

Laser tattoo removal

Liaisan Khismatova

Introduction

- WHY?
- Recent Break-up
- Change in Interests
- Maturity
- Career
- Poor Quality



https://en.wikipedia.org/wiki/Tattoo_removal#Laser_removal

!
<http://emedicine.medscape.com/article/1121212-overview#>

Tattoo removal

Lasers have become the standard treatment for tattoo removal because they offer a bloodless, low risk, effective alternative with minimal side effects.

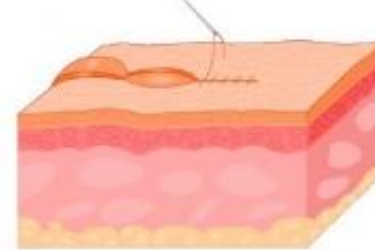
Current removal methods

Laser Removal



<http://www.blinktattooremoval.com/blog/tag/claser/>

Surgical Excision



<http://www.blinktattooremoval.com/blog/tag/excision/>

Dermabrasion



<http://www.tattooreport.com/tattoo-removal-overview.html>

Cryosurgery

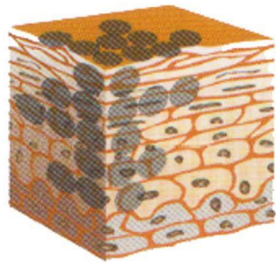


<http://www.blinktattooremoval.com/blog/tag/cryosurgery/>

www.notatzz.com

Laser removal

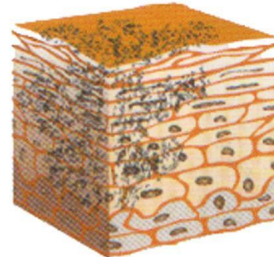
- Laser treatment causes tattoo pigment particles to heat up and fragment into smaller pieces. These smaller pieces are then removed by normal body processes.



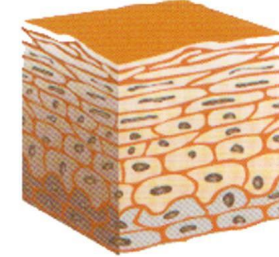
1 Pigment in the skin



2 The pigment particles absorb laser light and suddenly expand



3 Due to photoacoustic effect pigment particles are selectively fragmented

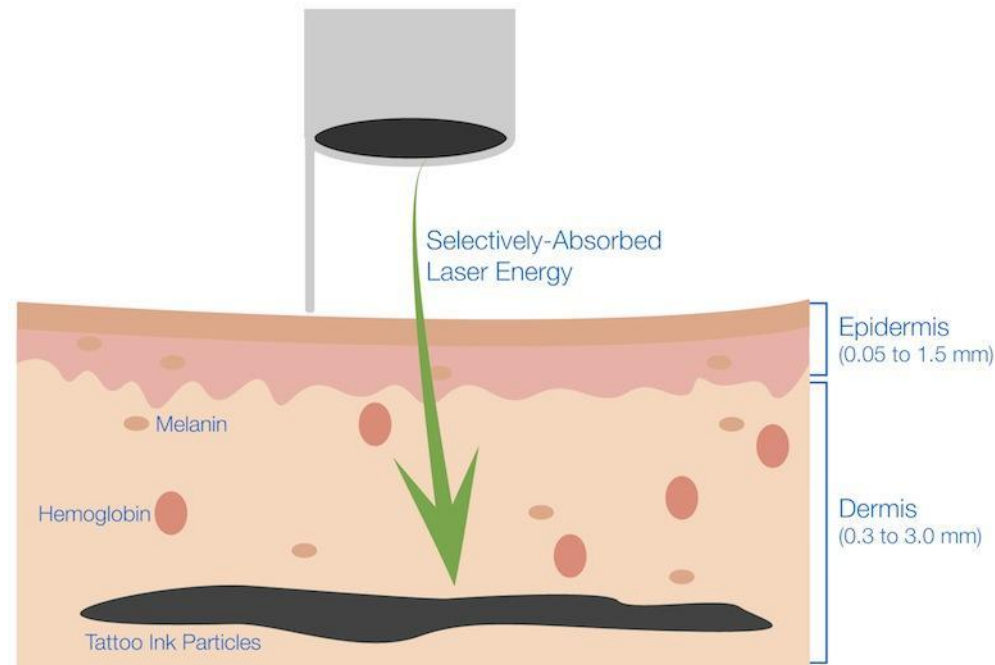


4 Fragmented pigment particles are carried away by macrophages

Laser-Skin-Ink interaction

- Properties
- deep ink placement
- melanin's ability to absorb light decreases with increasing wavelength
- tattoo-removing lasers must be absorbed by the tattoo granules to effect removal.
- ink may become resistant to certain wavelenaths of light

Laser-Skin Interaction



Lasers

- Q-switched Frequency-doubled Nd:Yag: a green light which is highly absorbed by red and orange targets.
- Q-switched Ruby: a red light which is highly absorbed by green, blue and dark tattoo pigments.
- Q-switched Alexandrite: a red light which is highly absorbed by green, blue and dark tattoo pigments.
- Q-switched Nd:YAG: a near-infrared light, suitable for darker skin and dark pigments



Summary

Tattoo removal is most commonly performed using lasers that break down the ink particles in the tattoo.

- + a low risk of scarring
- + and it does not require any incisions to be made near the tattoo.
- + the most effective
- - troubles with removing colored tattoo
- - skin depigmentation
- - various lasers are required