A web site designed for the Pacific University College of Optometry's Family Vision Center and affiliated clinics to help educate patients regarding what optometric services are available to them

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Abstract
A web-based handbook for Canadian students entering American optometry schools

Degree Type
Thesis

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A Web Site Designed for the Pacific University College of Optometry's Family Vision Center and Affiliated Clinics to Help Educate Patients Regarding What Optometric Services are Available to Them

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A thesis submitted to the faculty of the College of Optometry Pacific University Forest Grove, Oregon for the degree of Doctor of Optometry May, 2000

Adviser: Robert L. Yolton, Ph.D., OD
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Introduction:

The internet is quickly establishing itself as an effective means of information sharing. It is also a great means of advertising. Optometry is poised to gain from both avenues.

It is standard for schools of higher learning to be at the leading edge of new trends in their respective fields of study. The Internet is proving itself to be a part of that leading edge. With more and more people being able to access the “information super highway” daily, the internet is proving to be an extremely efficient and effective tool in providing information of all types to the people in communities all over the world. It is therefore logical that Pacific University’s College of Optometry should have its own web page; and one particularly geared toward promoting the school’s services and educating the public as to Optometry’s growing role in health care.

We created a web page to provide information to prospective and current patients. Particularly, we wished to give them answers to questions about Optometry, our clinics, and general items of interest regarding a vision examination.

We began by planning a web page layout that could be quickly navigated and easily understood. We provided a logical progression through the pages allowing for patients to view information on a particular clinic or service without having to go through multiple links to find them. Also, a search page was included to allow patients easier access to search the entire web site for a particular topic of interest rather than have them scan the entire site. In order to make the web project better we also included a link which allowed people who viewed the site the opportunity to leave feedback regarding the web site.

We felt it was important for patients to feel familiar with the web page and our clinics. With that in mind, we used actual pictures of the clinics. There are pictures of each affiliated clinic site, along with pictures of willing staff, faculty, students and patients in their respective roles at the clinics. We then filled the page in with details about hours, services rendered, and directions to each clinic location. We felt a “graphic” approach was best when attracting patients to our clinics via the internet. By allowing patients to see the clinic they were going to, they would be more familiar with the clinic before they entered it. We felt this might put them more at ease in a doctor’s office.

Included is a page designed for searching the web site for key words of interest as well as a means of providing feedback to the web site coordinator. This will allow patients to enter comments on how to better serve their needs when searching the pages. Additionally, we created links to an outside map generating service which allows patients to create, scale and print maps for the clinic of their choice. They may even ask for turn-by-turn directions from the address of their choice to the clinic of their choice. This service should be invaluable since everyone knows the frustration of finding a building which they have never before visited. This allows them to readily find that new building with reliable directions given every time.

We have included below a color printout of our web site with the intention of showing what the finished product looked like.
METHODS

For this project we used several materials which made the project significantly more enjoyable. First, we borrowed a Sony Mavica digital camera from the university educational technologies department. We used the camera for all our photographs. Although the quality of the original image is not as high as a standard 35 mm camera, we found the resolution to be adequate for use on the internet. Picture files any larger would use too much space and would increase load times while browsing. In addition, we used Microsoft Front Page 98 to design our web pages. This program requires little knowledge of HTML coding in order to produce professional looking web designs, and made the process more streamlined than it otherwise would have been. To make sure our pages worked on the internet, and because we the members of the team were in different states during this project, we subscribed to a server that provides 10 MB of free space for a web page. We published all our pages directly to this web site during the formative stages. This made it possible to directly alter the pages in real time no matter what our location in the country. We then made a hard copy to make the transfer from our temporary web server to the school’s server. This method has allowed for instant results regarding the functioning of our page as well as an avenue for peer review during the creation of the pages.

Authorization to use their likeness on the internet was received from each individual whose picture we used on our web pages.

We asked each of the clinic directors to write a short paragraph to describe their clinic and its strengths. We received only three of these from the directors. The responses were included as direct quotes in the appropriate web pages.

DISCUSSION

Most Optometry practices of today are turning to the internet for inexpensive advertising. It is possible to disperse your information over a large geographic area very economically. It is also possible to place your company advertising in varied resources such as an internet yellow pages or particular search engines. This information then is available to anyone with an internet connection, including a large potential patient base.

The internet is the newest and fastest growing market maker in the world today. The current methods patients undergo to have an eye examination and obtain prescription eyewear may change drastically in the new millenium. It is possible to surmise a day when some portions of an eye exam may be completed at home using a personal computer. Currently, one optical company is already testing a new “eyeglass software” package in opticals that would allow a patient to come into the optical with their eyeglass prescription. The patient would then have the optical take their picture with a digital camera and take important patient information such as pd, seg heights, etc. The image of the patient is uploaded into a database which contains hundreds of
frame styles. The patient can go home and access this database from the internet and place various frame styles on their picture and see what the frames would look like on their face. If the patient is happy they would order the frames online. It is impossible to tell now which direction health care and the internet will take in the future. In order to not fall far behind, or to set the pace, it is important for today's practitioner to become involved in the internet to some extent. This will allow them to more easily adjust their services as this booming market evolves to encompass eye care.
Clinic Information

Pacific University is dedicated to providing patients with the best optometric care. This is one reason for the large variety of locations. Our sites are uniquely suited to the populations respective locations.

You may make an appointment for any one of the several clinics most convenient for you. Some sites operate only by referral while others allow for walk-in appointments. You will find affiliated clinic sites with the pertinent information to assist you. You can follow the links at the top of this page by address, hours of operation, etc for each clinic. Or you may call Grove at 357-5800 to get the number of the clinic nearest you.

We hope you enjoy your experience while in our clinics and any ways of improving them for you. In addition, we thank you further our education while preparing the future optometrist.

Philosophy of the Pacific University College of Optometry Clinics

The Pacific University College of Optometry (PUCO) clinic program is guided by its mission, and that mission consists of three parts:

1) To provide optometry students, residents, post-doctoral fellows, and faculty with facilities, patients, and instrumentation in experiences that can culminate in the training of highly skilled optometrists, and in the advancement of the practice and profession of optometry.

2) To foster an environment that encourages the pursuit of new clinical knowledge by providing students, residents, post-doctoral fellows, students, instrumentation, and support as they develop and conduct meaningful research.

3) To provide patients with the highest level of preventive, diagnostic, and therapeutic vision care.

The balance between educational objectives, research objectives, and patient care is delicate. The need for balance must be respected students, and for the good of the community which they serve. For these reasons, the clinical program is dependent upon cooperation with varying interests and viewpoints, and mutual respect and appreciation is encouraged.
An environment that fosters the acquisition and application of new knowledge, and new techniques, by motivated clinicians, sh
level of service to the patient; yet the patient's welfare is foremost, and it must be respected.

Mission Statement

The Pacific University College of Optometry educates to
fulfill the vision and eye care needs of the public through
instruction embracing the full scope of contemporary
optometric science, visual science, clinical expertise, and
research. We constantly challenge and expand the range
of the profession through the acquisition, dissemination,
and application of new knowledge.

