procedure to protect your eyes.

Q-switch Laser treatment for pigment and birthmarks

Sun freckles can be cleared with 1–2 treatment sessions of the Q-switch laser. Spot-treatment can safely and effectively target individual brown marks on the face, torso and limbs. Birthmarks can also be similarly treated, although more treatment sessions (6 or more) are required as the response to treatment is less consistent. For birthmarks, a test treatment at the time of consultation may be carried out to assess treatment responsiveness and to select the appropriate laser dose. Treatments may be spaced 4–6 weeks apart.

Stubborn melasma can be treated by a series of Q-switch laser treatment sessions. Melasma is a challenging condition to manage as recurrence is common and it responds variably to a range of treatments such as skin bleaching, chemical peels, IPL, regular lasers and fractional resurfacing. Stubborn, end-of-the-line melasma often responds to the Q-switch laser, with up to 10 treatment sessions spaced 1–4 weeks apart may be required. Often a combination approach gives the best results for melasma.

Q-switch Laser treatment for skin rejuvenation

A recent application of the Q-switch laser is skin toning and rejuvenation. The whole face is treated and 4–6 treatment sessions are required at intervals of 1–4 weeks. Compared to other forms of rejuvenation, there is minimal down-time associated with the Q-switch. The Q-switch laser is operated by both the doctor and the specialist nurse. Treatments for melasma and skin rejuvenation may be carried out by the specialist nurse. Birthmark treatments are carried out by the doctor.

Q-switched lasers as Adjuvant (booster) lasers

After Laser resurfacing (including scar repair) the skin will continue to remodel over the next 2–3 months, even after it looks fully healed. It is desirable to help boost collagen remodeling during this period with adjuvant lasers to achieve an even better final outcome. These adjuvant lasers (Pulsed Dye Laser, Nd:YAG Laser) are gentle non-ablative lasers that can improve scar remodeling and the final results. These treatments are well tolerated and do not require any recovery time (ie no downtime). Patients undergoing Levels 6-7 resurfacing (including laser scar repair) can usually benefit from 3 (or more) adjuvant laser sessions at 3-week intervals. The adjuvant laser procedures are usually started 2–3 weeks after the resurfacing procedure, as soon as the skin looks healed. Please check with your doctor what would work best in conjunction with your resurfacing procedure.

What are the unwanted side effects of Q-switch Lasers?

Side effects are uncommon (less than 5%) with newer generation devices.

Apart from expected degree of post-treatment bruising and swelling, the following may occur:

- Burns to the skin leading to significant blisters or scabbing
- Infection of treated areas
- Alteration in pigment – darker or lighter
- Darker skin individuals are those with recent tanning are at greater risk of developing both increase or decrease in pigment
- The alteration in pigment may either be temporary or rarely, permanent
- Persistence or recurrence of pigment
- Scarring and indentations – usually as a result of burns (extremely rare)

Is everyone suitable for Q-switch Lasers?

We do not treat:

- Pregnant or breast-feeding women
- Children under age 18 without parental consent
- Current significant skin disease / infections such as cold sores at the site of treatment
- History of keloid scarring (special precaution in high risk areas)
- Prior treatment with gold injections (may darken)
- Cosmetic 'make-up' tattoos that are pale or skin coloured (may darken)
- Any emotional, mental or medical condition that may impair judgment

What happens after treatment and how long will the results last?

Immediate whitening of the treated spot occurs and fades within hours. This is followed by transient redness and mild swelling. Make-up may be applied if desired. The treated area then darkens (like a bruise) and will gradually peel off over the next 1–2 weeks. The 'new' skin may look slightly pink but will blend with the rest of the skin in time. Mild scabbing may occur but rarely leaves scars. The pigment may recur with sun exposure, therefore strict sun protection is recommended. Certain birthmarks (eg. Cafe-au-lait spots) tend to recur with time. Repeat treatments can be carried out, if the condition recurs.