A comparison of contact lens care costs in the Pacific Northwest

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A comparison of contact lens care costs in the Pacific Northwest

Abstract
Contact lens wearers find themselves spending increasing amounts of money on solutions to care for their lenses. In caring for contact lenses, most contact lens patients find it difficult to find the store with the lowest prices and ultimately end up going to their local grocery store and spending more money than needed. The purpose of this study is to show how one can benefit from price-shopping for contact lens solutions. This is a comparative study done on the most widely used soft contact lens and rigid gas permeable lens solutions, and their prices in various stores in the Portland, OR metropolitan area.

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A COMPARISON OF CONTACT LEN S CARE COSTS IN THE PACIFIC NORTHWEST

BY

PAUL A. HORNER
JOHN SCHWEITZER

A thesis submitted to the faculty of the College of Optometry Pacific University Forest Grove, Oregon for the degree of Doctor of Optometry May 1993

Advisor:

Cristina Schnider, O.D.
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JOHN F. SCHWETZER

ADVISOR:

CRISTINA SCHNIDER, O.D.
John Schweitzer was born and raised in the Midwest, and is currently residing in Beaverton, Oregon. He has been attending Pacific University College of Optometry since 1989. While working part-time in the private practice of an Optometrist during undergraduate, Mr. Schweitzer developed a strong interest in the eye care field. He attended North Dakota State University for four years of undergraduate studies and received a degree in Microbiology in the Spring of 1989. He was accepted into Pacific University's optometric program the fall of 1989.

John Schweitzer would like to further his education in full-scope optometric practice with special interests in contact lenses.
AUTOBIOGRAPHY
OF
PAUL A. HORNER

I was born and raised in Linton, North Dakota, a small, rural town of about 1500 residents. I went to undergraduate school at Mayville State University in Mayville, North Dakota and graduated in May of 1989 with a Bachelor of Science in Biology. I wanted to pursue a career in Optometry because of my general interest in eyecare and the visual system. I will be graduating in May 1993 with a Doctor of Optometry degree from Pacific University College of Optometry. My wife, Dayna, and I have plans to move to Oklahoma or Texas following graduation.
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ABSTRACT

Contact lens wearers find themselves spending increasing amounts of money on solutions to care for their lenses. In caring for contact lenses, most contact lens patients find it difficult to find the store with the lowest prices and ultimately end up going to their local grocery store and spending more money than needed. The purpose of this study is to show how one can benefit from price-shopping for contact lens solutions. This is a comparative study done on the most widely used soft contact lens and rigid gas permeable lens solutions, and their prices in various stores in the Portland, OR metropolitan area.

Key Words:
contact lens, soft contact lenses(SCL), rigid gas permeable(RGP), contact lens care, contact lens solutions, prices, Portland metro area, Ao sept, Renu, Opti-free, Boston, Boston Advance, Wet-n-soak.
Contact lens patients often seem to be under the assumption that once they have been fit with lenses, they are through with the majority of the money spending. It is often a real shock for them to find out the significant amount of contact lens solutions it takes to care for their lenses, and furthermore, the price of these solutions. Eyecare practitioner's should advise patients about the extensive costs that coincide with wearing contact lenses, and that cutting corner's on their contact lens care to save a few dollars is not a wise decision.

One of the biggest problems with contact lens wearers is the non-compliance factor. "If the patient feels the actual cost of care is too high, they will fail to adhere to the daily and weekly contact lens hygiene regimens suggested by the lens manufacturers and the eyecare practitioner." In the long run, this causes an increase in possibilities for ocular inflammation and infection, which will cause an increase in doctor bills. "The decision to modify or ignore the prescribed treatment regimens may be the result of the patient's perception that the costs of care outweigh the expected benefits." By following care instructions, the patient will extend the life of their lenses, and they will also be rewarded with continuous comfort during lens wear.

