



# **IACLE Distance Learning Program (DLP)**

## **Phase 3 Assignment 7:**

### **Course content covered:**

**C1. Contact Lens Contamination**

**C2. Contact Lens Care & Contact Lens Care Products**

**C3. Rigid Contact Lens Care**

**C4. Hydrogel & Silicone Hydrogel Contact Lens Care**

**From the New IACLE Contact Lens Course (New ICLC)**

## ASSIGNMENT 7

Read the questions carefully and record your answers on the answer sheet template

- 1. Which one of the following statements is NOT true?**
  - a. Ionic CLs attract more protein deposits than non-ionic CLs
  - b. Daily disposable CLs do not require use of a surfactant cleaner
  - c. The cornea can tolerate sodium chloride concentrations of 0.6 to 1.5%
  - d. Low water content CLs accumulate more deposits than high water content CLs
  
- 2. Which one of the following statements related to CL deposits is true?**
  - a. SiHy CLs are susceptible to protein deposition that rubbing removes only partially
  - b. Lipid deposits are more wearer-dependent and show 30% variability among wearers
  - c. CL deposition rates have shown a direct correlation with tear protein concentrations
  - d. White inorganic deposits are homogenous and are due to elevated levels of calcium in and on the CL
  
- 3. Which one of the following biguanides used in modern LCPs has the smallest molecular size?**
  - a. PHX
  - b. PAPB
  - c. Alexidine
  - d. PHMB
  
- 4. All of the following are examples of surfactants used in modern LCPs except?**
  - a. Polihexanide
  - b. Polaxamer
  - c. Pluronic 174R
  - d. Polyethylene glycol
  
- 5. Which one of the following is not a function of a surfactant?**
  - a. Prepare a CL for cleaning and rinsing
  - b. Increase the mode of action of the preservative(s) present
  - c. Increase CL surface wettability
  - d. Disrupt bonds and dislodge deposits from the CL's surface
  
- 6. Which one of the following chemical entities has been shown to have antifungal and anti-amoebic properties?**
  - a. PHX
  - b. PAPB
  - c. MAPD
  - d. PQ-1



- 7. In relation to the cleaning and rinsing of SCLs, which one of the following statements is NOT true?**
- Daily disposable CLs (DDCLs) do not need cleaning and rinsing
  - When a multi-purpose solution (MPS) is used, there is no need for the 'rub and rinse' step
  - Extended wear CLs (EWCLs) should be cleaned every time they are removed from the eye
  - Hypertonicity might improve the efficacy of CL cleaners
- 8. Which one of the following CL care solution properties is the LEAST likely to induce discomfort upon CL insertion?**
- Tonicity
  - pH
  - Viscosity
  - Preservative concentration
- 9. Which one of the following statements regarding the use of H<sub>2</sub>O<sub>2</sub> in the disinfection of SCLs is NOT true?**
- Suitable for all CL types
  - Cleaning and rinsing prior to disinfection is not necessary
  - Can be used with some enzyme treatments
  - Can be formulated without preservatives
- 10. Which one of the following is an enzyme used in CL care that is derived from a bacterium?**
- Papain
  - Lysozyme
  - Pancreatin
  - Subtilisin-A
- 11. Which one of the following is NOT an essential step in SCL care and maintenance?**
- Cleaning
  - Rinsing
  - Disinfection
  - Lubrication
- 12. What is the function of the buffer system in CL care products?**
- To adjust and maintain solution pH
  - To enhance the solution's viscosity
  - To adjust the solution's osmolality
  - To improve CL wettability



