5-1-1997

Pacific University College of Optometry contact lens web page

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Recommended Citation
Conner, Matt W., "Pacific University College of Optometry contact lens web page" (1997). College of Optometry. 1193.
https://commons.pacificu.edu/opt/1193
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Abstract
Within the web page for the Pacific University College of Optometry, there are several web pages relating to the services provided at the Family Vision Center Clinics. This particular web page provides a brief and concise overview of contact lens services. The information on this web page is intended for the patient who is browsing for information about contact lenses. Rigid gas permeable and hydrogel lenses can be used for the management of refactive errors, astigmatism and presbyopia. Wearing schedules effect ocular health and can be addressed using a variety of lens types, including disposable lenses. Tinted lenses, such as opaque and enhancing tints, can be used to alter eye color. Treatment and management of ocular disease, post-surgical and post-trauma patients can be enhanced with the use of contact lenses. A web link to a listing for Pacific University clinic sites is given.

Degree Type
Thesis

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PACIFIC UNIVERSITY COLLEGE OF OPTOMETRY
CONTACT LENS WEB PAGE

By

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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 1997

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ABSTRACT:
Within the web page for the Pacific University College of Optometry, there are several web pages relating to the services provided at the Family Vision Center Clinics. This particular web page provides a brief and concise overview of contact lens services. The information on this web page is intended for the patient who is browsing for information about contact lenses. Rigid gas permeable and hydrogel lenses can be used for the management of refractive errors, astigmatism and presbyopia. Wearing schedules affect ocular health and can be addressed using a variety of lens types, including disposable lenses. Tinted lenses, such as opaque and enhancing tints, can be used to alter eye color. Treatment and management of ocular disease, post-surgical and post-trauma patients can be enhanced with the use of contact lenses. A web link to a listing for Pacific University clinic sites is given.
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.

![Bifocal contact lens](image1)

![Bifocal contact on the eye](image2)

**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 regiments. 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.
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 lens 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.

**CLINICS**
- Portland
- Forest Grove
- Southeast Portland
- Northeast Portland

REFERENCES:

Return to Areas of Interest

Mail your questions or comments to the webmaster.

last updated: 4/9/97