Eyecare practitioner's could benefit their patients by providing them with an estimation of the cost of contact lens care. This study was done to estimate the total cost incurred in one year when caring for contact lenses using six of the currently available solution systems. When explaining cleaning systems to patients, they will be more attentive if they have an estimation of what it will cost to care for their lenses. Importance of each step should be stressed, and the patients should know that cutting corners will only cause adverse reactions in the future, and could, subsequently, cause an abrupt end to wearing contact lenses.
METHODS

The initial step in the study was to collect samples of each of the solutions to be used in the study. Each sample contained everything needed to completely and accurately follow the recommended instructions given with each lens care system.

Each lens care system was assessed individually according to package instructions for calculating the amount of daily cleaner, saline and other solutions used for daily lens care and weekly enzymatic care. The processes used for each care system were repeated five times to obtain an accurate average amount used on a daily basis. All solutions were captured in a graduated cylinder and measured to obtain the precise amount used in each trial.

All contact lenses were cleaned according the instructions given with the individual packages. For example, the Opti-free system suggests cleaning contact lenses in the following manner: First of all, wash your hands; remove the lens and place it in the palm of your hand; place 2 drops of Opti-free daily cleaner on the lens and rub it gently for 15-20 seconds in the palm using the forefinger of the opposite hand or between the thumb and forefinger; flip the lens over and repeat the process; rinse the lens with rinsing/disinfecting solution for at least 10 seconds with a steady stream; fill the lens case with rinsing/disinfecting solution, place the lens in the case and tightly close the chamber. The process should be repeated exactly for the other lens. The enzyming process is to be completed one time per week. The above instructions are followed exactly, then the vials (right and left) are filled with rinsing/disinfecting solution. One enzyme tablet is placed in each vial along with the designated lens. The lenses are soaked in the enzyme solution overnight. The following morning, the lenses are removed from the solution and rinsed with rinsing/disinfecting solution with a steady stream for at least 10 seconds. The lenses are now ready to be placed in the eye.
The following guidelines were followed in obtaining the exact amount of solutions used for each lens care system:

AOSEPT
1. Daily Cleaner--> 2 drops on each side of lens
2. Saline Rinse--> 10 second steady flow
3. Aosept Solution--> fill vial up to fill line
4. Aodisc--> replaced every 3 months
5. Enzyme--> once/week, 1 tablet/treatment

OPTI-FREE
1. Daily Cleaner--> 2 drops on each side of lens
2. Rinse--> 10 second steady flow
3. Storage--> fill each side of lens case
4. Enzyme--> once/week, 1 tablet for each vial, 10ml solution/vial

RENU
1. Daily Cleaner--> 2 drops on each side of lens
2. Rinse--> 10 second steady flow
3. *Enzyme--> once/week, 1 tablet/vial, 10ml solution/vial
   * denotes--> one extra disinfecting/daily clean cycle per enzyming

BOSTON, BOSTON ADVANCE, and WET-N-SOAK
1. Daily Cleaner--> 2 drops on each side of lens
2. Storage--> fill each side of lens case with conditioning solution
3. *Enzyme--> once/week, 1 tablet/vial, 10ml solution/vial
   * denotes--> use sterile saline solution in vials
RESULTS

MEASUREMENTS: (30 drops (gtt.)/ml; 1 oz. = 29.6 ml)

---> average amounts used after 5 trials

AOSEPT
1. Daily Cleaner --> 8 gtt./night = 97 ml/year = 3.2 oz./year
2. Aosept Disinfection --> 4.73 oz./14 days = 123.31 oz./year
3. Saline --> 9.7 oz./14 days = 252.79 oz./year (morning rinse included)
4. Aodisc --> 1 disc/3 months = 4 discs/year
5. Enzyme --> 4 tablets/month = 48/year

OPTI-FREE
1. Daily Cleaner --> 8 gtt./night = 97 ml/year = 3.2 oz./year
2. *Disinfect. Solution --> 14.83 oz./14 days = 386.57 oz./year
3. Enzyme --> 8 tablets/month = 96/year
4. *denotes: includes solution used for morning rinse and enzyming.

