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thier for the eye.
poable lenses are just thatlenses are theoren away and repleced after a specified provid of frame. They may be prescribed to the worst on an extended ways is in which case, they are replicated least works(a), prescribed to the worst on a daily works this, they are replaced last every two works and an postfy as daily. Disposibles are the most popular lenses because they require minimal care and are the healthiest contact lenses for the cys.
phreical lens is a lens with the same has curve in all nericlands. Spherical lenses are used to correct singler propria and simple hyperopla. They can also be for prioritors who have small morotice (1000) of adoptimation. The lens "marke" same of the assignment in the grant of the prioritor is not black the single same of the simple s
oric lens is an SCL with one base curve but two different refracting powers oriented 90° away from each other. It is used to correct the vision of putients w e larger amounts (>1.00D) of corneal assignmation. A toric lens may be either a cylinder or a spherocylinder lens.
scal SCLs are available in both concentric power rings and aspheric designs. See figure 4–3.
-continuatorya colorless, clear less.
ses are available with tints serving specific purposes.
se lenses have a very light blue or aqua visibility tint. This tint does not affect the color of the patient's eye, but makes the lens easier to see if it is dropped white surfacelike a sink.
s tint makes the patient's eyes appear a deeper shade of their original color, without actually changing the eye color. A blue enhancing lens will make a blu appear a deeper blue; a green enhancing lens will make a green eye appear a deeper green, etc.
opupae tint is a tint completely masking the patient's natural eye color. Opaques are most popular with dark-eyed individuals desiring blue or green eyes, contact lenses used for special effects in movies and at Halloween time (zombie, cat eye, 8-bull, etc.) are opaque lenses.
X-cheom laws is a red contact lens worn on the nondominant eye of color deficient people. The lens helps some patients to better interpret colors or rants.







ONA OK





The two primary forms of dry eye are Evaporative Dry Eye, also known as Meibornian Gland Dysfunction or MGD and Aqueous Dry Eye. The majority of dry eye sufferers have MGD.

7



8



- Eye health
- Vision Testing
- Tear eval TBUT
- Cornea eval K-reading Topography
 Spectacles current SRx
- Diabetic patient
- Pregnancy
- Lens selection
 - Water content (high water 55%+, low water 38%)
 - CoverageCentration

 - Movement upon blink
 Rotation (LARS)

9

11

Contact Lens Data

1.Keratometry readings

Fitting Theory

Verify if your patient has any OSD conditions to consider

- 2.Prescription 3.Horizontal visible iris diameter (HVID)
- 4.Pupil size
- 5.Fissure size
- 6.Eye dominance
- 7.Topographies
- 8.Current contact lens brand, base curve and fit assessment if your patient is a current contact lens wearer.

10





The average palpebral fissure size is 9 to 10 mm.

The Visible Iris Diameter (VID) is the distance from the nasal limbus to the temporal limbus and constitutes the lateral diameter of the iris. With the patient fixating straight ahead, a millimeter rule is angled toward the iris. A normal reading is between 10.5 and 12.5 mm.

Lid Considerations





 Determining the rate of blinking can be accomplished quite easily by counting the number of blinks made by the patient in a minute. The procedure should be performed without the patient's knowledge or the nearly earded he offseted. the results could be affected. Patients should be aware that blink rate prior to fitting can be useful as a baseline value with which to compare values obtained after lens wear has begun. A blink rate of 10 to 15 times per minute is considered normal.



15 K T L

Negative fitting factors

- Chronic blepharoconjunctivitis
- Bad acne or rosacea
- Larger Pterygium
- Seventh Nerve Palsy (Bell's Palsy)
- Diabetes
- Severe allergies
- Severe dry eyes
- Poor hygiene



PANNUS/ NEOVASCULARIZATION



14



Contact Lens Uses
Convenience
Medical Uses
Cosmetics
Sports

Verification

Hand Magnifier
 Measures

• overall diameter (OAD)

• peripheral curve widths (PCW, SCW)

• optic zone (OZ)

V-Gauge or Slot Gauge
 measures the overall
 diameter (OAD)

15





16



- Summa Lander South

Trouble Shooting Contacts Issues

- Patient Compliance
- Vision Issues
 Unstable/fluctuating
- Over-refraction

19

- Begin with spherical power firstToric Lens rotation
- Too much movement
 Verify surface issues
- Inflammation
 Dry Eye Disease



Care and Handling

Hygiene!!!!
Evaluate lens
Tears
Inverted
Lint



20





What is a prism ballast used for? To stabilized the contact at a specific position

22



ral Curve (PC)

Secondary Curve Width (SCW)
Peripheral Curve Width (PCW)

Contacts Characteristics



- Low water contacts are 38%
- High water content contacts are 55% and up
- Visitints are for pts with high Rx's to see the lens
- Some CLs are close to 70% water
- Biotribology is fraction, lubrication, and wear

Characteristics Cont...



