

Comparative Study of Corrective Eye Surgeries

Project Proposal

Prepared for Gavin Orion

Prepared by Chris Le

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Introduction

You stated in our conversation that you would like to correct your vision. Your eyesight has worsened since you started wearing glasses at the age of ten. Now that you are an adult, you want to be able to see clearly without the aid of glasses or contact lenses. Since you are busy with work and raising a family, I would like to offer my services.

You mentioned that both glasses and contact lenses are uncomfortable. Glasses leave marks on the bridge of your nose and pressure on the temples of your head. Contact lenses become dry and make it hard for you to see clearly. Your discomfort makes it dangerous while driving and distracting while concentrating at work.

Since you indicated that you have astigmatism and nearsightedness, I will compare the following procedures that treat these conditions.

- Laser-Assisted In Situ Keratomileusis (LASIK)
- Laser Epithelial Keratomileusis (LASEK)
- Photorefractive Keratectomy (PRK)

The following criteria will be used to evaluate the various options for correcting your vision.

- Procedure
- Cost
- Recovery Conditions
- Success Rate
- Risk Factors
- Post Surgery Complications
- Benefits
- Duration of Treatment
- Availability

The proposal for correcting your eyesight consists of problem significance, methods, task schedule, my qualifications and experience, the budget, and an initial bibliography. In this study, I will provide facts and definitions of medical terms to help you understand each of the options for corrective eye surgeries.

Project Procedures

Significance of Problem

Results of 20/20 vision are desired so that you can perform daily activities without the aid of glasses or contact lenses. LASIK is not the only type of operation that does away with the need for glasses or contact lenses, there are many other kinds of eye surgeries for improving vision. Even though laser eye surgery has turned out to be widely popular since the late 90's, it is still important to be informed about whether you are a candidate for LASIK, LASEK, or PRK.

Corneal refractive surgical procedures change the shape of the cornea to correct myopia (nearsightedness) and some types of astigmatism (irregular curvature of the cornea). The various types of procedures offer the potential to reduce or eliminate the need for glasses and contact lenses. It should be noted that in most cases these procedures do not correct presbyopia, which is the need to wear glasses for reading after middle age.*

Astigmatism is a common problem that is caused by an irregular shaped cornea, called corneal astigmatism. It can also be caused by irregular shaped lens, which is known as lenticular astigmatism. You said that you experience blurred vision, which is a symptom of astigmatism. Even though surgery will correct astigmatism, it is a problem your children will also have, since astigmatism is hereditary.

Project Methods

I will use the following resources to compare the criteria of the various options for corrective eye surgery.

1. Online Database
2. Web Sites
3. Personal Interviews

* "LASIK Eye Surgery: A Consumer Guide," LASIK & Other Vision Surgery, Feb. 2005, 4 Feb. 2005
<<http://www.allaboutvision.com/visionsurgery/>>

Each source includes the criteria that apply towards that source and options (abbreviated) in parentheses. As the research progresses, I will add further sources to this list.

1. Online Database

The following periodicals are from the Bellevue Community College Library Media Center's EBSCOhost. This online resource system contains articles from credible journals, magazines, and newspapers.

Azar, Dimitri T. "A Comparative Update on PRK, LASEK, and Epi-LASIK." Review of Ophthalmology. Apr. 2004. 4 Feb 2005
(LASIK, LASEK, PRK; Procedure, Recovery Conditions, Success Rate, Risk Factors)

Bethke, Walter, and Arturo Chayet. "A Closer Look at the Epi-LASIK Procedure." Review of Ophthalmology. Aug. 2004. 4 Feb. 2005
(LASIK; Procedure, Recovery Conditions, Success Rate, Risk Factors, Benefits)

Hardten, David R., Neelu K. Hira, and Kevin J. Corcoran. "Refractive Surgery Can Be Therapeutic." Review of Ophthalmology. Jul. 2004. 4 Feb. 2005
(LASIK, LASEK, PRK; Procedure, Cost, Benefits)

Patch, Catherine. "I can see clearly now." Toronto Star (Canada). 12 June 2004. 4 Feb. 2005. (LASIK; Procedure, Success Rate, Risk Factors, Benefits)