Profile

Pacific University College of Optometry currently operates, or is affiliated with, seven optometry clinics scattered throughout the
The school and largest clinic are located in Forest Grove, Oregon, 20 miles west of Portland. Three of the seven sites are located
Portland Convention Center.

Other than the Forest Grove Clinic, each site is affiliated with Pacific University but owned and run independently. The sites are
provide optimal patient care and an excellent learning environment for the optometry interns in their third or fourth years of scho
The sites are listed with links to their respective pages. Each page has the details specific to those sites—such as hours, location, 1
offered and links to Yahoo! Maps for local maps and driving directions.

Most clinics schedule appointments by phone but walk-ins are always welcome. Please follow the links to the left to learn more

Contact Information

Telephone
503-357-5800

FAX
503-357-5800

Postal address
2043 College Way, Forest Grove, OR 97116

Electronic mail
Webmaster: voltonr@pacificu.edu

Clinic web pages originally authored by: Karl Czirr, Don Chin, and Adam Heiner.
Send mail to voltonr@pacificu.edu with questions or comments about this web site.
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Last modified: December 09, 1999
Below is a brief description of the services offered in our clinics. To learn more about a particular service, just click on the name of that service below. (Most of the clinics offer Primary Care for our patients.)

**Primary Care**
If you’re not sure what services you need, this one's the best bet. Primary Care involves any condition for which you have not already visited our clinics. This service is the springboard to all other services depending upon your individual needs. You can call the clinic site you are nearest to request a Primary Care appointment.

**Contact Lenses**
Contact Lenses have been a popular means of compensating for vision problems. Both patients and doctors enjoy Contact Lenses for the convenience and options they offer. Contact Lenses are considered a "drug" by the government and so use is regulated by the Food & Drug Administration (FDA). This is to ensure the patient is receiving lenses which meet strict guidelines for quality. It is very important for the health of your eyes to care for your Contact Lenses as instructed by your eye doctor. Call any of our clinics, or go to the page of the clinic nearest you to learn which clinics offer contact lens service.

**Vision Therapy**
Vision Therapy has been used by many to learn how to better use their eyes to perform daily tasks. Typically this is reserved for those who are experiencing vision problems which Primary Care services cannot alleviate. This service is available to you only by referral from an eye doctor (either your own private practitioner or from a doctor within the Pacific University network of clinics). Another avenue for vision care is the enhancement of visual skills to attain better performance in many sporting activities. To learn more about Vision Therapy, follow the link above. You may also visit the pages for the Portland or Forest Grove Clinics.

**Pediatrics**
Yes, we do exams on children too. Many times parents are interested to know how their child's vision is developing. Other times parents may notice odd behavior in the way their children are using their eyes (including, but not limited to, a turned eye, sitting very close to the TV, covering one eye to look at near objects, or a red and inflamed eyelid or eye.) We evaluate children from infancy for red eyes or injuries to their eyes. The typical age to have a first eye exam is around 6 months old. There is A LOT we can test to determine your child's visual abilities; even at such a young age! Call any of our clinics to schedule an appointment. Some of our clinics have more specialized equipment to work with small children but any of the clinics are able to accommodate a child's needs.
Low Vision

Some individuals suffer from profound vision loss. Often vision is not completely lost and these individuals can be trained to make better use of their remaining vision. Our Low Vision service offers special equipment, training and referrals to help any such individual adapt to their situation. This service is referral based too. Follow this link to learn more about the possibilities--perhaps you know someone who may benefit from these services.

Dispensary

Get anything related to glasses or contacts here. We have sunglasses, protective eyewear for work and sports and other specialty eyewear. Each clinic has a dispensary on site which provide excellent products and excellent service. Each dispensary is staffed by qualified and trained opticians or services are provided by the doctors in some facilities.

Ocular Disease and Special Testing (ODST)

As with Low Vision, ODST is a service to deal with unusual or vision threatening vision problems. This is a referral based service from a Primary Care doctor. Your Primary Care doctor may refer you to this service because the doctors in this service have more advanced equipment and expertise in diagnosing ocular disease. Follow the link above to learn more about this service and some conditions which may affect the eye.

CO-MANAGEMENT

Optometrists have worked hard to be recognized as the primary care doctors for conditions which affect the eye. This means that most eye conditions you as the patient may encounter can readily be managed by your optometrist. This also means that your optometrist recognizes times when you may need to be referred to a ocular surgeon or other specialist. Your optometrist may also refer you to a general physician for care of your general body health. Thankfully those conditions which require a specialist for treatment are rare in the general population. If you are found to have a condition requiring surgery, advanced treatment or request an elective surgery (like refractive surgery), your optometrist will refer you in an appropriate manner for the best care. You may be sent to a specialist for an advanced procedure, and then follow-up care is given by your optometrist. This is generally the case with conditions like cataract surgery, LASIK surgery, vision restoration in cases of sudden vision loss, etc. Some conditions require treatment which is outside the scope of general care and as such out of the care of your optometrist. In these cases, your optometrist will inform you that further care for that condition will be provided by an appropriate specialist. Pacific University has just this sort of arrangement with several eye surgeons (ophthalmologists) in the Portland area. In addition, the Pacific University College of Optometry doctors are happy to refer you to any doctor your condition may require in accordance with your health insurance guidelines.
COMPREHENSIVE VISION EXAMINATION

Primary Care Optometrists provide comprehensive ocular, vision and related care to a diverse population of patients. Students attending Pacific University's College of Optometry begin patient care their third year of school. Fourth year students spend the full year seeing patients either at preceptorship sites or at one of the school's clinics. These student interns learn to master the skills required to perform a comprehensive vision examination.

There are four main areas addressed by student interns during an initial eye exam. These are:

CASE HISTORY
REFRACTIVE STATUS
BINOCULAR & ACCOMMODATIVE STATUS
OCULAR HEALTH

CASE HISTORY

The exam sequence begins with a case history. You begin by telling the doctor what symptoms you are experiencing and the doctor asks you questions about your eyes and general health. The doctor asks about general health because many conditions may affect your vision and visual health. An attentive doctor will also ask questions to elicit other symptoms which may aid in diagnosis.

The case history occurs throughout the entire exam--so feel free to add to what you've already told the doctor anytime during the exam. Also, if you have a question regarding the tests or the results feel free to ask at any time during the exam. If they cannot be answered at that time, you will be so informed.

REFRACTIVE STATUS

This section of the exam is used to determine how well you are currently seeing, how well you use your eyes together, and if your vision may be improved by lenses. Your vision is evaluated by standardized methods recognized by optometrists throughout the country. A few of these methods are mentioned below.

Visual Acuity and Entrance Tests
Visual acuity is a measure of your ability to see. It is standardized throughout optometry to use a chart of letters of decreasing size—called a Snellen Chart after its developer. Visual Acuity is taken at the beginning of each office visit and is used as one of the techniques to monitor how well you currently see objects at near and far distances.