Rose-K For Keratoconus



- Lens Types ROSE K (roseklens.com)
- The ROSE K lens has a number of features that make it ideal for keratoconus:
- · Its complex geometry can be customized to suit each eye and can correct all of the myopia and astigmatism associated with keratoconus.
- They are easy to insert, remove and clean.
- They provide excellent health to the eye, because they allow the cornea to "breathe" oxygen directly through the lens.
- Practitioners have the ROSE K trial set fitting system which achieves a first fit success in over 80% of patients internationally.

26



Safety First!

- Wash your hands!
- Procure all supplies
- · Procedure must be safe Explain procedure
- · Explain do's and don'ts
- Practical exams automatic failure for contact lens station

28



27

25

Contact Lenses Care **Tips From FDA**

- <u>Contact Lens Care | FDA</u>
- Do not "top off" the solutions in your case
- Throw away all the lens solution after each use Use only the lens solutions and eye drops that your eye doctor suggests.
- Do not use solutions longer than the recommended time after opening.
- · Replace your contact lens case every 3-6 months.



FDA Continued ...

- · Follow your eye doctor's directions on how to wear and clean your contacts.
- · If you have a problem, take out your lenses right away and bring them with you to see your doctor.
- Have an up-to-date, correct prescription from your eye doctor when buying contact lenses.
- · Get your doctor's OK before using any new or different medicines.
- · Do not use solutions longer than the recommended time after opening.
- Take out your contacts when you swim or go into a hot tub. You could risk an eye infection from the non-sterile water. You also need an eye exam and prescription for decorative contact lenses.
- Report problems to FDA's Medwatch program. 1-800-FDA-1088, <u>www.fda.gov/medwatch</u>



31

Compliance is a big issue

 You may require a patient to pay for the eye exam, fitting, and evaluation before giving them a copy of the contact tens prescription, but only if you also require immediate payment from a patient whose eye exams show no need for glasses, contact lenses, or other corrective eye care products. Proof of valid insurance coverage counts as payment for purposes of this requirement.1

 The FCLCA has always required that prescribers provide contact lens prescription to anyone who is designated to act on behalf of the patient, including contact lens sellers. The updated 2020 final regulations now require that physicians respond to these requests within 40 business hours. Prior to this rule change there was not a timeframe within which the prescription was required to be provided.

CDC and FDA Recommendations



CDC

✓ Schedule a visit with your eye doctor at least once a year. ✓ Take out your contacts and call your eye doctor if you have eye pain, discomfort, redness, or blurry vision. ✓ Understand that eye infections that go untreated can lead to eye damage or even blindness.2

Insertion and Removal

<u>Contact Lens Insertion and Removal - Bing video</u>

<u>Contact Lenses for Beginners | How to Put in Contacts - Bing video</u>

Paragon CRT[®] Contact Lens Insertion and Removal Video - Bing video

Scleral Lens Society Insertion, Removal, Troubleshooting and Lens Care Video - Bing video

How to Insert and Remove SCLERAL LENSES | Beginners Guide to Scleral Lenses - Bing video

32

34



FDA

✓ "To be sure that your eyes remain healthy you should not order lenses with a prescription that has expired or stock up on lenses right before the prescription is about to expire. It's safer to be re-checked by your eye care professsional."3

· Fitting...if you get the chance, have pt practice technique

Dispensing Contacts

· Do's and Don'ts of contact lens wear Hand washing Soaps
Towels

Check VA's before and after dispensing

Activities

Care and Handling

- Make-up Medications (wait at least 15 minutes after medication)
- Fumes and vapors...high school kid Patient appearance
- Patient motivation
- Work Conditions Cleaning System...do not keep solutions opened for more than 90 days
 Contact lens case...clean daily, let air dry
- Follow-up Care...wear schedule and and emphasis on the value of scheduled follow-ups
- Pre-appointment Instructions

33

Insertion of Contacts



Step-by-step instructions

- · First, wash your hands thoroughly and dry them well Open your contact lens case and use your fingertip to put the first contact lens in your non-dominant hand.
- Rinse the lens with contact lens solution. Never use regular water.
- Put the lens on the top of the index or middle finger of your dominant hand.
- Check to make sure the lens isn't damaged and that the correct side is facing up. The edges of the lens should turn up to form a bowl, not flip out. If it's inside out, gently flip it. If the lens is damaged, don't use it.
- Look in the mirror and hold your upper and lower eyelids open with the hand not holding the lens. Look in front of you or up toward the ceiling and place the lens in your eye.
- Close your eye. Close your eye. Close your eye around or press gently on the eyelid to settle the lens in place. The lens should feel comfortable, and you should be able to see clearly after blinking a few times. If it's not comfortable, gently take out the lens, rinse it, and try employed.
- Repeat with the second lens.