"Recommendation ≠ LASIK Satisfaction." Review of Ophthalmology Nov. 2004. 4 Feb. 2005. (Recovery Conditions, Success Rate, Risk Factors, Benefits, Duration of Treatment)

Swanson, Mark A., and Barrie D. Soloway. "Epi-Lasik with new device produces promising results." Ophthalmology Times 1 Jan. 2005. 4 Feb. 2005
(LASIK, LASEK; Procedure, Benefits, Success Rate)

Taneri, Suphi, James D. Zieske, and Dimitri T. Azar. "Evolution, techniques, clinical outcomes, and pathophysiology of LASEK: review of the literature." Survey of Ophthalmology. Nov. 2004. 4 Feb. 2005
(LASIK, LASEK, PRK; Procedure, Recovery Conditions, Success Rate, Risk Factors, Benefits, Availability)

Wilson, Steven E. "Epi-LASIK will be different—right?." Review of Ophthalmology. Apr. 2004. 4 Feb. 2005
(LASIK, LASEK; Procedure, Success Rate, Benefits)

Yeoman, Fran. "Shining a light on laser eye surgery." Times, The (United Kingdom). 20 Nov. 2004. 4 Feb. 2005
(LASIK; Procedure, Recovery Conditions, Success Rate, Risk Factors)

2. Web Sites

The following websites cover information on astigmatism, as well as all of the criteria regarding LASIK, LASEK, and PRK.

"Astigmatism." Eye Problems & Diseases. Dec. 2004. 4 Feb. 2005

"Corrective eye surgery questions and answers." Force Medical N01M. 27 Jul. 2000. 4 Feb. 2005
(LASIK, LASEK, PRK; Procedure, Recovery Conditions, Success Rate, Risk Factors, Benefits)

"LASIK Eye Surgery: A Consumer Guide." LASIK & Other Vision Surgery. Feb. 2005. 4 Feb. 2005
(LASIK, LASEK, PRK; Procedure, Cost, Recovery Conditions, Success Rate, Risk Factors, Post Surgery Complications, Benefits, Duration of Treatment, Availability)

White, Gina. "Types of Corrective Eye Surgery." LASIK & Other Vision Surgery. 4 Feb. 2005
(LASIK, LASEK, PRK; Procedure, Cost, Success Rate, Risk Factors, Benefits)

3. Personal Interviews

The following interviews will be conducted through e-mail with an optometrist and a laser eye surgery patient.

Michael K. Matsunami, O.D., Optometric Physician

Dr. Matsunami owns and operates Broadway Vision Source in Seattle, Washington. He will be able to provide information on the Procedure, Cost, Recovery Conditions, Success Rate, Risk Factors, Benefits, Duration of Treatment, and Availability. The date of the interview has not been established.

Phylicia H. Nguyen, Laser Eye Surgery Patient

Phylicia has undergone two successful LASIK eye surgeries in 1998. She will be able to provide information regarding Procedure, Cost, Recovery Conditions, Success Rate, Risk Factors, Benefits, Duration of Treatment. The date of the interview has not been established.

Task Schedule

The following is an estimated task schedule with the start and finish dates for the stages of the research and report's process:

Task	Start Date	Finish Date
Preliminary Research	4 February 2005	13 February 2005
Proposal Report	4 February 2005	15 February 2005
Progress Report	15 February 2005	24 February 2005
Documented Research	15 February 2005	7 March 2005
Interviews Conducted	15 February 2005	7 March 2005
Data Report	24 February 2005	7 March 2005
Final Report	7 March 2005	21 March 2005

Qualifications and Experience

I will be graduating from Bellevue Community College in the spring of 2005 with a Business Associates of the Arts Direct Transfer Degree. I am currently enrolled in a technical writing course, which is improving the development and expression of ideas with practical problems in writing technical documents.

Through my involvement with DECA, a marketing student association, I had the opportunity to develop an entrepreneurship proposal plan to open an entertainment store. This project allowed me to develop my presentation, research and organizational skills. In addition to creating a business plan that consisted of a financial and marketing strategy. This entrepreneurship proposal won 1st place at the 2000 Regional Conference.

