

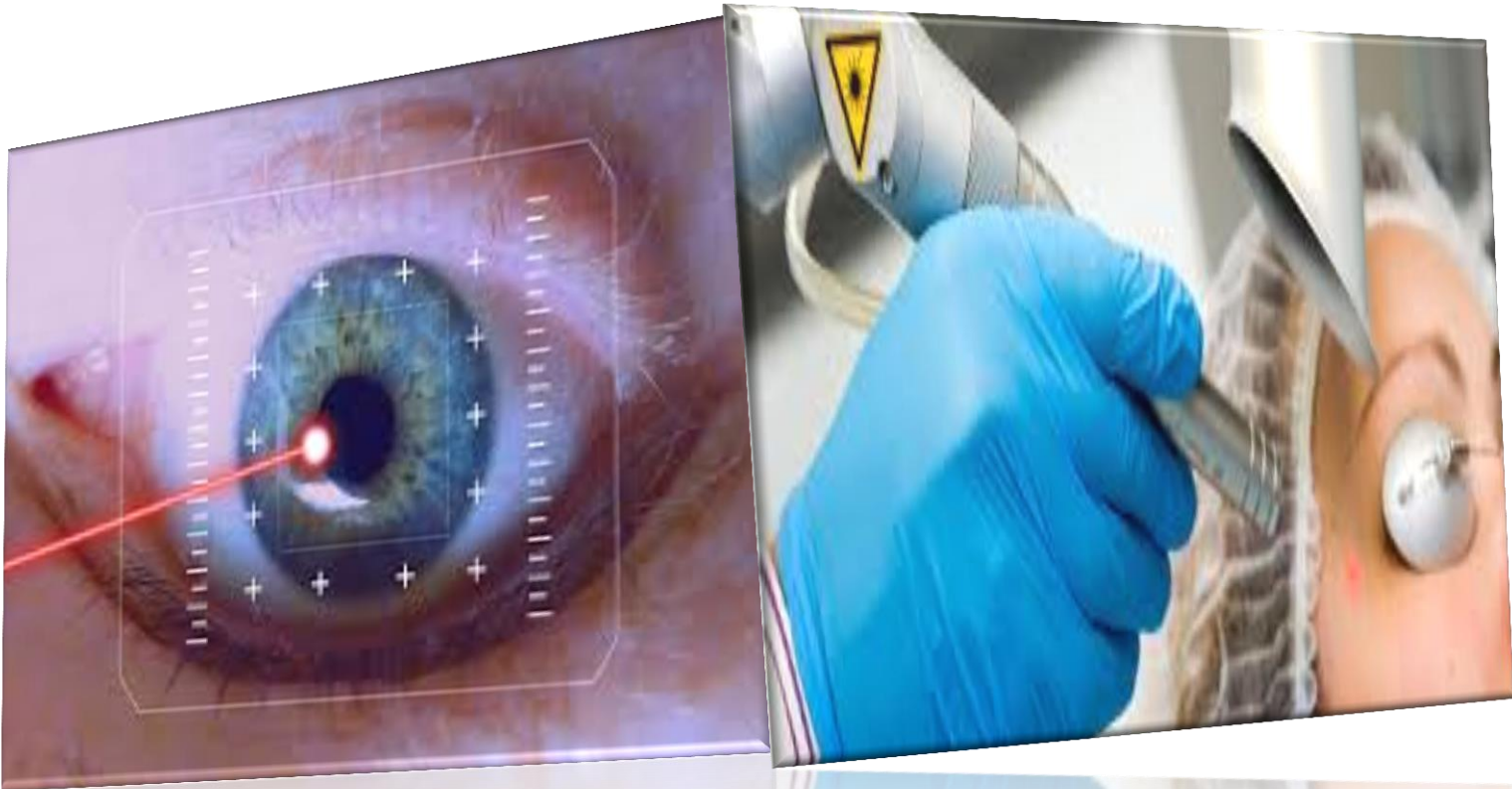
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## Medical Laser Applications



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## Laser skin treatment

If aging, acne, or too much time in the sun has left the face with blotches, scars, wrinkles, or lines, laser skin resurfacing may help skin look younger and healthier.