Entrance Tests are a series of tests used to determine the general health of your visual system. Testing includes the eyes' response to light, how your eyes work together, head and body posture, and an evaluation of peripheral vision.

**Refraction**

When analyzing the refractive error, both subjective and objective sources of information are combined to determine the patient's ideal lens correction. One test determines the power of your eye by shining light into the eye. Another test determines the curvature of your eye for contact lens fits. The majority of the refraction occurs behind an instrument called the phoropter. It contains hundreds of lenses allowing the doctor to find just the right lens combination to help you see better. After determining the best refraction, the doctor may reproduce that refraction in a special adjustable lens holder called a trial frame.

**BINOCULAR AND ACCOMMODATIVE STATUS**

With the lens combination providing the best visual acuity and most comfort in place, tests are conducted to evaluate the eye-teaming and focusing ability of the eyes. Results from these tests can uncover functional vision problems. For example, if you have an eye-teaming or binocular problem, you may experience difficulty seeing an object as single. What can result is double vision or fatigue when reading. An example of an eye focusing problem occurs when you see blur in the distance after reading for a while. Some lenses may be able to alleviate these symptoms while others may require eye-teaming training called Vision Therapy. Ask your doctor about Vision Therapy if you feel you have double vision or fatigue after reading.

**OCULAR HEALTH EVALUATION**

Just as a regular health exam by your primary care physician is recommended, so is a regular check by your optometrist—your primary eye care physician. And like the general body, there are eye problems that you may not notice in their early stages but which may be preventable if detected early. The best methods so far to monitor your eyes for these conditions require that your eyes be dilated every two years if younger than 60 and every year if you are over 60. The eye provides a unique view of the blood vessels inside the eye which lends itself to a more exact evaluation. This allows the optometrist a noninvasive method to monitor your blood vessels using light. Many times optometrists make the initial diagnosis in conditions such as hypertension, diabetes, and hardening of the arteries and other less common disease processes. Because the eye is highly dependent upon a large blood supply to function well, if you have been diagnosed with any disease affecting the blood system, a yearly dilated exam may be in your best interest to monitor the health of your eye.
There are several techniques which allow the optometrist to view the health of the inside of your eyes as well as a detailed view of the front of your eyes. Most of these techniques require that your eyes be dilated to get an adequate view of the inside of your eye. Dilating your eyes allows the optometrist to view the back of your eyes using stereoscopic methods. Stereoscopic means they can see the same structure with both eyes at the same time. This allows the doctor to monitor the inside of your eyes for changes in elevation or to determine which layer is being affected. Dilated eye exams provide a view of the inside of the eye which is unavailable by any other means. (The following schematics demonstrate the value of having your pupils dilated.)

**Biomicroscopy "Slit Lamp"**

The slit lamp provides a magnified, stereoscopic view of the front of the eye and the surrounding tissues. It is used to evaluate ocular health including:

- trauma to the eye;
- irritation or red eyes;
- infection causing any discharge from your eyes;
- inflammation from allergies or irritating chemicals; and
- fit and management of contact lens wear.

**Applanation Tonometry (Goldman)**

Most people who have had an eye exam remember the old "air-puff" test. Although this method may still be used if needed, it has been replaced with a more modern one. This new method uses anesthetic eye drops and a spring-mounted pressure gauge. A small, glass, bi-prism tip is gently placed against the front of your eye and the pressure is registered. This is one of the tests used to evaluate the presence or absence of glaucoma.

**High Plus Lens Examination**

When using a high magnification lens with the slit lamp, a highly detailed stereoscopic view of the inner structures of your eye are possible. This type of view is crucial when examining these structures for evidence of diseases such as diabetes and glaucoma. High plus examination requires the pupil to be dilated.

**Binocular Indirect Ophthalmoscopy (BIO)**
BIO is given a low magnification, stereoscopic view of the inner structures of the eye. BIO allows the doctor to detect generalized color or elevation changes which may indicate disease. It also allows a quick view of the far periphery of the back of the eye. BIO requires the pupils to be dilated.

Upon completing these tests, you will likely have experienced the most thorough eye exam you have ever had before. The doctor will inform you of the status of your eyes and vision and then instruct you as to the best treatment plan for your eyes. This plan could include a prescription for glasses or contact lenses, further testing, treatment of a disease or disorder, or a referral to another health care specialist. You will always receive a glasses prescription slip from the doctor which can be used to order glasses in our on-site dispensary, or elsewhere if needed.

Send mail to yoltonr@pacificu.edu with questions or comments about this web site.
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Last modified: December 05, 1999
CONTACT LENSES

Contact lens services available at the Pacific University College of Optometry Family Vision Centers include: the fitting and management of contact lenses for refractive conditions such as nearsightedness, farsightedness, astigmatism, and presbyopia. Each of these conditions can be treated with a variety of lens types and materials.

Hydrogel (Soft) Lenses:

This type of contact lens is relatively soft and flexible, which allows it to drape over the entire surface of the cornea like a blanket. Soft lenses are composed of complex plastic polymers combined with a 38-74% water content. Advantages of this type of lens include disposability, shorter adaptation time, an ability to enhance or change eye color and a reduced possibility of dislodging from the eye in comparison to the rigid gas permeable lens.

Rigid Gas Permeable Lenses:

These lenses are relatively smaller in comparison with the soft lens and float on top of the tear layer of the cornea. RGP's are composed of a low flexure plastic polymer with a water content of <2%. This type of lens offers high optical quality, superior ocular health, easy care regimen, and durability.

Correction of Astigmatism:

Astigmatism includes refractive conditions in which the optical system of the eye cannot create a single point image on the retina from a single point object in real space. This situation usually arises when the cornea has meridional curvatures which are unequal. Toric soft contact lenses, as well as rigid gas permeable lenses can be used to compensate for this condition.

Correction for Presbyopia:

As the eye ages, it slowly loses the ability to focus on objects held at arms length or closer. Patients who
are becoming presbyopic may want to consider the use of contact lenses (RGP or hydrogel) instead of spectacles. Several management strategies can be used in the correction of presbyopia.

- **Monovision:** The most common type of correction for presbyopia with contact lenses involves two different lens powers for each eye. One eye is corrected for distance viewing and the other eye is corrected for near viewing.

- **Bifocal Contact Lenses:** The design of bifocal contact lenses is similar to that of spectacle bifocal lenses. Some lenses contain a visible segment area for near viewing, while others incorporate the progressive or no-line design. Selection is based upon the type of lens which will provide the patient with stable and comfortable vision specific to his or her needs.

**Wearing Schedules:**

The amount of time the lens is worn each day and the frequency with which it is replaced is dependent upon many factors, such as patient convenience and compliance with lens care regimen. Realistic patient expectations about lens performance and the maintenance of good ocular health are among the primary goals for successful contact lens management.

- **Daily wear:** With this schedule, the lenses are worn for an average of 12 hours per day and then removed at night. After removal, the lenses are cleaned and disinfected before re-insertion the following morning.

