



Melasma, Stretch marks and Cellulite

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Stretch marks

Stretch marks, or *stria distensae* as they are known medically, are scars that appear when the skin is stretched beyond its [elastic limit](#)

Physicists define the elastic limit as the maximum force that can be applied to solid material before the onset of permanent deformation. In dermatology, when stresses up to the elastic limit are removed, the skin resumes its original size and shape. When forces beyond the elastic limit are removed, the skin remains permanently stretch-marked.

The younger you are, the firmer your skin. The firmer your skin, the lower your elastic limit and the more likely you are to develop stretch marks. Stretch marks occur most frequently during adolescent or pregnancy growth.

The primary cause is [mechanical](#) stretching of the skin due to underlying tissue expansion. Parallel inflammatory streaks appear and align perpendicular to the direction of skin tension. Microscopically, the skin is initially swollen, inflamed and elastin bundles in the inner layer of skin (the dermis) are disrupted.

Over time, the inflammation eventually fades and is replaced by scar tissue. This produces a thinned outer layer of skin (the epidermis), loss of dermal elastin, and a replacement of the dermis by abnormally dense collagen fibres.

Risk factors

Adolescent stretch marks may appear on the lower abdomen, lower part of the back, buttocks, thighs and female breasts. They are most common on the thighs of girls and on the knees of boys.

Hormonal and genetic factors are also involved in the development of pregnancy stretch marks.

Girls who develop adolescent stretch marks on their breasts are more likely to develop abdominal stretch marks during pregnancy.

Younger women, women who gain more weight during pregnancy, women with twins or large babies and women who go post-term are all [more likely](#) to get stretch marks.

Risk factors

Weightlifters are more susceptible to stretch marks, especially those who use anabolic [steroids](#). Stretch marks can also occur in [Cushing's syndrome](#) or following the administration of oral and topical [corticosteroids](#).

Prevention and treatment

Creams and lotions can't prevent stretch marks. While not all preventative treatments have been evaluated, and some treatments have shown promise in individual studies, [Cochrane review](#) in 2012 concluded there is: no high-quality evidence to support the use of any of the topical preparations in the prevention of stretch marks during pregnancy.

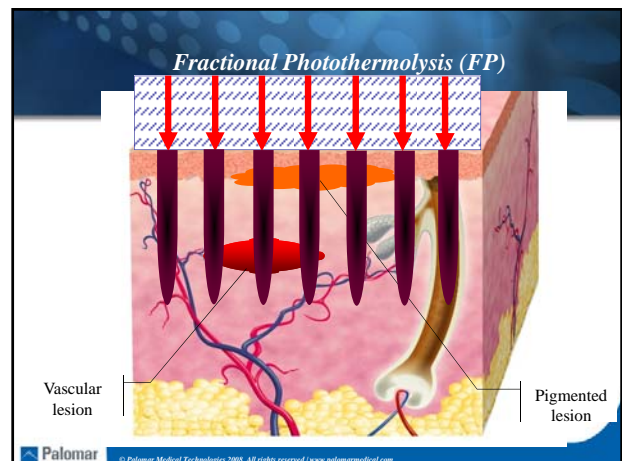
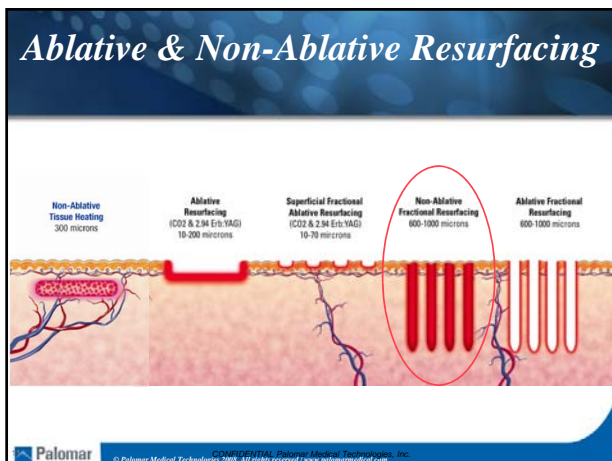
People with stretch marks have four options:

- 1) Learn to love them:** Embrace stretch marks. Show them off. Post them on [social media](#). Wear them as a badge of honour.
- 2) Wait for them to fade:** Most stretch marks begin red (stria rubra) and become white (stria alba) and less conspicuous over the course of a year or two. For people concerned by their stretch marks, reassurance is usually all that's required.

- 3) Use creams to fade them:** While creams won't prevent stretch marks, they may help fade them, according to a recent comprehensive review.

Topical retinoid creams such as [tretinoin](#) are thought to work through induction of collagen synthesis and should be applied once daily for six months. Tretinoin works better on early red stretch marks, while white stretch marks respond poorly. Skin irritation is a common side effect of tretinoin, so it may not be suitable for people with sensitive skin. Cocoa butter is less irritating, but also less effective. Newer silicone gels seem to be more effective.