- Wash your hands thoroughly with scap and water, and dry with a lint-free cloth. It is best to avoid using scap the fragrances or oils, as they can adhere to the surface of your lens.
- Remove your contact lens from its storage case or sealed package using your fingertips (NOT your fingernails) and place it in the
 of your hand. Some eye doctors recommend pouring the contact lens directly from the storage case onto the palm of your hand. Insertion of Soft
 • Piece the lines onto your index finger of your dominant hand and check that the lens is not inside out: To do this, look at the shape of the site T appears with the sides turned out, similar to a tacoup, it is indice out. The correct position of a lens resembles the shape of a book. Second they appear context,
 - With your other index or middle finger, gently hold your upper eyelid to the way. Using your middle finger on your dominant hand, pull your lower eyelid down.

 - Staring straight ahead, or looking up toward the ceiling, slowly bring the contact lens toward your eye and gently place the lens in the center of your eye.
 - Look down and blink a few times to help the lens move to its proper position.
 Release your eyelids and check for comfort and clear vision.

Lenses

Placement of Soft **Contact Lens**

- Hygiene Placement
- Place lens on finger-tip
- Inspect lens
- Manipulate lids for widest aperture
- Place lens on eye • Release lower lid, then upper lid



Removal of Soft Contact Lens

- Hygiene
- Pull lower lid down
- Pinch lens off the white part of eye
- Remove
- Reverse hand positions for second eye





38



Placement of Gas Perm Contact Lens

Hygiene

- Place lens on moistened finger-tip
- Position head down
- Lift upper lid with forefinger
- Pull lower lid down
- Place lens on center of cornea
- Remove lens finger Release lids



Insertion of GP

When putting in gas permeable lenses, follow these steps

1.Wash your hands with soap and water. Do not use soaps that con perfume, or artificial coloring. Dry your hands with a clean, lint-free towel.

2. Orly your names win a clean, in in the cover.
8. Remove a lens from its zear. Fry to get into the habit of always doing the same side first.
This will help you avoid mixing up your lenses. When handling the lens, use your fingertips (like the mage on the fight). Avoid toxing its with your anist.
4. Rinse the lens with fresh cleaning solution. Only use brands recommended by your docto Do not use tap water.

5. Check to make sure the lens is clean and wet.

- 6. Rub several drops of cleaning solution on the lens. 7. Place the lens on the fingertip of your dominant hand's index finger.
- So the term data for the majority of your dominant hand a mach might.
 So the term data finger of your dominant hand to hold down your lower eyelid. Use a finger
 on your other hand to hold up your upper eyelid.
 So Gently place the lens on the center of the colored part of your eye.

10. Release your eyelids and blink.

11.If you have blurry vision, check to make sure the lens is centered. If it is in the correct position, remove the lens and make sure it is clean. Clean and disinfect the lens again before reinserting it.

40









Removal of Gas Permeable Lens

- Open eyes are wide as possible
- Place fingertip at lateral canthus
- Pull lid laterally
- Blink
- Catch lens in other hand

Insertion of Scleral Contact Lens

- Remove your scleral lenses from their storage case and rinse them with saline. If you're using a hydrogen percoide solution, wait at least 6 hours for the solution to neutralize after you place the lenses in the storage case. Before placing the lens on the eye, always clean it with saline.
- Secure the scleral lens to a suction instrument (plunger) provided by your optometrist, or insert it between your middle finger, forefingers and thumb (the tripod method).
- To prevent air bubbles from accumulating between your eye and the lens, fill half the bowl of the lens with preservative-free salint solution. In a facedown position, place the lens directly on the middle of your eye.
- With a tissue, wipe and dry your lens case, then leave the cover off to air dry.



Step-by-step instructions **Removal of Contacts**



- Wash your hands thoroughly and dry them well.
- Use the middle finger of your dominant hand to gently pull down your lower eyelid on one eye.
- While looking up, use the index finger of that same hand to gently pull the lens down to the white part of your eye.
- Pinch the lens with your thumb and index finger and remove from your eye.
- After you remove the lens, put it in the palm of your hand and wet it with contact solution. Gently rub it for about 30 seconds to remove any mucus, dirt, and oil.
- Rinse the lens, then place it in a contact lens case and cover it completely with contact solution.
- Repeat with the other eve.