- **Extended wear:** These lenses are worn overnight for 1-6 consecutive nights in select cases. Soft lenses in this category are generally thinner or have a higher water content (>60%) than normal daily wear lenses. This wearing schedule can create a greater risk (8 times greater compared to the daily wear schedule) of infections, including sight threatening corneal ulcers. RGP's possessing above average oxygen transmission can also be used on an extended wear basis. RGP's are less likely to cause eye infections than soft lenses when worn on an extended wear schedule.

- **Disposable lenses:** Disposable lenses are designed to be thrown away upon removal rather than cleaning and disinfection before re-insertion. A new lens is used each time one is removed. This can be an advantage since the amount of time spent by the patient on the care of the lenses is reduced. 1-day and extended wear lenses fall under this category.
Frequent or planned replacement lenses: This category includes 1-week, 2-week, 1-month, 2-month, 3-month, and 6-month lenses. These lenses must be cleaned and disinfected upon removal before re-insertion. Planned or frequent replacement schedules can be beneficial for patients who experience comfort and vision problems created by excessive lens deposits, typically protein build-up. The insertion of a fresh lens can relieve these symptoms as well as reduce the potential for inflammation or infection.

SPECIALTIES:

Cosmetic: These lenses are used to enhance or change eye color are available for occasional use as well improved cosmesis in patients with ocular trauma.

- Handling tints: This type of tint allows the patient to see the lens inside the lens case and aids in the prevention of losing the lens. However, these lenses do not change or enhance eye color. This tint, sometimes referred to as a visitint, is available in RGP and hydrogel lens styles.
- Enhancing tints: This tint is transparent and allows the patient to deepen or emphasize their natural eye color. This is most effective with lighter eye colors such as blue, green, and gray.
- Opaque tints: If a patient desires to change their eye color completely, then they would need to select an opaque tint. Results can vary depending upon individual pigment density of the iris.

Example of an Opaque tint

Therapeutic: Treatment of certain patients with corneal dystrophies or defects such as keratoconus may involve the use of specific hydrogel or RGP lens styles. Post-surgical and post-trauma patients can also benefit from contact lenses designed for their specific needs.

Opaque contact lenses can be used as an alternative for patching in vision therapy. Patients with iris abnormalities from trauma or congenital forms like anirida can benefit from contact lenses which artificially simulate the pupil.

- Keratoconus: This is a non-inflammatory, self-limiting corneal disease involving progressive thinning, steepening, and distortion of the cornea. The resulting loss of optical quality in the cornea is improved best with RGP lenses especially designed for the patient.
- Post-surgical: Patients who have had refractive surgery such as RK, PRK, and LASIK may need to improve their vision to a more desirable level with contact lenses in select cases. For patients who have had non-refractive surgery, such as a corneal transplant, a contact lens may serve to enhance vision as well as ocular health.
Post-trauma: Corneal defects (such as abrasions, recurrent erosions and lacerations) caused by the introduction of a foreign body or substance into the eye may be managed with the use of contact lenses.

Appointments for contact lens exams can be scheduled with one of the clinics listed below.

Portland  Forest Grove  Southeast Portland  Northeast Portland

This page was originally created by Matt Conner, his original is here.
Vision Therapy is a training process in which you, the patient, are taught to use your visual skills more efficiently. Patients who have been diagnosed with a visual dysfunction, such as seeing double or having a lazy eye, are referred to the vision therapy clinic. After an evaluation has been completed, a vision therapy program is designed to remediate the areas of dysfunction, if therapy can help. Therapy sessions are held on a weekly basis, with home therapy assignments given at the conclusion of each session.

If you've never been involved in a vision therapy program before, it is likely to be unlike any other eye exam you've ever had—the biggest difference being you are an active participant in developing better visual performance for yourself! A vision therapy program can range from simply wearing reading glasses to an extended program to bring a "lazy eye" back to proper functioning. Each patient is evaluated before beginning vision therapy and is asked to develop personal goals to attain, given a prognosis depending for success and shown the estimated length of therapy.

Several areas of the visual system are evaluated extensively in a vision therapy exam. They are:

**EYE HEALTH STATUS**

A good vision therapy doctor is aware of the adverse effects eye disease can have on the visual system. A thorough vision therapy exam therefore must rule out eye disease as a potential cause of
poor visual performance before embarking on active therapy for that poor performance. Our system is designed so that your eyes are evaluated first for health problems. Then if your performance problems persist you are referred to the vision therapy clinic for evaluation.

**REFRACTIVE STATUS**

A "refractive error" means the eye is not focusing images clearly for the brain to interpret them well and refers to nearsightedness, farsightedness and astigmatism (uneven focusing of vertical lines versus horizontal lines). Most often, nearsighted people know they have a refractive error or teachers will detect it by classroom performance and they will see an optometrist quickly.

But farsighted people can have refractive errors which go undetected, often until the age of 40-50. Then these people will notice they can't see things within arms length as easily as before.

This is the case for those with mild farsightedness. Those with higher refractive errors can experience constant blur at all distances, they may see double images at times, or they may have a turned eye (especially when reading or looking at near objects). Many of these people will be seen early because of the cosmetic appearance of the turned eye. But many times they can have an eye turn which other people cannot typically notice yet it's enough to decrease their visual performance. Sometimes this decreased performance is attributed to intelligence when the real problem may be as simple as the proper glasses to compensate for their refractive error. The case which I have just described can often occur undetected by the individual and can only be determined by a thorough eye exam.

Astigmatism is a state of unequal focusing of the eye. If you were to look at a plus sign (+)--the up-down line may appear clear while the side-to-side line is fuzzy. This is called astigmatism and is mainly due to the shape of the front of your eye--it is not a disease! Astigmatism makes it difficult for a person to see objects clearly at any distance unless they have glasses or contacts prescribed to compensate for the uneven shape of the eye.

**OCULAR MOTILITY (Eye Movement Skills)**

This refers to the ability to look at objects in space (up, down, left, right, near, far) without moving your head. If you cannot move both of your eyes to point at the same object in space, you will see double images of whatever you are looking at. Many times a person can have a decreased ability to move their eyes and they compensate for it with a head tilt or move their head instead of their eyes to look side-to-side. Or they may learn to "turn off" an eye--which is to say they learn to ignore the information from one of their eyes so that the double images no longer confuse them. This is called a "lazy eye" and is often caused by a "turned eye."

Vision therapy can often help to alleviate the problems of poor eye movement skills by helping the individual learn where both eyes are pointing under controlled circumstances.

**ACCOMODATIVE SKILLS (Focusing)**

This is the ability to see far away clearly and up close clearly without the use of reading glasses. Before the age of 40-50, a person should see far away and close up with only one pair of glasses--or no glasses. When we turn 40-50 we start to notice our "arms are too short" to read effectively anymore. This is one of nature's unstoppable irritations. If you are older than 40, this is something
for which vision therapy is unable to help. Progressive lenses are the best option for this group. Speak to your eye doctor about your many glasses and contact lens options now available to help you with your vision.

It is important to differentiate between seeing "blurry" objects and seeing "double" objects. Many times they are confused by people and they have very different causes.

