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TATTOO REMORSE

Making them go away

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Tattoos once marked homesick sailors and enlisted servicemen, survivors of inebriated shore leaves. Their ink-branded upper extremities shone with patriotic tattoos and reminders of home honoring moms and girlfriends.

However, women, college students and others under 30 now lead the charge for contemporary body art, including more eclectic tattoos and piercings.

Older associations correlating tattoos to military experiences, thugs, prisoners, illegal drug use and alcoholism no longer stand. Most folks getting tattoos these days simply want to feel unique and independent, or to punctuate a life experience like Hurricane Katrina. Tattoo wearers today are often more interesting and colorful than their peers – such as a senior physician of a local faith-based clinic who e-mailed me that he had a tattoo, liked it and would never consider having it removed.

Initial happiness with any permanent embellishment can fade with time and changing lifestyles, but tattoos, like children, are usually forever. Unlike children, professionally applied new tattoos are bright and crisp, while it may take a couple of decades for many children to become decent people. And as all skin-watchers know, time isn't kind to most tattoos as they fade and sag over the years.

The exponential surge in tattoo parlor business over the past couple of decades has also fueled increased desires for tattoo removals, especially for those marking relationships gone sour and on more visible body parts. Reasons range from career opportunity concerns, family pressures and plain old maturity motivated change.

Women are more likely than men to seek tattoo removal according to a 2008 paper in the Archives of Dermatology, which surveyed Texans who made appointments for laser removals. Tattoo removals were often fueled by social stigma and negative comments by others, but the most frequently quoted reason was simply, “I don’t want it any longer.” Other cited reasons of regret included newly found embarrassment, lowering of body image, problems with clothes, experiencing stigma, a change in a relationship or desire for a new job or career.

If someone gets bored with a body piercing or decides to abandon it for another reason, they remove the piercing.

Tattoos aren’t all that simple to forget. Except for camouflage creams as temporary cover-up, over-the-counter potions and remedies are best left on the counter. Chemical peels for tattoo removals are as passé as bell-bottoms.

Dermabrasion is rarely recommended anymore, except in a situation when the person has some sort of allergic skin reaction to the breakdown of the pigments in the skin.

Laser ablation is the state-of-the-art method for tattoo removal. Lasers have become useful and important tools in the medical armamentarium from zapping certain tumors and diseased tissues to correcting eyesight. On the dermatologic cosmetic front, lasers can rejuvenate aging faces and help erase or banish unwanted hair, unattractive birthmarks and rethought tattoos.

With less selective earlier lasers, unwanted tattoos were simply swapped for unsightly scars. There are several types of lasers, and each has it specific uses depending on the specific procedure and the color of the targeted tissue. Just like a good carpenter needs various sized screwdrivers for different screws, physicians need unique lasers for specific tasks. Lasers that are used to smooth the skin on the face and remove unwanted hair don’t have the proper wavelengths and settings to vaporize tattoo pigments.

The goal in laser tattoo removal is to destroy the tattoo pigments with bursts of light energy with minimal effects on the surrounding skin. This process is called selective photothermolysis, repetitive very short bursts of high intensity laser waves to zap the tattoo ink pigment particles in the dermis of the skin. The body’s immune defense mechanisms then carry away the trashed pigment pieces.

Proper photothermolysis of the tattoo pigments requires use of the correct laser with precise attention to the wavelength, exposure time and number of repetitive hits, all focused at the right spot. Temperatures inside the pigment molecules can reach more than 200 degrees Fahrenheit so the duration of the energy pulses must be in nanoseconds, fractions of fractions of seconds, to prevent the surrounding skin from turning to burnt toast. Just like with a photograph, improper exposure time or lighting can mar the outcome.

Modern tattoo removal uses more advanced “Q-switched lasers” with different wavelengths for different ink pigments. The first step in vanishing the ink is absorption of enough light energy by each pigment molecule to cause a heat related breakdown. This amount is different for different colors. Ink pigments absorb laser waves in different intensities according to their color, just like a darker car heats up faster in the sun than a light-colored one.

The absorbed light must pack a high enough energy load to toast and destroy the pigment particle.

“Get your tattoo in red or black,” says Dr. Elizabeth McBurney, a renowned Louisiana dermatologist who practices in Slidell and lectures about laser removals throughout the world. “Black and red tattoo pigments are the easiest to remove by laser even though each color takes a different wavelength. Oranges and yellows are more difficult and take more treatments to remove. Green and aquamarine are very resistant to laser removal.”

Depending on the size of the tattoo, a treatment session lasts about 15 to 30 minutes and sessions are repeated no more frequently than every two months. Smaller plain black amateur tattoos, superficial with a less dense ink load, can be removed in four sessions or fewer. Professional tattoos with more elaborate designs and multiple pigments require as many as six to 10 sessions depending on the ink colors and how deep they were blasted into the skin.

“A complicating factor in tattoo removal is that the white pigment titanium dioxide is often mixed with other colors by the tattoo artist to achieve maximum tattoo brightness,” wrote McBurney in a 2002 landmark review article in dermatology literature, with 85 references describing potential adverse effects and complications of laser therapy.

Such brighteners can cause less than optimal results at removal time. Laser energy oxidizes them into darker pigments akin to a rust effect.

At least getting tattoos is generally safer these days. The most common adverse effect is plain old bad or botched artwork. Single needle use is now the norm, but there’s still the potential to transmit hepatitis and other viruses. For example, the tattoo artist who dips into a shared vial of an expensive ink between customers contaminates a single-use sterile needle. Staphylococcal skin infections also can occur in less than surgically sterile tattooing parlors. Other rare complications are allergies to the ink and sun related skin rashes.

Laser tattoo removals are always more expensive than getting them in the first place. The equipment and maintenance costs are high for multiple lasers with specific wavelengths for different tattoo ink colors. But removals can be life-changing and even lifesaving for some: those in witness protection programs.