Proper Care of Gas Permeable Contact Lenses

Contact Lens Care Systems & Solutions | Contact Lenses | CDC

- 1. Cleaning is the removal of deposits, debris and some germs from the surface of the contact lens.
- 2. Disinfecting is the killing of germs present on the contact lens, some of which can cause serious eye infections.
- 3. Polishing

44



43

45



- A hybrid lens has a gas permeable contact for clarity in the center and a soft contact lens skirt for comfort
- Great for certain types of astigmatism · Requires more patient education
- Not used for lenticular astigmatism





- GPs and Ortho-K lenses
 - Reshapes the cornea · Only wear at night when sleeping
- No pain involved
 - Usually one month of wear record wear time for 6 months

46

Ortho-K



- Reduces photophobia
- Improves: **Prosthetic Contacts**
 - Deformities (Iris, pupil, etc.)
 - Binocularity (aniseikonia)
 - Self esteem Confidence
 - · Patient's quality of life

Do's and Don'ts of Contact Lens Wear



DON'T wear your lenses for longer than the prescribed amount of time. DON'T store lenses overnight in saline. Saline is great for rinsing, but not for storing contact lenses

DON'T reuse the disinfecting solution in your lens DO throw out the solution in your lens case after you put your lenses in your eyes.

DO rinse your case with saline solution after you put in your lenses.

DO mi

e you wash and dry your l efore putting in or remove

DO replace your lens case every 3 mon

DO keep your nails short to avoid scratching your eye. If you have long nails, make sure to only use your fingertips to handle your lenses.

DON'T use water to clean or store your lenses. DON'T sleep in your contact lens

DON'T go underwater in your lenses, in swimming or showering. Water can con pathogens that have the potential to ca

Wearing Schedules

 Soft Lenses • 4-6 hours plus 2 each day to full time wear Gas Permeable • 4 hours plus 1-2 each day to full time wear



Normal Adaption

- Tearing is natural with initial lens placement
- Awareness, improving with continued wear
- Intermittent blur (due to excess tears)
- Increase photophobia
- Minor irritation to wind, smoke, dust
- Mild redness

50



49

Abnormal Adaption

- Sudden pain or blurring
- Severe or persistent haze or halo
- Severe redness or irritation
- Spectacle blur for one hour or
- more after contact lens removal



Care and Handling Techniques

• Lens Care Systems

- Clean
- Rinse
- Disinfect & Store
- Protein Removal



Bic

Protect of





Why is it important to keep up with current trends?

Cleaning/Disinfecting

Soft contact lens solution for soft contact

52





54

Solutions

ARE

- Hydrogen peroxide systems
- Deactivation disc
 Minimal time for disinfection for system Soft lens care systems
- clean
- rinse disinfect & store
- protein removal
- Gas Permeable care systems
- clean
- rinse
- disinfect & store protein removal

Multipurpose solution

- Multipurpose solution is an all-in-one care system used to clean, rinse, disinfect, and store soft contact lenses. This solution is the most commonly used care system among soft contact lens wearers. Follow these steps for proper use of multipurpose solution:
- What is the difference between cleaning and disinfection?
- · Cleaning is the removal of deposits, debris and some germs from the surface of the contact lens. · Disinfection is the killing of germs present on the contact lens, some of which can cause serious eve
- Rub and rinse your contact lenses and store them in fresh solution every time you take them out 12. Never mix fresh solution with old or used solution in the case—a practice called "topping off"—since it reduces the effectiveness of disinfection ³⁴.
- Rub and rinse your contact lens storage case with fresh solution—never water—every day 52
- Empty all excess solution out of the case, and dry it with a fresh, clean tissue 52.
- Store the clean case upside down on a fresh, clean tissue with the caps off after each use $^{\pm}$ in order to prevent germs from building up in the case $^{\pm11}$.

55

Hydrogen Peroxide Systems

- Hydrogen peroxide-based systems clean, disinfect, and store contact lenses. An eye care
 provider may prescribe this care system if you have an allergy to ingredients in multipurpose
 solution that causes redness or irritation of the eye. Systems that use this type of solution
 require the use of a special case that comes with the solution when you buy it. The special case
 reacts with the hydrogen peroxide, converting it to harmless saline solution over time. Never
 use another type of case with hydrogen peroxide-based solution, as the solution over to to saline and will cause burning, stinging, and redness upon inserting the contact lenses.
- · Carefully follow all instructions on the label for proper use of hydrogen peroxide-based systems · Put the contact lenses in the special case with fresh solution. Never mix fresh solution with old or used solution
- · Wait at least 4 to 6 hours-depending on the label's instructions-before inserting your contact lenses
- Never rinse your contact lenses with hydrogen peroxide-based solutions and directly insert into your eyes, as this can cause burning, stinging, and redness.