But vision therapy can help some individuals with poor focusing ability—typically anyone younger than about 40 who cannot see clearly far away and close up with one pair of glasses.

**BINOCULAR STATUS (Eye Teaming)**

Binocularity is your ability to use both eyes together in the most efficient manner we know. It makes up the bulk of your depth perception in day to day life. Your ability to drive safely, to catch a fly ball, to avoid tripping on uneven ground, to know how far to throw a ball to a receiver all depend upon efficient binocularity. Binocularity is a result of complex manipulations by the brain of the information the two eyes send it. It is considered the ultimate in visual efficiency.

**VISION DEVELOPMENT AND PERCEPTION**

Most of our abilities to efficiently use our visual system are learned in our earliest years. We learn how far away objects are when we first reach for them. We learn what different textures "feel" like when we put objects into our mouths and compare that sensation to what we see. We learn to recognize shapes from simple lines on the walls to complex features of our parents' faces in the earliest months. We learned to picture an object in our mind when we hear, touch, taste or smell it as children. During the first decade we learned what our body looked like and about its organization. We also discovered our body was divided into up and down, left and right. Then we learned that others also had this organization and that our left and right was not necessarily theirs as well. We learned to recognize emotional states by the expressions on other's faces—joy, disapproval, friendship, sadness, and comfort.

All these experiences lead to what we are today. But what if we weren't able to clearly see our parents' faces? What if we always saw two of the same object and had to choose which one to reach for each time we wanted something? What if we could taste, smell and hear things but never got a clear image of them as we developed? These impediments could surely lead to distortions in our perception of the world around us. Our world would depend more upon things we could touch or hear or smell. Our world would be very limited and our abilities to function in life would certainly be hampered. That is how important our vision is to our development. Without it we are extremely limited in mobility, social interactions, learning, etc. But what about the various gradations of distortion from perfect vision to total loss? Along the way we have people who could possibly reach further, attain higher goals and expand their horizons if they could just get the proper visual input during their formative years.

Vision therapy also deals with those individuals, who mainly for visual reasons, have fallen behind their peers in school or work or play. Therapy can focus on helping them to better learn to visually perceive their environment and interpret what they perceive. This can be done with a proper lens prescription and repetitive sessions where perception is guided by a trained vision therapist/optometrist. In this way the individual is allowed to use limited skills and then work to develop those skills in isolation at first—then to integration at the end. Many people can benefit from
this guided tour through the visual world and improve their performance in seemingly unrelated ways as a result.

**SPORTS VISION**

Sports vision is a specific discipline of optometric practice focused on the visual performance of athletes. Sports vision optometrists provide special vision services and materials to help patients maximize their visual abilities, enabling them to perform and enjoy their sport to the fullest.

Are you an athlete? For many, when one imagines an athlete, participants of a team sport, such as baseball, basketball, or soccer, come to mind. To others it may be the avid runner, golfer, or tennis player. You may not have considered yourself an athlete, but if you drive an automobile, enjoy photography, paint, cross stitch or are involved in other hobbies or activities, you most likely are utilizing many of the fine visual skills common to athletes.

Most all can benefit from increased visual awareness. Through sports vision training many visual abilities can be improved. Increased depth perception, peripheral awareness, eye-hand coordination, ability to track a moving object, and being able to concentrate and perform consistently, even when under pressure, are a few examples. Protective and specialty eyewear is also an important consideration in the sports vision examination. Not only can it be crucial for safety but often can be a key to maximum performance.

If you would like to improve your game, sport, recreational hobby or activity ask your optometrist to learn how enhanced vision skills and/or materials could help.
Pediatric Vision Department
Please Select the Topic you would like:
* What Does The Pediatric Vision Department Offer?
* At What Age Should My Child Get a Vision Examination?
* What Does a Pediatric Vision Examination Consist Of?
* What Are Common Conditions that Preschoolers Have?

What Does the Pediatric Vision Department Offer?

Pacific University College of Optometry is proud to offer comprehensive and unique vision care for infants and children. Most people believe that vision problems in children are rare. This is not the case. About 25% of children have a vision problem that can hinder their overall development or make visual learning tasks like reading more difficult. Fortunately, most childhood vision disorders are treatable if detected early. However, many of the most common childhood vision problems are not
ERROR: ioerror
OFFENDING COMMAND: image
STACK:
-dictionary-
Low Vision Department

Pacific University College of Optometry is proud to offer our patients low vision evaluations and progress examinations. New patients to the low vision department are seen by referral. Most patients who are seen already have been diagnosed with "low vision" as a result of a birth-related defect, previous or current pathological condition, or a recent traumatic injury.

The purpose of a visit to the low vision department is to assess the extent of the patient's decreased acuity and/or loss of visual field along with the impact that this decrease in visual functioning has or will have on the patient's life. After the low vision evaluation/examination, the patient is counseled regarding what devices if any may help them to interact with their daily environment. Also, if it is necessary, the patient may be referred to other service agencies that may be able to provide the patient with additional assistance or information.

A typical low vision evaluation usually entails:

i. history of the patient regarding his condition if applicable
ii. taking of patient’s visual acuities
iii. talking to the patient about his current and future goals
   i.e. a patient may wish to be able to just read the newspaper like he used to or be able to read a letter from friends or family.
iv. A vision examination if required
v. Discussion with the patient regarding our findings and the options available to help them meet their previously discussed goals
vi. Trial of different vision aids to help the patient interact better in daily life. If a particular device is found to help improve a patient's ability to visually function better in daily life, then proper training and instruction for using the device is available.

Some of the devices that may help patients with low vision include:
a. telescopes
b. high plus adds
c. microscopic spectacles
d. hand magnifiers
e. stand magnifiers
f. large print books,
magazines, newspapers
g. electronic devices such as
closed circuit televisions
(CCTV)

As well, advice to the patient regarding proper illumination, controlling reflections,
light transmission, proper spectacle tints, use of Braille, etc., is also provided.