- 13. What is the minimum exposure time to 3% H<sub>2</sub>O<sub>2</sub> required to inactivate bacteria effectively?**
- 5 minutes
  - 10-15 minutes
  - 30 minutes
  - 45-60 minutes
- 14. Which one of the following is NOT a principal function of a SCL rinsing solution?**
- Emulsification of oils and lipids on the CL's surface
  - Removal of residual CL cleaner
  - Rehydration of the CL
  - Removal of loosened CL contaminants
- 15. With regard to subtilisin-A, which statement is NOT true?**
- It is a protein-specific enzyme
  - Derived from the pancreas of the pig
  - Can bind to CL materials and cause sensitivity reactions
  - Recommended CL soaking time in peroxide systems is 6 hours
- 16. Which one of the following statements regarding hydrogen peroxide-based CL disinfecting solutions is NOT true?**
- Usually formulated with a 1% H<sub>2</sub>O<sub>2</sub> concentration
  - Neutralization is required following disinfection and before CL insertion
  - pH is usually acidic or slightly acidic
  - Peroxide disinfection is reasonably effective in 45 to 60 minutes
- 17. Each of the following factors warrant consideration when selecting the most suitable CL care and maintenance system EXCEPT:**
- Inclusion of a new CL storage case with each bottle of solution
  - Ocular sensitivity
  - CL material
  - Wear and replacement schedule
- 18. Which one of the following is a chelating agent, commonly used as an antimicrobial enhancer in combination with other preservatives?**
- Polyquaternium-1
  - Polyethylene glycol
  - Chlorhexidine gluconate
  - EDTA
- 19. Which of the following deposits is MOST likely to accumulate on fluoro-siloxane acrylate (FSA) CL materials?**
- Rust spots
  - Jelly bumps
  - Lipid deposits
  - Denatured protein



- 20. Care products for soft CLs have lower concentrations of antimicrobial agents compared with those for RGP CLs. Which one of the following reasons is NOT responsible for that situation?**
- Low Dk value
  - Decreased pore size
  - Low water content
  - Lack of significant surface charges (typically)
- 21. The amount of deposits that accumulate on an RGP CL is largely independent of:**
- Tear quality
  - CL care regimen
  - Dk of CL material
  - Wearing schedule
- 22. Which one of the following statements is TRUE?**
- RGP CL materials are less rigid than PMMA
  - High Dk RGPs for daily wear (DW) are more deposit prone than their low Dk counterparts
  - Rigid lenses should preferably be cleaned between the thumb and forefinger
  - When an RGP lens is stored dry, its BOZR will flatten temporarily
- 23. An RGP CL has a hard, matte deposit on both its front and back surfaces that is difficult to remove. This deposit also causes reduced CL wettability and patient discomfort. Which type of deposit is it MOST likely to be?**
- Lipids
  - Calcium
  - Jelly bumps
  - Protein
- 24. A new, custom RGP CL shows persistent wettability problems on the eye. What is the most likely cause of this problem?**
- Inappropriate storage solution used by the laboratory
  - Excessive tearing during the adaptation period
  - Excessive lens polishing during manufacture
  - Improper handling of the lens while cleaning
- 25. Which of the following statements about cleaning of RGP CLs is true?**
- CLs should be rubbed for less than 10 secs
  - CLs should be cleaned between the thumb and forefinger
  - CLs should be rubbed vigorously with a cleaner containing a mild abrasive
  - The front surface of a high plus CL is more difficult to clean fully
- 26. What is the best way for a patient to remove lipid deposits from a RGP CL?**
- Use an enzymatic cleaner weekly
  - Re-polishing the CL surface
  - Switch to hydrogen peroxide disinfection
  - Use an alcohol-based surfactant cleaner



- 27. A patient who only wears their CLs occasionally, should be advised to store their CLs in which one of the following:**
- Unneutralized hydrogen peroxide
  - Multipurpose solution
  - Unpreserved saline solution
  - Distilled water
- 28. Which one of the following statements regarding SICS is NOT true?**
- SICS increases the risk of corneal inflammation by 2X
  - SICS is affected proportionally by the concentration of PHX in the LCP
  - SICS peaks at 2 hours but can disappear before the end of the day
  - Poor CL surface quality is associated with SICS
- 29. Compared with Hy CLs, SiHy CLs are more prone to which one of the following deposits?**
- Denatured proteins
  - Lysozyme deposits
  - Calcium deposits
  - Jelly bumps
- 30. All of the following are functions of in-eye re-wetting/lubricating drops for SCLs, EXCEPT:**
- Flushing irritating particles from the eye and CL
  - Rehydrating CLs
  - Facilitating easy CL removal
  - Alleviating symptoms of dryness and discomfort