I also have several contacts in my family whom have undergone laser eye surgery. These contacts will allow me access to information from the perspective of a patient.

As an administrative assistant at the New York Life Insurance Company, I am responsible for organizing and maintaining the financial and medical history of clients. I have the experience of preparing documents for clients, which will enhance my ability to facilitate your final decision.

Budget

The following are estimated costs for the research study, organization, supplies and travel expenses:

Consultation..... (2 hours at \$15.00 per hour).....	\$ 30.00
Research..... (20 hours at \$15.00 per hour).....	\$ 300.00
Compilation..... (20 hours at \$15.00 per hour).....	\$ 300.00
Supplies..... (Paper, ink, internet connection).....	\$ 150.00
Travel Expenses..... (200 miles at \$0.50 per mile).....	\$ 100.00
Total.....	\$ 880.00

Initial Bibliography

“Astigmatism.” Eye Problems & Diseases. Dec. 2004. 4 Feb. 2005
<<http://www.allaboutvision.com/conditions/astigmatism.htm>>

Azar, Dimitri T. “A Comparative Update on PRK, LASEK, and Epi-LASIK.”
Review of Ophthalmology. Apr. 2004, Vol. 5 Issue 2: 18-3p. EBSCOhost.
Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb 2005
<<http://web4.epnet.com>>

Bethke, Walter, and Arturo Chayet. “A Closer Look at the Epi-LASIK Procedure.”
Review of Ophthalmology. Aug. 2004, Vol. 11 Issue 8: 79-2p. EBSCOhost.
Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005
<<http://web4.epnet.com>>

“Corrective eye surgery questions and answers.” Force Medical N01M.
27 Jul. 2000. 4 Feb. 2005 <<http://home.san.rr.com/forcemed/prkquest.htm>>

Hardten, David R., Neelu K. Hira, and Kevin J. Corcoran. “Refractive Surgery Can
Be Therapeutic.” Review of Ophthalmology. Jul. 2004, Vol. 11 Issue 7: 44-6p.
EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA.
4 Feb. 2005 <<http://web4.epnet.com>>

“LASIK Eye Surgery: A Consumer Guide.” LASIK & Other Vision Surgery. Feb.
2005. 4 Feb. 2005 <<http://www.allaboutvision.com/visionsurgery/>>

Matsunami, Michael K., Optometric Physician. Personal Interview. Seattle, WA.
Date pending.

Nguyen, Phylcia H., LASIK Patient. Personal Interview. Renton, WA. Date
pending.

Patch, Catherine. "I can see clearly now." Toronto Star (Canada). 12 June 2004. EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005 <<http://web4.epnet.com>>

"Recommendation ≠ LASIK Satisfaction." Review of Ophthalmology Nov. 2004: Vol. 11 Issue 11, p.75. EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005 <<http://web4.epnet.com>>

Swanson, Mark A., and Barrie D. Soloway. "Epi-Lasik with new device produces promising results." Ophthalmology Times 1 Jan. 2005, Vol. 30 Issue 1: 14-2p. EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005 <<http://web4.epnet.com>>

Taneri, Suphi, James D. Zieske, and Dimitri T. Azar. "Evolution, techniques, clinical outcomes, and pathophysiology of LASEK: review of the literature." Survey of Ophthalmology. Nov. 2004, Vol. 49 Issue 6: 576-27p. EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005 <<http://web4.epnet.com>>

White, Gina. "Types of Corrective Eye Surgery." LASIK & Other Vision Surgery. 4 Feb. 2005 <<http://www.allaboutvision.com/visionsurgery/other.htm>>

Wilson, Steven E. "Epi-LASIK will be different—right?." Review of Ophthalmology. Apr. 2004, Vol. 5 Issue 2: 3. EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005 <<http://web4.epnet.com>>

Yeoman, Fran. "Shining a light on laser eye surgery." Times, The (United Kingdom). 20 Nov. 2004. EBSCOhost. Bellevue Community College Library Media Center, Bellevue, WA. 4 Feb. 2005 <<http://web4.epnet.com>>