**Important Internet Links to Low Vision Resources Available:**

* Gateway to Access Low Vision Resources of the World
* Eye Diseases or Conditions that Lead to Low Vision
* Low Vision Products and Manufacturers
* Organizations Assisting the Blind and Visually Impaired

**Devices Available to the Low Vision Patient**

<table>
<thead>
<tr>
<th>Device</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| Telescopes   | **×** Telescopes come in three different models and may be adjustable or fixed telescopes.  
**×** The three models are: handheld, handheld with adaptive devices, headborn.  
Telescopes help the patient see objects that are farther away easier.  
**×** Provides magnification for distance  
**×** Useful aid for independent travel, tv, theatre, sporting events, board work in school, CRT screens beyond 5 feet i.e. monitors in airports. | **×** decreased field of view in all powers  
**×** difficult to find objects and to focus rapidly  
**×** extra training required  
**×** hands are not free if hand-held telescopes are used  
**×** often not successful with patients with decreased fields. |
<table>
<thead>
<tr>
<th>High Plus Adds and Microscopic spectacles</th>
<th>Hand Magnifiers</th>
<th>Stand Magnifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X</strong> Usually a magnifying lens with a handle. May or may not come with a built in light.</td>
<td><strong>X</strong> Relatively low cost. Patient is familiar how to use one. Relatively low cost. Patient is familiar how to use one.</td>
<td><strong>X</strong> Not hands free. Decreased field of view. Decreased field of view makes patients want to move closer to get a larger field of view.</td>
</tr>
<tr>
<td><strong>X</strong> Relatively low cost. Patient is familiar how to use one. Easy to use and allows patient a variety of working distances to view material from. Available in a wide variety of powers.</td>
<td><strong>X</strong> Need to hold object at specific distance thus making device only useful in short duration tasks.</td>
<td><strong>X</strong> Need to hold object at specific distance thus making device only useful in short duration tasks.</td>
</tr>
<tr>
<td><strong>X</strong> Not hands free.</td>
<td><strong>X</strong> Difficult to use if you have hand tremors.</td>
<td><strong>X</strong> Difficult to use if you have hand tremors.</td>
</tr>
<tr>
<td><strong>X</strong> Patient must view material through distance portion of spectacles.</td>
<td><strong>X</strong> Patient must view material through distance portion of spectacles.</td>
<td><strong>X</strong> Patient must view material through distance portion of spectacles.</td>
</tr>
</tbody>
</table>

**Hand Magnifiers**

- A magnifying lens set in a stand which sits on top of the material to be viewed.
- Relatively low cost
- Maintains a constant distance between material and device
- Available with a self contained light source
- Allows patient to view material from different working distances

**Stand Magnifiers**

- A magnifying lens set in a stand which sits on top of the material to be viewed.
- Relatively low cost
- Maintains a constant distance between material and device
- Available with a self contained light source
- Allows patient to view material from different working distances
- Decreased field of view makes patients want to move closer to get a larger field of view.
- Posture in using stand magnifier may be awkward and tiring.
- Distorted image may result if patient tries to view material from too great an angle or from too far away.
- Not hands free
- Patient must accommodate or view through a bifocal.
<table>
<thead>
<tr>
<th>Closed Circuit Television</th>
<th>Covers a greater range of magnification than spectacles.</th>
<th>Machine is bulky and is not portable.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May use both eyes with monitor to view material.</td>
<td>Expensive to purchase.</td>
</tr>
<tr>
<td></td>
<td>Writing and typing are done more easily under a tv camera than with optical aids.</td>
<td>Reading speed may be too slow with CCTV.</td>
</tr>
<tr>
<td></td>
<td>Contrast level of material may be adjusted when viewing through the monitor.</td>
<td>Practice is necessary to develop skill for successful use.</td>
</tr>
</tbody>
</table>

If you would like more information regarding our low vision department or low vision services offered, please call one of the clinics listed above.

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At the Pacific University Vision Clinics we take pride in our dispensaries.

We cater to all your eyewear needs. Whether you need tiny glasses, sturdy glasses, specialty glasses, sunglasses, safety eyewear or a new fashion statement. Your needs can be fulfilled here. We can also provide you with a wide variety of contact lenses. The newest technology in vision correction devices are here.

We send our edging and cutting to local Labs, in order to provide you with quality lenses and coatings.

We have knowledgeable staff to answer questions, help choose frames, adjust and repair glasses, and provide for all the rest of your eyewear needs.

Hours of the dispensaries are the same as the clinics they serve.
OCULAR AND SYSTEMIC DISEASE

Assessment of ocular and systemic health is an important aspect of a comprehensive vision exam. Students attending Pacific University College of Optometry, are taught to integrate ocular and systemic health evaluations into a comprehensive vision examination. This requires that students have an extensive knowledge of ocular diseases in addition to an understanding of how systemic diseases can affect the eyes. Our clinics can provide for most ocular disease and special testing.

OCULAR DISEASE

The topic of ocular disease covers disorders that range from infections to conditions that produce blindness. Diseases are studied during a sequence of courses that cover conditions that affect the anterior surface of the eye (such as the cornea and lids) to those that affect the posterior pole of the eye (such as the retina and optic nerve head). These courses also include systemic diseases which affect the eyes.
In addition to ocular disease, students are taught to treat ocular emergencies such as traumas, foreign bodies and chemical exposure.

During the third year, student interns begin patient care. Clinical experience is in the Primary Care Clinic and includes comprehensive vision exams and ocular emergencies, including treatment of red eyes. Fourth year interns complete a year of patient care including a rotation through the Ocular Disease and Special Testing Clinic. This clinic sees patients who have been referred from the Primary Care Clinics. These patients quite often have active cases of a disease requiring special treatment. Student interns perform state-of-the-art testing to further evaluate the cases and provide treatment using the latest therapy techniques. Some cases may be referred to secondary health care specialists such as neurologists and internists.

The following are some of the more common diseases that students are trained to diagnose and manage.

**CATARACTS**

Cataract formation results in a decreased transparency of the lens. Cataracts can form in both the young and the old, but typically affect the elderly. A traumatic cataract results from an injury to the eye that causes the lens to become cloudy.

Age-related cataracts can form as a result of several different conditions. These include normal aging, certain medications and some systemic diseases. When vision becomes impaired, cataract removal surgery is an option that can improve sight in most cases.

**CONJUNCTIVITIS (Pink Eye)**
Conjunctivitis is a common childhood eye condition that can also affect adults. It can be caused by viruses, bacteria or allergy. Conjunctivitis affects the outer membrane of the eye causing redness, itching or burning with a watery or mucus discharge. Treatment of this condition can require the use of medication.

GLAUCOMA

Glaucoma is a disease that produces no symptoms until late in its course when irreversible vision loss has already occurred. Glaucoma is caused by a build-up of fluid pressure in the eye which can eventually damage the optic nerve. This can cause partial or total blindness. Yearly vision exams can detect this disease in its early stages when treatment can prevent further vision loss.

SYSTEMIC DISEASE

Systemic disease courses are taught as part of the curriculum at Pacific University. These courses present information on diseases that affect different organ systems of the body with special emphasis on how these diseases can create ocular and vision problems. The pharmacological agents used for treatment of systemic disorders are studied along with their side-effects on the visual system. In addition, the side-effects of medications used to treat ocular diseases on the systemic system are also considered.

Student Interns are taught the importance of taking blood pressure measurements on patients suspected of having high blood pressure. This procedure helps identify those patients at risk of a blood pressure disorder who are not currently receiving treatment.

When examining the back of the eye, a view of the posterior pole structures (blood vessels, optic nerve, retina, etc.) is possible. The eye is the only place in the body where blood vessels can be directly observed without a covering of skin. Seeing these blood vessels, in addition to the other posterior pole structures, can give clues to certain systemic diseases.

