

Laser depigmentation versus keratopigmentation to change eye color: a comparison based on the experience of Professor dr Osama al Nahrawy, EGYPT.

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Item of comparison	Laser depigmentation (LDP)	Keratopigmentation (FKTP)
Nature of procedure	Out-patient clinic sessions, not a surgery. Number of sessions is variable according to the response of eyes and according to the load of melanin on the surface of the iris and inside the iris stroma. People need from 4-10 sessions in my clinic (in 3-5 weeks duration).	A superficial corneal surgery (no eye wall invasion or penetration) with two stages: first under the femtosecond laser machine to make a circular corneal pocket, then in the Operation room to place the colored pigment. Operation takes around one hour and people need to stay one week.
Anaesthesia	Not needed, or topical surface drops.	Topical surface drops, may be some sedation for very anxious people.
Investigations or tests before (and repeated after).	Pentacam, Specular endothelial cells count, OCT macula and Optic nerve. Anterior OCT is also important (check the iris)	Pentacam, Specular endothelial cells count, OCT macula and Optic nerve. Anterior OCT is also important (check the cornea).
Contra indications	Systemic or local eye diseases. Family history of glaucoma.	Systemic or local eye diseases, lasik, femtolasik surgery or femtosmile, DMEK surgery and PKP.
Associated poor vision management	Surface laser corneal ablation could be done one week after sessions. No flap lifting techniques.	Surface laser corneal ablation could be done one week after sessions. No flap lifting techniques.
Associated squint	Could be corrected after sessions.	Could be corrected after FKTP ((one week).
Satisfaction and outcomes	Partial (sometimes very high) and color change is noted in good lighting. Predictability is moderate.	High satisfaction and immediate color change even in poor lighting.
Appearance	Natural	Close-up photos show as if there is a contact lenses put-on.
Over time	Rare reports about recurrence of melanin formation. Further few sessions could be made	Sometimes there is fading of the color. A touch up recoloration could be made again with low cost.
Cost	Needs longer stay or frequent visits almost equal or cheaper and payment over longer time.	Quiet expensive, in one week, needs preparation of the pigment before visit.
Reversibility	Can not be done	Can not be done
Safety	Few – moderate number of sessions is safe. More than 10-12 sessions may risk the iris strength and thickness.	Having a central clear cornea of 5.5 mm, limits and narrows the access to the interior of the eyes (this is needed in the future to do a cataract surgery and fundus

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