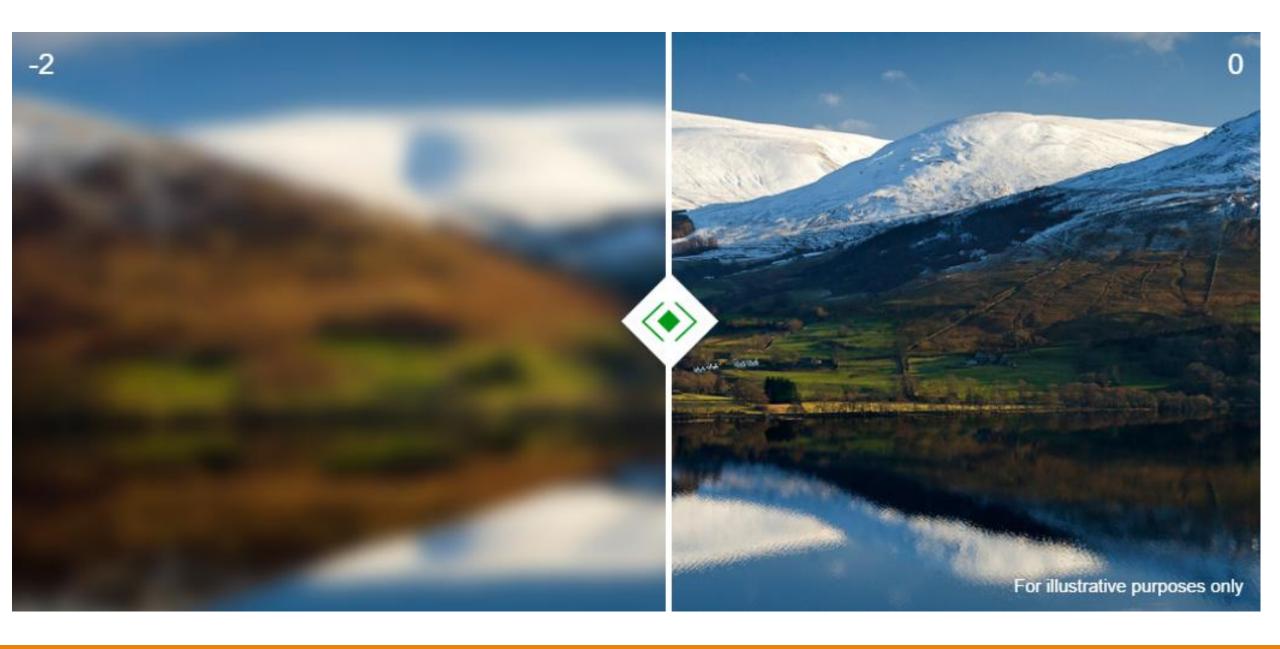
LASIK Eye Surgery

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Overview

- •LASIK- Laser in Situ Keratomileusis
- Subdivision of refractive surgery
 - Corrects myopia, hyperopia, and astigmatisms
- •Costs about \$1500-\$2500 per eye
 - Various according to location and surgeons experience
- •Machine costs between \$200,000-\$500,000





History

1948- Father Waclaw experimented with corneal curvature

1964- Professor Barraquer he introduced keratomileusis

1973-1983- IBM made the excimer laser

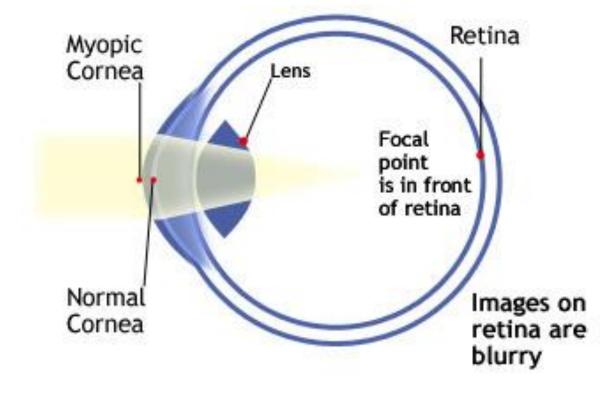
1996- FDA approved LASIK surgery

2001- Wavefront Technology created the IntraLase



Qualifications

- Must be at least 21
- Consistent vision
- Proper eye proportions
- •Have myopia or hyperopia or astigmatism



MICROKERATOME

ALL LASER LASIK

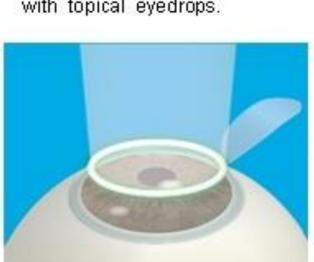
- Used for patients with normal corneal measurements
- Less expensive
- More experienced surgeons



- Used for patients with excessively shaped corneas
- Dry eyes or contact lens intolerance
- Anxiety
- More expensive
- Lower Complications



At the beginning of the proce -dure, the eye is anesthetized with topical eyedrops.



