NEURO-OPHTHALMOLOGY AND ADULT STRABISMUS
ASK THE EXPERTS SERIES

To schedule an appointment or for more information please call 323.442.6335 or visit us at www.USCeye.org
Vivek R. Patel, MD
Director, Neuro-Ophthalmology and Adult Strabismus
Associate Professor of Clinical Ophthalmology

USC Gayle and Edward Roski Eye Institute

Q: What is neuro-ophthalmology?
Neuro-ophthalmology bridges the fields of ophthalmology and neurology. Many causes of vision loss are due to conditions that affect the brain. As a result, a number of neurological illnesses can lead to problems with vision that may be not be detected during a routine eye exam. For example, I see patients with a history of stroke, high pressure in the brain, multiple sclerosis, brain tumors and cranial nerve palsies to name a few. It is estimated that approximately 40 percent of the human brain is devoted to some form of visual processing.

Q: Do neuro-ophthalmologists have specialized training?
Neuro-ophthalmologists are medical doctors who have completed advanced fellowship training after either an ophthalmology or neurology residency. During a neuro-ophthalmology fellowship, physicians are exposed to complex neurological and neurosurgical diseases which may affect a patient’s vision. Ophthalmology-trained neuro-ophthalmologists, like me, may also have a surgical practice. My specific expertise is the medical and surgical management of adult patients with double vision or misalignment of the eyes, known as strabismus.

Q: What visual problems would warrant a neuro-ophthalmic evaluation?
If your physician or optometrist suspects that your difficulties with vision are due to a neurological condition, you will be asked to see a neuro-ophthalmologist. Patients are evaluated for visual field defects (peripheral vision loss), blurring of vision, headaches associated with changes in vision, double vision, as well as facial spasms.

Q: What can I expect during a neuro-ophthalmic consultation?
The neuro-ophthalmic eye examination is more involved than a standard eye exam and consists of various tests. This can make for a long appointment but the time is used for in-depth history-taking and detailed clinical examination. Your eyes may be dilated, so it is advised that you make arrangements for transportation home. At the USC Roski Eye Institute, the most advanced technologies are available to assist in arriving at the most accurate and thorough explanation of your vision concerns. If you had a previous MRI or CT scan of the brain, I would ask that you bring it on a CD to the consultation so I can review it with you.

Q: What happens during strabismus surgery?
An adult may consider strabismus surgery for a number of reasons including double vision, recurrence of eye misalignment from childhood strabismus, paralysis of an eye muscle or nerve, or even cosmetic realignment. Following a thorough evaluation of your eyes, type and degree of misalignment, I determine if you are a good candidate for surgery, and if so, what the specific plan will be. Adjustable suture techniques are often used to allow the alignment to be “fine-tuned” after surgery to improve the final outcome.

Q: Is there a long recovery time after strabismus surgery?
This is an outpatient procedure without an overnight stay, and our patients can return to work in a few days. The eye that was operated on will be red and somewhat sore for a few days, which is normal, and there may be a feeling like something is in the eye. Broken blood vessels in the eye and general redness should fade within one to two weeks. Eye alignment during the first days after surgery is a good indicator of the final outcome. However, more permanent results may not be known four to six weeks after surgery. Usually a patient may resume normal daily activities right after strabismus surgery but the main restriction is no swimming for two weeks.

Q: Does the USC Roski Eye Institute have new neuro-ophthalmic research underway?
We have a number of exciting research directions that we are currently exploring. At USC, we are fortunate to have one of the world’s most developed brain imaging programs right here on our campus. We are currently involved in a pioneering, collaborative study investigating structural and functional changes in brain connections that occur in patients with optic nerve and retinal disorders. We are also a site for two international, multi-center clinical trials, and actively recruiting patients. Through these trials, we hope to develop improved treatments for patients with severe pseudotumor cerebri, and ischemic optic neuropathy.

Contact Info: USC Gayle and Edward Roski Eye Institute, 1450 San Pablo St., 4th floor Los Angeles, 90033; 323.442.6335