RENU
1. *Daily Clean/Disinfect. Solution --> 14.72 oz./14 days = 383.68 oz./year
2. Enzyme --> 8 tablets/month = 96/year
3. *denotes: includes solution used for morning rinse and enzyming.

BOSTON
1. Daily Cleaner --> 4 gtt./night = 48.5 ml/year = 1.6 oz./year
2. Conditioning --> 2.36 oz./14 days = 61.52 oz./year
3. Enzyme --> 8 tablets/month = 96/year

BOSTON ADVANCE
1. Daily Cleaner --> 4 gtt./night = 48.5 ml/year = 1.6 oz./year
2. Conditioning --> 2.36 oz./14 days = 61.52 oz./year
3. Enzyme --> 8 tablets/month = 96/year
WET-N-SOAK
1. Daily Cleaner--> 4 gtt./night=48.5 ml/year=1.6 oz./year
2. Conditioning--> 2.36 oz./14 days=61.52 oz./year
3. Enzyme--> 8 tablets/month=96 year

(Insert Chart)
Solution prices in the Portland metro area on a per annum basis:

**SCL SOLUTIONS**

- **COSTCO**: $0.00
- **FRED MEYER**: $100.00
- **SAFEWAY**: $200.00
- **TARGET**: $300.00
- **K-MART**: $400.00
- **BI-MART**: $500.00

**RGP SOLUTIONS**

- **COSTCO**: $0.00
- **FRED MEYER**: $50.00
- **SAFEWAY**: $100.00
- **TARGET**: $150.00
- **K-MART**: $200.00
- **BI-MART**: $250.00

Legend:
- OPTI-FREE
- B&L RENU
- AO SEPT
- WET-N-SOAK
- BOSTON ADVANCE
- BOSTON
DISCUSSION/CONCLUSION

Taking proper care of contact lenses can cost the contact lens wearer a considerable amount of money throughout the year. In some cases, the amount spent on solutions can even be greater than costs incurred in the purchase of the lenses themselves.

In this study, it was found that it can be beneficial to "shop around" when looking for a suitable place to buy contact lens solutions. Patients often find themselves going to the store that is most easily accessible, which often results in the patient paying more money than necessary. This unfortunate situation often makes the noncompliance factor come into play. Patients will go to the store and notice that brand x is much cheaper than their recommended brand of solution. Because this type of solution was not recommended by the optometrist, the patient has an adverse reaction, thus leading to emergency office visits. Compliance is the issue when it comes to contact lens wear and contact lens solutions. Ultimately, cutting corners when wearing contact lenses causes the consumer more out-of-pocket spending. Compliance should be stressed when dealing with contact lens wearers.

In this study, estimates in the amount of money spent on a particular contact lens care system were obtained. These estimates are based on full-time daily wear soft or RGP contact lens wearing schedules. In other words, it is based on those patients that wear and remove their lenses every day. The cost of lens care will be significantly less to those patients who are part-time lens wearers. When dealing with prospective contact lens wearers, eyecare practitioners should make patients aware that costs associated with contact lens wear do not end with the purchase of the lenses themselves. On the other hand, a very high estimate of anticipated costs could cause the patient to reconsider the purchase of contact lenses.

Costs associated with contact lens wear are most apparent when the patient is shopping for their recommended solutions. It can be beneficial to price shop for contact lens solutions.
According to our study, Costco is the overall cheapest store to buy contact lens solutions in the Portland, OR metropolitan area. Opti-free is the most expensive soft contact lens solution, and Boston Advance is the most expensive RGP solution.
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<th>BI-MART</th>
<th>DISINF/COND. SOLUTION</th>
<th>ENZYME TABLETS</th>
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