56

RGP Care Systems

Care systems for rigid gas permeable, or hard, contact lenses are different from care systems used with soft contact lenses. Hard contact lenses typically require several different solutions for wetting, cleaning, and disinfecting. If you wear hard contact lenses, talk to your eye care provider about which care system is best for you. Never use hard contact lens care products on soft contact lenses.

Talk to your eye care provider for more information about Tak to your eye care provider for more mormation about contact lens care systems. Your eye care provider can help you determine which care system will work best with your eyes and your contact lens type. Visit the <u>Protect Your</u> <u>Eves</u> page for more information on how to properly care for your contact lenses.



Make up and Contacts

- Wearing M
- Always wash and dry your hands prior to touching your eyes or your contact lenses.
- You should insert your contact lenses prior to applying your eye make-up. Remove your contact lenses prior to removing your eye make-up.
- Never apply eyeliner to your inner eyelid.
- When applying powder eye shadow, close your eye and brush off any excess prior to opening your eye. If you use cream eye shadow, be careful not to get it into your eyes. Use a water-based cream eye shadow should you pick to use cream rather than powder.
- Use only hypoallergenic make-up in order to help prevent irritation of one's eyes.
- Make-up brushes, specifically those used near your eyes, should be washed once per week and left to air dry.
- Cosmetics do have expiration dates. Typically, eye make-up for example eyeliner and mascara should be
 discarded no less once every three months to prevent introducing bacteria to the eyes.
- If your eyes are irritated from cosmetic use, do not wear your contact lenses. If irritation remains, see your
 optometrist for an eye exam.

58

60

57



Document the patient's chart

• Documenting the patient chart is critical

- · All patient instructions must be documented
 - Do's and don'ts · Insertion and removal training, to include video instructions
 - · Handwashing instructions
 - Care of contacts
 - Wear schedule
 - Replacements
 - Care
 - · Remove contacts when eye is irritated
 - Contact the office with all concerns

· Troubleshoot contact lens problems



MAX comfort MAX clarity.

CUVUE

ACUVUE

• Prescription

Comfort

Vision

Comfort

Redness

59

• Fit

TriCare on Contacts as of 3/9/2023

- TRICARE only covers glasses and contacts to treat certain conditions This includes: <u>Glasses and Contacts | TRICARE</u>
- Infantile glaucoma

61

- Corneal or scleral lenses for treatment of keratoconus Scleral lenses to retain moisture when normal tearing is not present
 or is inadequate
- Corneal or scleral lenses to reduce corneal irregularities other than astigmatism Intraocular lenses, contact lenses, or glasses for loss of human lens function resulting from intraocular surgery, ocular injury or congenital absence
- "Pinhole" glasses prescribed for use after surgery for detached retina
- TRICARE doesn't cover adjustments, cleaning, and repairs for glasses.



 Sending patient information securely is a best practice. However, if the
doctor does not have the ability to send the prescription securely or via
encrypted email, they can make the patient aware of that when the
patient consents to receiving their prescription electronically. With regard
to unencrypted email, HHS prevuly darliefd, "overed entities are
permitted to send individuals unencrypted emails" if they have advised the
individual of the risk, and the individual still prefers the unencrypted
email." So sending the prescription via unencrypted emails." So sending the prescription via unencrypted emails aware the patient
understands to the docts robuid inform the patient that the prescription
would be sent via unencrypted email and aware the patient
understands the situation. Again, using secure communications would be
the best practice. What is the penalty for non-compliance?
 Doctors should also be aware that failure to comply with Contact Lens Rule regulations can result in legal action including civil monetary penalties of up to \$42,530 per violation. Contact-Lens-Rule-Compliance-Toolkit.pdf (aoa.org)

HIPAA Law on sending the CL Rx

62



Useful Videos		
	Getting Comfortable With Multifocal Contact Lenses - Bing video	
	Multifocal Lenses:FINEvision: - Bing video	
	How do Bifocal and Multifocal Contact Lenses Work? - Bing video	
	https://youtu.be/4lHijsotMww	Gas Permeable I&R
	https://youtu.be/mlvFsxjtFBY	Soft Contacts I&R
	https://youtu.be/h0dl2P6qyZU	Scleral Contacts I&R
	https://youtu.be/QspSu-Eligo	Contact Lens Care
	<u></u>	

64