After the flap has been created, an excimer laser is used to reshape the cornea.



The surgeon then uses a device called Femto second Laser to create a corneal flap on the outer layer of the eye.



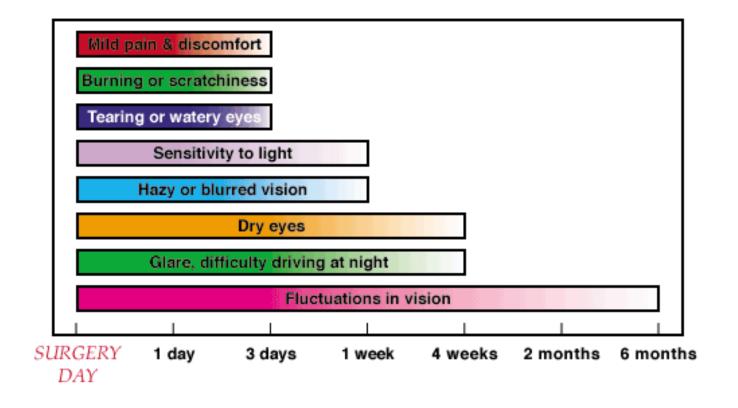
The corneal flap is replaced.



The eye will heal by itself, and no stitches are necessary.

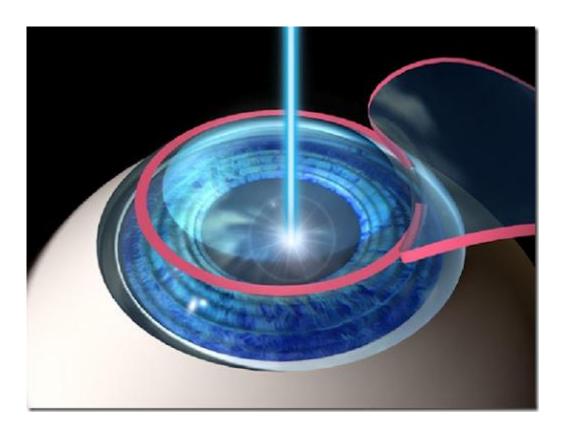
Complications

- Dry eyes
- Under/Overcorrection
 - Glares/Halos
- Astigmatism
- Corneal flap folds/wrinkles
- Infection
- Blindness is very rare



Future

- Currently looking to improve current technology
 - Find a solution for dry eyes
 - Reduce the qualifications
- Have a laser-less procedure



Works Cited

- Boxer Wachler, Brain, MD. "LASIK Risks and Complications." All About Vision. N.p., n.d. Web.
- "History of Refractive Surgery." History of Refractive Surgery. N.p., n.d. Web.
- •"Looking Back: The History of Laser Vision Correction." LASIK.com. N.p., 11 July 2013. Web.
- Mayo Clinc Staff. "LASIK Eye Surgery." Risks. N.p., n.d. Web.
- •Salomão, Marcella Q., and Steven E. Wilson. "Femtosecond Laser in Laser in Situ Keratomileusis." *Journal of cataract and refractive surgery* 36.6 (2010): 1024–1032. *PMC*. Web. 12 Nov. 2016.
- •Straub, Howard, D.O. *The Future of LASIK Eye Surgery*. N.p., n.d. Web.
- •Stein, Joshua D. et al. "Gauging Interest of the General Public in Laser Assisted In Situ Keratomileusis (LASIK) Eye Surgery." *Cornea* 32.7 (2013): 1015–1018. *PMC*. Web. 12 Nov. 2016.
- •Solomon, K. D. "LASIK World Literature Review: Quality of Life and Patient Satisfaction." *National Center for Biotechnology Information*. U.S. National Library of Medicine, Apr. 2009. Web.

Questions?