The following are some of the more common eye diseases caused by systemic disease, that students are
Diabetic retinopathy is a disease that can develop in people who have either Type I or Type II Diabetes. It occurs when the tiny blood vessels that nourish the retina become weak. If these blood vessels bleed or leak, they can affect vision and even cause blindness. Yearly exams with dilation of the pupils are important so that the health of the eyes can be monitored. If bleeding or leaking is noted, then the patient can be referred for laser treatment by a Retinal Specialist. Patients who have diabetic retinopathy are also encouraged to work with their physician to ensure blood sugar levels are being controlled properly.

Hypertensive retinopathy is a disease caused by systemic hypertension (or high blood pressure). If hypertension is not treated, the patient can experience serious consequences that are both vision and life threatening. When signs of hypertensive retinopathy are noted, the patient can be referred to primary care physician or a Retinal Specialist if necessary.
Please tell us what you think about our web site or services. If you provide us with your contact information, we will be able to reach you in case we have any questions.

Your comments will help us enhance this website. If you wish to leave an anonymous comment, either mention it in the first line of your comment or exclude your personal information. Thank you.

Comments and Suggestions

For each of the following, please select the one which most correctly applies.

1) Were you able to quickly and easily find the information you desired on this website?  ○ Yes  ○ No  Please describe:

2) Was there any information you felt was confusing or unnecessary?  ○ Yes  ○ No  Please describe:

Other comments or suggestions

Contact Information
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Information to Gather Before You Come In

If you choose not to fill out the pre-exam questionnaire, your exam can be more effective if you bring in certain information. A list containing the following information can help to better assess your condition and ensure the proper treatment, individualized for you.

Useful information would include:
- All prescription and non-prescription drugs—many medications can affect your eyes
- Any health problems you have such as high cholesterol, high blood pressure, or diabetes—many general health conditions can affect your eyes
- Any health problems such as diabetes or heart disease in your immediate family
- Any past eye problems such as glaucoma or macular degeneration
- How you use your eyes at work—note the distance, amount of detail, lighting, and time spent at each task
- Your hobbies and the sports you participate in
- Any problems with your eyes, reading or developmental problems, or inconsistencies in performance during hobbies or sports

Three main components are included in the examination:

1. Image Clarity: This includes determining your visual acuity. You will also be tested for myopia (nearsightedness), hyperopia (farsightedness), astigmatism, or presbyopia.
2. Coordination of Eyes: This includes tests for depth perception and strabismus (eye turn). This involves observing different lights and targets.
3. Eye Health: An eye health examination will be performed to find any eye disease including glaucoma and cataracts. This will include three areas:
   - Examination of your face, eyelids and pupils with a penlight
   - Magnifying the outside of your eye with a biomicroscope to observe the cornea, iris, and lens
   - Use of special lenses to look at the inside of your eye—this will require dilating your eyes.

Other tests may be performed depending on your vision condition. For instance, different tests will be performed for children, contact lens patients, and patients over age 60.

Patients need a thorough vision examination every two until age 61. After age 61, you should get an vision exam every year. Many vision problems occur without early symptoms. These certain patients need eye care more often:
- Premature infants
- Infants with an abnormal pregnancy history
- Those with a family history of eye disease or crossed eyes
- Children with performance problems or learning disabilities
- Patients with diabetes, hypertension or a family history of glaucoma

Please plan approximately two hours for your eye exam. Some patients may require longer visits and/or follow-up appointments. A health exam also includes pupil dilation, which allows the doctor a full view of your internal eye structures. In most cases, dilation (enlargement of the pupil) lasts for 8 hours or more; after dilation your near vision may be blurry for 4-6 hours. Some people may have some difficulty with driving after dilation, but most people have little or no problems. Dilation lets more light into your eyes, so it is normal to experience light sensitivity after this procedure.

What to Bring

The following information can help better assess your condition and ensure proper treatment:

- List of all prescription and nonprescription medication
- Glasses
- Sunglasses
- Contact lenses (please wear to exam)
- List of medical and general allergies
- Records from your previous eye doctor
- Safety eye wear
- Insurance information
- How you use your eyes at work (note the distance to your work station, lighting of your workstation, and the level of visual detail necessary for your work)
- Personal and immediate family health history
- A list of any past eye problems such as surgeries, injuries, or diseases
- Also make sure to note any problems you have been having with your eyes such as reading problems or visual deficiencies of some kind when doing hobbies and or sports.

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Welcome to the Pacific University Beaverton Center for Sight.

The Pacific University Center for Sight in Beaverton is a comprehensive referral, co-management, and research center committed to providing exceptional medical, surgical, and specialty optometric care. The doctors, interns, and staff are specialized in the treatment and co-management of areas dealing with:

* Corneal disease  * Strabismus surgery  * Cataract surgery  * LASIK refractive surgery
The Center for Sight is also associated with renowned surgeons, Dr. Howard Freedman and Dr. Stanley Teplick of the Teplick Laser Center. Dr. Teplick has been recognized as one of the top 100 refractive surgeons in the United States.

If you have any questions regarding the services offered by the Center for Sight, or wish to obtain a referral, please do not hesitate to contact the Center at the number below.

**Beaverton Center for Sight**

9975 SW Nimbus  
Beaverton, OR 97008  
Phone: (800) 700-0230 or (503) 646-0164  
FAX: (503) 520-0403

**Maps and Driving Directions**

Local streets map (You can zoom in or out to any level with these maps)

Enter your address as the origin and press "Get Directions"
Welcome to the Pacific University Family Vision Center. We are happy to announce the completion of phase one of the multi-million dollar renovation to Jefferson Hall, home of the Pacific University College of Optometry and Family Vision Center. We would also like to thank all of our patients and friends of Pacific who have continued to support us during the ongoing renovations of the past year.

The newly renovated Jefferson Hall is better suited now to provide for the needs of our patients in the most timely and efficient manner. As always, we at the Family Vision Center are pleased to offer the best and most complete range of optometric services to our valued patients. Some of the services available include:
As you enter the front doors of the Family Vision Center, you will notice to your left our newly remodeled optical dispensary. Our dispensary continues to carry all of the latest fashion frame lines available to suit every budget and taste preference. We offer spectacles to suit various occupational and recreational needs, no matter what they may be. In either case, the doctors, interns, and staff at the Pacific University Family Vision Center look forward to taking care of all your vision needs. Please feel free to come down and look at the newly remodeled Jefferson Hall or browse in our optical dispensary for your next pair of glasses. If you have any questions or would like to book an appointment, please do not hesitate to call the number below.

Pacific University Family Vision Center

First Floor Jefferson Hall
Pacific University College Of Optometry
2043 College Way
Forest Grove OR, 97116
Phone: (503) 357-5800
FAX: (503) 359-2261
Before or after hours: (503) 357-6151 x 2754
Clinic Director: Darin Paulson, O.D.

