



Adult, Pediatric & Cosmetic Dermatology
Laser & Skin Surgery

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Options For Tattoo Removal

Tattoos no longer should be viewed as permanent. Several very good options now exist for removal of tattoos. There is not simply one method that is right for every person, nor for every tattoo. The ability to remove a tattoo will vary by the amount, color, age, and depth of tattoo pigment applied to the skin. In general, the older the tattoo, the faster it responds to treatment. Certain colors and complex pigments (i.e. greens, purples, yellows) may be more difficult to remove. Different techniques may be needed to remove different colors from the skin. No two tattoos are the same – there is often quite a difference in how fast any given tattoo will respond to a given therapy.

1. What are the treatments available to remove a tattoo?

a. Surgical Excision

If the tattoo is relatively small and/or easily accessible and cosmetically in an inconspicuous area, the entire tattoo can be surgically cut out (or excised), and sutured closed with stitches. This can be done in a single treatment session, or in several treatment sessions involving a staged or serial excision technique. This surgical technique is done in the office under local anesthesia. The surgical technique always leaves a line scar which can spread and leave a significant or disfiguring scar in certain areas of the body (i.e. breast, shoulder or base of the neck areas). The cost of excision will vary according to the size of the tattoo, its location, and how much time is involved.

b. Dermabrasion

Dermabrasion is a technique utilizing a specially designed, rapidly rotating, diamond tipped, skin sanding instrument to physically remove the tattoo pigment under the skin. Under local anesthesia and a surface skin refrigerant, the area is carefully abraded layer by layer until all visible tattoo pigment, or most of the visible pigment is removed. This results in an open abrasion or sore that slowly heals over the next 4-6 weeks. The wound requires daily care, and can be sore during the healing phase. This will always result in a scar which initially will be pink to violaceous in color and in certain areas (especially in deltoid, neck and chest) can become raised, disfiguring and/or hypertrophic. This treatment is usually done in a single 15-30 minute treatment session in the office under local anesthesia.

c. Laser Techniques

Carbon Dioxide (Co2) Laser: This Laser uses an infrared light beam to vaporize the skin and remove tattoo pigment in a precisely controlled manner. The procedure can be done in our office in a single treatment session under local anesthesia. The resulting wound, post-operative care, and scarring is fairly similar to that described above in the dermabrasion technique. The cost may be \$300 to \$750 or more, depending on the size and location of the tattoo, with all follow-up costs included in that fee.

Erbium:YAG Laser: This Laser is more precise and gentle sort of infrared wave length Laser which works similarly to the Co2 Laser. The procedure is done in office under local anesthesia with removal of pigment usually accomplished after one treatment session but involving prolonged healing, scarring and/or pigment irregularity after treatment. The cost of the treatment is similar to the Co2 Laser. This Laser may be used for small areas of resistant pigment or in combination with other Lasers described below.

New Generation Q-Switched (Rapid Pulsed) Lasers:

The Q-Switched Nd-YAG: This laser has been available since the early 1990's and utilizes a high intensity infrared or green light pulsed in a rapid manner. It works by exploding apart pigment particles under the skin into smaller and smaller particles with each treatment. Usually this Laser, while not painless, requires little or no anesthesia and produces minimal scarring, nor any significant color or texture change after treatment. After treatment the skin may show some scattered areas of pinpoint bleeding and fine scabbing which may need to be covered and treated gently for 3-7 days. Slowly the pigment lightens over the next 4-6 week interval.

For tattoos in cosmetically important areas, (i.e. eyebrows or face) or for patients with darker skin it is the Laser of choice. The primary down side is that it requires multiple treatment sessions and treatment is more costly. The older and lighter the tattoo, the faster it is removed. It may require as many as 3-7 laser treatment sessions at approximately 6 week intervals for optimal or complete removal. This Laser is excellent for tattoos that are dark blue and black or red in color, but unfortunately does poorly to remove green and yellow pigment. The cost varies according to the size of the tattoo and time involved in each treatment session. A typical palm sized tattoo may take 10 minutes of treatment time per session and cost around \$350 or \$450 per session.

Q-Switched Ruby Laser: This Laser works on a similar principal as the Q-Swtiched Nd-YAG Laser. The Ruby Laser is ideal for dark pigment and also works well to remove green pigment. The Ruby Laser also requires multiple treatment sessions and results in little or no scar.

Alexandrite Laser: Similar in principle to the other Q-Switched Lasers, this Laser has a broad application for the removal of most tattoo pigments and is excellent to remove tattoos with dark black, blue or green colors.

Versapulse Laser: This Laser has a Nd-YAG and an Alexandrite Laser built in which enables us to treat with green, red and infrared light; therefore tattoos, with any combination of black, blue, green and/or red pigments can usually be treated effectively with this one device. The Laser treatments are similar to the selective Laser described above requiring multiple treatments at 4-6 weeks intervals.

2. Which laser is best to remove my tattoo?

The Laser system optimal for removal depends on the size and location of the tattoo, the type and/or color of the tattoo pigment as well as your willingness to accept incomplete removal, scar and/or multiple treatment sessions. Certain darkly-colored tattoos and some deeply-applied tattoos will take multiple sessions with Lasers and will be quite costly. The almost complete and virtually scarless removal in most cases, using a Laser, often makes one of these the best treatment options for the long term.

3. If the tattoo is on my teenager and is gang-related and he/she now wants it off, will you give a discounted fee?

Dr. Goldberg will be glad to discuss significant discounts in your fee in a young person motivated to remove the stigma of a gang tattoo or a gang sign at this time in his/her life.

4. Which can be done to minimize discomfort during treatment?

The surgical excision, dermabrasion techniques are all done with local anesthesia, that is a small injection of Lidocaine at the tattoo treatment site. The Q-Swtiched Lasers involve a rapid fire pin point pricking sensation likened to the feeling of hot grease from a frying pan touching the skin. Most people find it quite tolerable and not too dissimilar to the pain felt in applying the tattoo. Topical or local anesthesia or sedation by pill (i.e. Valium) is available on request prior to the treatment.

5. What are the risks and side effects of treatments?

Risks of treatment involve the incomplete removal of pigment, the potential for a change in pigmentation (especially skin lightening), infection, or scarring. Dr. Goldberg and associates will take every precaution to minimize any potential side effects.

6. Can cosmetic tattooing around the lips or eyebrows be removed?

Unwanted cosmetic tattooing around the eyebrows, lips or eyeliner can usually be lightened and improved with one of several Laser modalities. Often a test spot may be necessary to determine the best Laser to remove a particular pigment. On occasion certain tattoo inks, especially those with titanium dioxide or ferric oxide will turn jet black when treated with a Q-Swtiched Laser. In select cases you will be advised of this possibility and treatment with the Co2 or Erbium Laser will be recommended. Multiple treatments may be required for optimal results.

A consultation in the office with Dr. Goldberg or Jennifer Allison M-PAC is required before scheduling tattoo removal treatment. The cost of the consultation is \$70 and will not be applied towards the removal of the tattoo. The costs of the tattoo treatments are usually not covered by insurance, and payment for tattoo removal needs to be received 10 days prior to the procedure, unless prior arrangements have been made with Dr. Goldberg or the Business Office.