

# Integrating New Presbyopia Technologies into Practice

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## Description

The options to help our presbyopic patients are advancing quickly. This course will review pharmaceutical treatments, new medications being studied and how they are being successfully incorporated into clinical practice.

## Learning Objectives:

- 1) Understand the prevalence and mechanism of action of pharmaceuticals for presbyopia
- 2) Discuss the various pharmaceuticals that are currently being studied for presbyopia
- 3) Understand the clinical applications of presbyopia correcting pharmaceuticals

## Outline:

1. Why are pharmaceuticals that address presbyopia important?
  - a. Prevalence of Presbyopia -1 billion people worldwide are presbyopic
  - b. Many will use over the counter reading glasses
  - c. The onset of presbyopia may be the impetus for a patient's first eye exam. Knowledge of a prescription eye drop will create the impetus for patients to call optometry offices for appointments
  - d. Optometrists perform 85% of all annual eye exams and perform 88 million eye exams yearly
  - e. There is a gap in options for presbyopic patients and pharmaceuticals fill a void
2. Let's dive into this a little more. Currently, the mechanism of action is through reducing the pupil size and extending depth of focus. What has been your experience with this?
  - a. Discuss pilocarpine and its mechanism of action
  - b. Understand what to expect clinically
  - c. Discussion of extended depth of focus
  - d. Discuss current length of time (duration of activity)
  - e. Discuss qd versus bid dosing regimen
  - f. Understand nuances in prescribing
    - i. The latent hyperope
    - ii. The low myope
    - iii. The low astigmatic patient
  - g. How do you prescribe the medication?
    - i. Do you sample or simply prescribe the medicine?
3. There are several other pharmaceuticals being studied for presbyopia. Can you discuss some of these new advancements?

- a. Cholinergic agonists
    - i. Pilocarpine
      - 1. Cholinergic agonist
      - 2. Different concentrations from what is commercially available will emerge
      - 3. Will be utilized alone and in combination with adrenergic antagonists
    - ii. Carbachol
      - 1. Long duration of action
      - 2. May be combined with alpha-2 adrenergic agonists
    - iii. Aceclidine
      - 1. Has strong affinity for muscarinic receptors on sphincter
      - 2. Has low affinity for muscarinic receptors on ciliary muscle
      - 3. Long duration of action
      - 4. May be combined with alpha-2 adrenergic agonists
  - b. Adrenergic antagonists
    - i. Inhibit dilator muscle
    - ii. Can be used in combination with cholinergic agonist
  - c. Alpha-2 adrenergic agonist
    - i. Prevents pupil dilation
    - ii. Acts on the alpha-2 adrenergic receptors on the presynaptic nerve of the dilator muscle reducing nor-epinephrine produced in the cleft
4. You all work practice in different settings. I would be interested to discuss with all of you how you incorporate this in the various settings.
- a. Surgical setting
    - i. What are the considerations with the post surgical patient
    - ii. Discuss protocols for prescribing and follow up
  - b. Private practice
    - i. Discuss what patients are good candidates
    - ii. Discuss contact lenses and glasses wearer
  - c. Corporate Optometry
    - i. 9k locations nationwide with 13,500 ODs work in this setting
    - a. 40-50% of patients are new patients in this setting
    - b. What are the clinical considerations with this setting and prescribing pharmaceuticals for presbyopia
5. Are there safety concerns with the miotics?
- a. Ciliary muscle activation
    - i. Anterior movement of ciliary muscle
  - b. Discussion of risk factors for retinal detachments
    - i. Lattice degeneration
    - ii. Retinal holes
    - iii. Retinal pathology
    - iv. High myopia
  - c. Understand the clinical trials and the inclusion criteria
    - i. Refractive error inclusion criteria

- ii. All patients underwent dilated retinal evaluation
    - d. Understand retinal detachments that have been reported
      - i. Discussion of cases that have been reported
- 6. Integrating pharmaceutical presbyopia treatments into the office
  - a. What is your exam protocol?
    - a. When will you prescribe?
    - b. How will you refill prescriptions?
  - b. Who is answering the phone?
    - a. Do they know about the technology?
    - b. How will they schedule appointments for patients that are interested in drops?
  - c. Optical staff education
    - a. Helping optical staff understand it is an additional tool for patients looking for options
    - b. It will not take away from optical sales
    - c. Weekly optical/OD meetings.
  - d. OD staff protocols, phone scripts difference in presbyopia drops
- 7. Set up for Success
  - a. Referral Channels
  - b. Walmart Health-pharmacy
  - c. Luxottica network- LC Target Sunglass Hut Target CVS pharmacy
- 8. Patient Discussions
  - a. Open ended questions
  - b. Patient expectations/ doctor deliverables.
  - c. Talk about why one drop might work and another might not
  - d. Talk about side effects