Clinic Hours

Primary Care: M F Sat: 9 AM - 5 PM
T W: 9 AM - 6 PM
TH: 9 AM - 7 PM
Contact Lenses: M W F Sat: 9 AM - Close
Vision Therapy: T W F: 9 AM - Close
Pediatric Vision: F afternoon and Sat morning
Low Vision: T W F: 9 AM - Close
Ocular Disease and Special Testing: M W F Sat: 9 AM - Close
Dispensary: M - Sat: 9 AM - 5 PM

Maps and Driving Directions

Local streets map (You can zoom in or out to any level with these maps)
Enter your address as the origin and press "Get Directions"

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The Northeast Eye Center provides comprehensive vision care to a culturally diverse community. Located on the main level of the Multnomah County NE Health Center, the clinic offers primary care optometry, pediatric vision care, low vision services, and ocular disease/surgery co-management. Fourth year student interns, supervised by licensed doctors, provide thorough eye-care. Interpreter services are also available on various days of the week, and a full optical dispensary offering spectacles, sunglasses, occupational eyewear and contact lenses is on site.

Located at:
5329 NE Martin Luther King Jr. Blvd.
Portland, OR 97217
Phone: (503) 248-3821
FAX: (503) 248-3809
Clinic Director: Lome Yudcovitch, O.D.
A view from the parking lot.

Clinic Services and Hours of Availability:

Hours are subject to change. Please call in advance to reserve time for your appointment.

<table>
<thead>
<tr>
<th>Service</th>
<th>Primary Care</th>
<th>Pediatrics</th>
<th>Low Vision</th>
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<tbody>
<tr>
<td>M-W, F</td>
<td>9 AM - 5 PM</td>
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<td>8:30 AM - 11:30 AM</td>
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Maps and Driving Directions

Local streets map (You can zoom in or out to any level with these maps)

Enter your address as the origin and press "Get Directions"

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511 SW 10th Avenue, Suite 500
Portland, OR 97205
Phone: (503) 224-2323
FAX: (503) 241-0222
Before or after hours: (503) 224-2407
Clinic Director: Carole Timpone, O.D.
Portland Family Vision Center is located in the heart of downtown Portland. It occupies all of the fifth floor of an upscale office building. The facility offers state-of-the-art technology with an efficient and caring staff. The clinic staff and doctors are here to ensure you receive the best possible care for your vision needs. We offer services from glasses to contacts to ocular health checks to low vision workups. Your eyes can be tested for glaucoma, cataracts, eye infections, and numerous other diseases which affect the eye. Vision therapy is available to train your eyes for better coordination. You may choose from one of our largest frame selections in our new dispensary, or be fit with the best contact lenses for your needs.

Clinic Services and Hours of Availability

Please call in advance to reserve time for your appointment.

Click on any service name below to learn more about that service

<table>
<thead>
<tr>
<th>Service</th>
<th>M, W: 9 AM - 5 PM</th>
<th>F: 2 PM - 5 PM</th>
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<tbody>
<tr>
<td>Primary Care</td>
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<tr>
<td>Contact Lenses</td>
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<td>Vision Therapy</td>
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<td>Ocular Disease and Special Testing</td>
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<tr>
<td>Dispensary</td>
<td>M-Th: 9 AM - 6 PM</td>
<td>F: 9 AM - 5 PM</td>
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</table>

Languages Spoken Here
A staff member is generally available to assist as an interpreter if you cannot provide your own. They speak one or all of the following: Spanish, Russian, Ukrainian, Croatian, Bosnian, Serbian, French, Portuguese, and Vietnamese. Other interpreters are available for almost any language if you are unable to speak any of the listed. Please call ahead to make an appointment.

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Maps and Driving Directions

Follow this link (Local area map) for an interactive map at http://maps.yahoo.com or click here to Enter your address in the "Origin" space and press "Get Directions" for turn-by-turn street directions.

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SOUTHEAST FAMILY VISION CENTER

3653 SE 34th Avenue
Portland, OR 97202
Phone: (503) 248-3506
FAX: (503) 248-3887
Before or after hours: (503) 248-3507 x 22687
Clinic Director: Weon Jun, O.D.
The Southeast Family Vision Center offers services to people of all nationalities. It is located downstairs in the Multnomah County Health building. The center provides students an excellent opportunity to work with people from many different cultures. This clinic focuses on primary care optometry but offers pediatric vision care as well. The interns work directly with patients to provide the necessary care. The interns also may use the help of interpreters to aid in the exam. The interns’ work is monitored and approved by the attending doctor. The clinic director is Dr. Weon Jun.

Clinic Hours and Services Available

Click on a service below to learn more about it. Hours are subject to change.

Please call in advance to reserve a time for your appointment.

<table>
<thead>
<tr>
<th>Service</th>
<th>Days</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Care</td>
<td>M-F</td>
<td>8:45 AM - 5 PM</td>
</tr>
<tr>
<td>Pediatric Vision</td>
<td>M</td>
<td>8:45 AM - 5 PM</td>
</tr>
<tr>
<td>Dispensary</td>
<td>M-F</td>
<td>8:45 AM - 5 PM</td>
</tr>
</tbody>
</table>

Language Interpreters

A staff member is generally available to assist as an interpreter if you cannot provide your own. The staff members speak Spanish, Russian, Ukrainian, Croatian, Bosnian, Serbian, French, Portuguese, and Vietnamese. Other interpreters are available for almost any language. Please call ahead to make an appointment.

Maps and Driving Directions

Follow this link (Local area map) for an interactive map at http://maps.yahoo.com or click here to Enter your address in the "Origin" space and press "Get Directions" for turn-by-turn street directions.
The new Virginia Garcia clinic in Cornelius

Virginia Garcia Family Vision Center

Virginia Garcia Memorial Health Center
85 N. 12th Street
Cornelius, OR 97113
Phone: (503) 357-2541
Appointments: (503) 359-5564
Clinic Director: Dennis L. Smith, O.D., M.S., F.A.A.O.

Clinic Hours and Services
Maps and Driving Directions

Local area map (You can zoom in or out to any level with these maps)

Enter your address as the origin and press "Get Direction"

Send mail to voltonr@pacificu.edu with questions or comments about this web site.
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The Washington State School for the Blind Lions Low Vision Clinic was established in the mid 1970's. The purpose of the clinic is to provide low vision evaluations for individuals within Washington and Northern Idaho. These evaluations are provided at no cost to the patient. The clinic is a collaborative effort between the Washington State School for the Blind (WSSB), the Lions Sight & Hearing Foundation of Washington and Northern Idaho (the Foundation), and Pacific University College of Optometry (PUCO). WSSB provides the physical space and administrative support for the clinic, PUCO provides the faculty and student intern staffing for conducting the evaluations, and the Foundation provides the funding to support clinical operations.
The Washington State School for the Blind is a school devoted to providing meaningful assistance to those considered with severe visual reduction. Pacific University has a cooperative arrangement to provide those individuals with visual assistance to those who can benefit. Student interns work with the staff at the school to determine the best means of helping this special needs population.

Clinic Services and Hours of Availability:* (Click on the service to learn more about it.)

![Low Vision](M-F 7:30 AM - 4 PM)

* Hours are subject to change. Please call in advance to reserve time for your appointment.

Maps and Driving Directions

Local streets map (You can zoom in or out to any level with these maps)

Enter your address as the origin and press "Get Directions"

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