Laser skin resurfacing also known as laser peel, laser vaporization, or lasabrasion, removes skin layer by layer with precision. The new skin cells that form during healing give the skin a tighter, younger looking surface. The procedure can be done alone or with other cosmetic surgeries on the face.

### Who Is a Good Candidate for Laser Skin Resurfacing?

if the patient has fine lines or wrinkles around eyes or mouth or on forehead, shallow scars from acne, or non-responsive skin after a facelift, then may be a good candidate for laser skin resurfacing. You may also be a good candidate if the patient has:

- Warts
- Age spots or liver spots
- Skin scars from birthmarks
- Sun-damaged skin
- Enlarged oil glands on your nose
- Birthmarks such as linear epidermal nevi

may not be a candidate for laser resurfacing if you have:

- Excessive or sagging skin
- Deep wrinkles
- Active acne
- Pregnant or breastfeeding
- Weakened immune system
- Deeper skin tone

if the skin very dark, some laser resurfacing techniques could cause inflammation or discoloration after the treatment. It's worth noting that deeper skin tones also have the potential for keloid scarring.

dermatologist may use the Fitzpatrick scale, which matches the pigment level (melanin) in skin to risk of sun damage and skin cancer. The scale ranges from 1 to 6. If you have very brown skin, may be a 5 or 6 on this scale. This rating also means have less potential risk for skin damage. However, everyone has some type of risk of skin cancer.

## Types of Laser Resurfacing

### CO2 Laser Resurfacing

This method has been used for years to treat different skin issues, including wrinkles, scars, warts, enlarged oil glands on the nose, and other conditions.

The newest version of CO2 laser resurfacing (fractionated CO2) uses very short pulsed light energy (known as ultrapulse) or continuous light beams that are delivered in a scanning pattern to remove thin layers of skin with minimal heat damage. Recovery takes up to two weeks.

If a person of color, this type of laser resurfacing could cause hyperpigmentation or scarring.



## Erbium Laser Resurfacing

Erbium laser resurfacing is designed to remove surface-level and moderately deep lines and wrinkles on the face, hands, neck, or chest. One of the benefits of erbium laser resurfacing is minimal burning of surrounding tissue. This laser causes fewer side effects -- such as swelling, bruising, and redness -- so your recovery time should be faster than with CO2 laser resurfacing. In some cases, recovery may only take one week.

If a patient has color skin, erbium laser resurfacing may work better. However, there is always the risk of skin discoloration after the treatment.

## Neodymium Yag Laser

If a patient has skin tones (4 to 6 on the Fitzpatrick Scale), using a laser called Neodymium Yag or Nd:YAG. This type of laser has a longer wavelength that goes deeper into the skin, effectively by passing the melanin in the upper layers of your skin. Here are some reasons to use this laser treatment:

- Facial or body hair removal
- Tattoo removal
- Birthmark removal
- Inflammatory acne
- Hyperpigmentation
- Vascular reduction

The patient may have to have more sessions because practitioner will generally start at a lower setting. Also may adjust the temperature of the laser, to make it cooler and more comfortable.

## Pulse-Dye Lasers

Sometimes called a vascular laser, pulse-dye lasers are used to treat skin issues related to blood vessels. This is a good option for issues with reduce redness, hyperpigmentation,

broken capillaries, and rosacea. The lasers are typically non-ablative and use a concentrated yellow light to heat the skin and absorb pigments.

### Fractional Lasers

Fractional lasers target only a fraction of the skin at a times. This option can be used to treat a number of age-related blemishes, get rid of hyperpigmentation, acne scars, and wrinkles. The laser energy is broken into thousands of tiny beams to treat only a fraction of the skin in the area, which reduces downtime. Fractional lasers can be ablative or non-ablative.