

Laser mean :light amplification by stimulated emission of radiation

Nd:YAG laser

Mechanism of action : photodestruction

Indications of Nd: YAG laser in ophthalmology :

(1)-Posterior capsulotomy :Creation of an opening in the posterior capsule thickening or opacification which is the most common late complication of uncomplicated cataract surgery

Indication for capsulotomy :

1-diminished visual acuity

2-diplopia or glare

3-inadequate fundus view

Complications of the capsulotomy:

1-damage to the IOL

2-Cystoid macular oedema

3-rhegmatogenous retinal detachment

4-intraocular pressure elevation

5-posterior IOL subluxation or dislocation

6- chronic endophthalmitis

(2)-Nd:YAG laser iridotomy:the purpose of peripheral laser iridotomy is to re-establish communication between

the posterior and anterior chamber by making an opening in the peripheral iris.laser iridotomy is effective in about 75 % of eyes with acute angle-closure glaucoma.

Argon laser

Mechanism of action : photocoagulation

Indication : 1- diabetic retinopathy

2- hypertensive retinopathy

3- some intra ocular tumors

4- prophylactic treatment for retinal degenerations in high myopia

5-retinal vascular diseases

Excimer laser

Mechanism of action :photoablation

Indication: for correction of refractive errors ( myopia, hypermetropia and astigmatism )

LASIK (laser in –situ keratomileusis )

PRK(Photorefractive keratectomy )