

Information From Your Eye M.D.

LASER SURGERY IN OPHTHALMOLOGY

Background

Surgery has improved remarkably over the past centuries. New medical devices including lasers have helped surgeons to do more for their patients than they could with just the scalpel.

Lasers were originally used in ophthalmology in the early 1960s. Since then, many benefits of laser surgery in ophthalmology have been demonstrated.

What are Lasers?

Lasers are surgical devices that use extremely high-energy light waves to treat tissue. Lasers have produced dramatic surgical benefits that have improved the quality of care for patients. Different types of lasers are used to treat a variety of conditions.

What is Laser Surgery?

Like other surgical procedures, laser surgery alters, human tissue. Laser energy can also “activate” drugs to treat disease.

Different types of lasers are used for many kinds of eye surgery. Eye M.D.s (ophthalmologists) performs laser surgery:

- to help reduce vision loss from diabetic retinopathy and age-related macular degeneration
- to restore vision after cataract surgery
- to reduce high eye pressure for patients with glaucoma
- to help reduce or eliminate the need for glasses
- to treat cancerous lesions inside the eye and

- for cosmetic treatments of the eyelids

Who Can Perform Laser Surgery

Laser surgery is still surgery, but without using a scalpel. Any surgical procedure no matter how “simple,” has the potential to become complicated and cause serious consequences to the patient. The key to a good outcome is careful selection of patients who would benefit from the surgery by a knowledgeable, experienced and skillful surgeon. The surgeon who uses lasers should understand the technology, be well trained in its use, be capable of managing potential complications and meet the high standards of his or her medical peers. Because of this, only medical doctors should perform surgery.

Eye M.D.s (ophthalmologists) have been among the main pioneers and innovators in the field of laser surgery. They become experts in laser surgery techniques through residency and fellowship training, continuing educational courses and through performing laser surgery under the guidance of more experienced surgeons.

The Academy strongly supports the position that all laser surgery for medical purposes, including ophthalmic laser surgery, should be performed only by licensed doctors of medicine or osteopathy.

Possible Side Effects of Laser Surgery

Like other surgical instruments, lasers are potentially dangerous. Specific risks associated with lasers used for ophthalmic surgery include bleeding, increased in pressure within the eye, clouding of the cornea (the clear covering at the front of the eye), scarring of the retina (the light-sensitive area at the back of the eye), and cataract formation. Any of these could result in significant loss of vision.

Guidelines

Because of the risks of laser surgery, and to guard against unsafe or inappropriate use of lasers, strict guidelines have been established for the use of lasers in patient care. The Food and Drug Administration (FDA) controls all medical instruments as prescription devices, including ophthalmic lasers. In addition, several surgical specialty societies have

developed guidelines and policies regarding medical qualifications of surgeons that perform laser surgery.

Patient Outcome

To help ensure the best possible result for a patient undergoing laser surgery, the surgeon must do the following:

- Make an accurate diagnosis of the problem
- Consider the patient's overall health and visual needs
- Choose an appropriate treatment after considering all the options

- Make sure treatment is given at the appropriate time
- Make sure the proper medications are used correctly after surgery

As with any surgery, patient outcome depends on the technical skill and experience of the surgeon, as well as the correct and timely recognition and management of both the expected and unexpected after-effects of the treatment.

Should I Have Laser Surgery?

Laser surgery is neither simple nor risk-free. You need to discuss your condition and options with your Eye M.D. to see if you are a candidate for laser surgery.

Where Can I Get More Information?

Your Eye M.D. is the best source of information on eye surgery, as well as eye health and safety.

If you would like more information on eye surgery, please visit the American Academy of Ophthalmology's public information Web site at www.medem.com/eyemd.

Approved by: The Eye Health and Public Information Task Force

April 2002

Revised November 2003

American Academy of Ophthalmology ®