- 4) Laser:** While pulsed dye vascular lasers or [intense pulse light](#) (IPL) treatments can fade red stretch marks, this is unnecessary, as most will fade naturally within six to 12 months.



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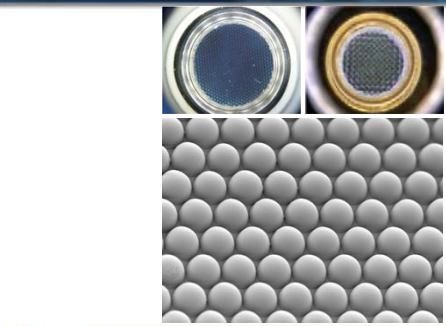
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Current FDA Approvals for Lux 1540

- Soft tissue coagulation
- Skin resurfacing
- Acne scars
- Surgical scars
- Melasma

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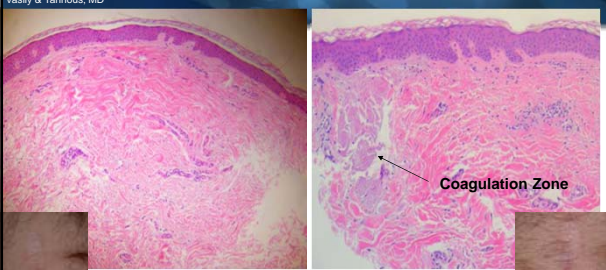
Micro Lens Array



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Scar Histology after Treatment with Lux1540™

Vasily & Tannous, MD



Atrophic Scar (baseline) Atrophic Scar Tissue 2 weeks post tx with 1540

Note improvement in collagen organization; more rete ridges

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Scar Histology after Treatment with Lux1540™

Vasily & Tannous, MD

Silver Stain



Atrophic Scar Tissue (baseline) Atrophic Scar Tissue 2 weeks post tx with 1540

Note increased elastin; more organized elastin fibers

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Deep Correction: Acne Scars

Improve thumbprint and ice pick scarring.

- Treatment strategy: 10 mm, 15 ms, 50-70 mJ/mb, 3-5 passes.
- Stretch skin, use compression = good contact.
- If surface has irregular contour, use LuxLotion.
- Blanching during Tx is common, resolves in 30 minutes.
- May see short-term improvement, but full benefit takes about 4-6 months.

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Deep Correction:
Surgical & Traumatic Scars

- Similar approach to acne scars
- Treatment strategy: 10 mm, 15 ms, 50-60 mJ/mb, 3-5 passes
- Improvement seen with single Tx at 3-4 weeks – continued improvement over time, additional Tx

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This slide has a title 'Deep Correction: Surgical & Traumatic Scars'. Below the title is a bulleted list of three points: 'Similar approach to acne scars', 'Treatment strategy: 10 mm, 15 ms, 50-60 mJ/mb, 3-5 passes', and 'Improvement seen with single Tx at 3-4 weeks – continued improvement over time, additional Tx'. The Palomar logo and copyright information are at the bottom.

Post Skin Graft Scar

Aesthetica Cosmetic & Laser Center
David B. Vasily, M.D.



DV#26 Pre-Treatment Post 3 Treatments
3-5 weeks apart

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Post Skin Graft Scar

Aesthetica Cosmetic & Laser Center
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Hypopigmented scar present on the Left Forehead x 5 years (post skin graft).




Pre 1540 Post (3 tx) 1540

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Post Surgical Scar

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Pre-Treatment 6 Weeks Post 2 Treatments

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Scar Treatment of Post Tattoo Removal Scar with Lux1540™

Aesthetica Cosmetic & Laser Center
David B. Vasily, M.D.



Pre-Treatment 3 Months Post 3 Treatments

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Pre-Treatment

Treatment of Surgical Scar with Lux1540™

Aesthetica Cosmetic & Laser Center
David B. Vasily, M.D.

6 Weeks Post 3 Treatments



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Pre-Treatment

36223

1 Month Post Treatment

Maurice Adatto, MD
Geneva, Switzerland



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Striae

- Associated with stretching of the skin
- Glucocorticoid hormones prevent fibroblasts from forming collagen & elastin fibrils necessary to keep rapidly growing skin taut
- Creates a lack of supportive material as the skin is stretched leading to epidermal and dermal tears

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Striae

- Striae may also occur as a result of abnormal collagen formation, or a result of medications or chemicals that interfere with collagen formation.
- May also be associated with longtime use of cortisone compounds, diabetes, Cushing disease, Ehlers-Danlos syndrome, post-pregnancy, and rapid weight gain or increased muscle girth.
 - 75-90% of women develop some degree of stretch marks during pregnancy. The sustained hormone levels usually results in appearance during month 6-7

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Deep Correction: Striae

- Studies ongoing
- Good results reported
- Settings: 10 mm, 15 ms, 40-70 mJ/mb, 3-5 passes
 - Lower energy, higher density
 - Higher energy, lower density
 - Increased risk of PIH and prolonged erythema

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Striae Lux1540



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Striae Lux1540



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