

Laser treatment of pigmented lesions and tattoos

Dr. Sanjeev Aurangabadkar

How does it work?

Pigmented lesions such as sunspots, freckles, certain birth marks and tattoos can be safely and easily removed with lasers. The laser commonly used for this purpose is the 'Q-Switched Nd: YAG laser. The laser emits a highly focused beam of light, which passes harmlessly through the outer layers of the skin and is absorbed primarily by the tattoo ink or excess pigment. As the light is absorbed, it is quickly converted to heat. The sudden rise in temperature within the treatment target fractures the ink particles or pigment into tiny particles. These tiny particles are either carried away by the scavenger cells or lymphatic system or shed from the skin.

What kind of tattoos and pigmented lesions can be treated?

A tattoo's color, depth, and the chemical composition of the ink all affect how it responds to laser light. Black, dark blue, red tattoos respond readily to treatment. Green, purple, orange, brown colored tattoos respond poorly and require more sessions. Professional tattoos require more sessions than amateur tattoos. A wide range of pigmented lesions can be treated by lasers including sun spots, freckles, and certain brown birth marks such as nevus of Ota.

Are there any precautions before laser treatment?

In general, a patient must avoid a tan as tanned skin carries an increased risk of complications. Strict sun protection is recommended before, during and after laser treatment sessions.

Does it hurt?

The laser light selectively targets the undesired ink or pigment and does not affect the surrounding skin. Most patients tolerate treatment well and report little discomfort. Most people compare the sensation of laser shots to the snap of a rubber band. If treatment is uncomfortable, then topical (surface) anesthesia may be used to minimize discomfort, but is usually not necessary.

What happens after treatment?

Immediately after laser treatment, the treated area may become whitish in color and may swell slightly. There might be some redness & slight burning sensation lasting for a short time. The whiteness subsides in about 30 minutes. The redness and swelling can be minimized by cooling the skin with an ice pack. The tattoo or pigmented lesion may fade over the next few weeks.

How long does it take?

Depending on the size and location of the lesion or tattoo, each session may take 2 minutes to 15 minutes. Some tattoos or pigmented lesions may clear in just one session but others may take multiple

sessions spaced over 4-8 weeks between treatments. Number of sessions is not fixed and varies with the lesion and from person to person.

Are there any side effects?

Side effects are rare. When side effects do occur, they are confined to the treatment area. The treating dermatologist can provide complete details of the side effects.

Are there any alternative treatments?

For tattoo removal, Q switched laser is the best solution. For pigmented lesions, the treatment options depend on the type of lesions and the skin color of the patient.