Computer Vision Syndrome (CVS)

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Causes

Numerous contributing factors

- -Contrast challenges
- -Body positioning, seating posture, head angle
- -Improper viewing distances and angles from the screen
- -Poor lighting in the room
- -Glare on the screen

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Causes continued…

Uncorrected or unknown vision problems

- -Hyperopia (farsightedness)
- -Astigmatism
- -Eye coordination problems
- -Accommodative (ocular focus) problems
- -Presbyopia

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Symptoms

Most Common
- -Eye strain
- -Eye pain
- -Headaches
- -Blurry vision
- -Dry eyes
- -Neck & upper back/ shoulder pain

Additional
- -Photophobia (light sensitivity)
- -Diplopia (double vision)
- -Color distortions
- -afterimage awareness

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Computer Vision Syndrome Scale (CVSS17)

FACULTAD DE ÓPTICA Y OPTOMETRÍA
UNIVERSIDAD COMPLUTENSE DE MADRID

CVSS17

Name, Surname: _____

Age:___ Date:_____

FOLLOWING QUESTIONS ASK ABOUT HOW YOU FELT DURING YOUR LAST FOUR WORKING WEEKS.

If you normally wear glasses or contact lenses during most of your working hours, answer as if you were wearing them.
Please, circle your preferred choice in each question.

A2. Have you noticed that the letters on the screen become blurry while you're working with your computer?

1. None at all 2. Rarely 3. Often
4. A moderate amount 5. Much 6. Very much

A13. Have you noticed that, after some time working with your computer, you have to rotate to see well?

0. Very much 1. Much 2. A moderate amount
3. Little 4. Very little 5. None at all

A14. While you're reading or working on your computer, did you feel like you're rotating your eyes?

0. Always 1. Frequently 2. Rarely 3. Never

A15. Have you noticed that, after a lot of time on the computer, the letters appear as a double image?

0. Very much 1. Much 2. A moderate amount
3. Little 4. Very little 5. None at all

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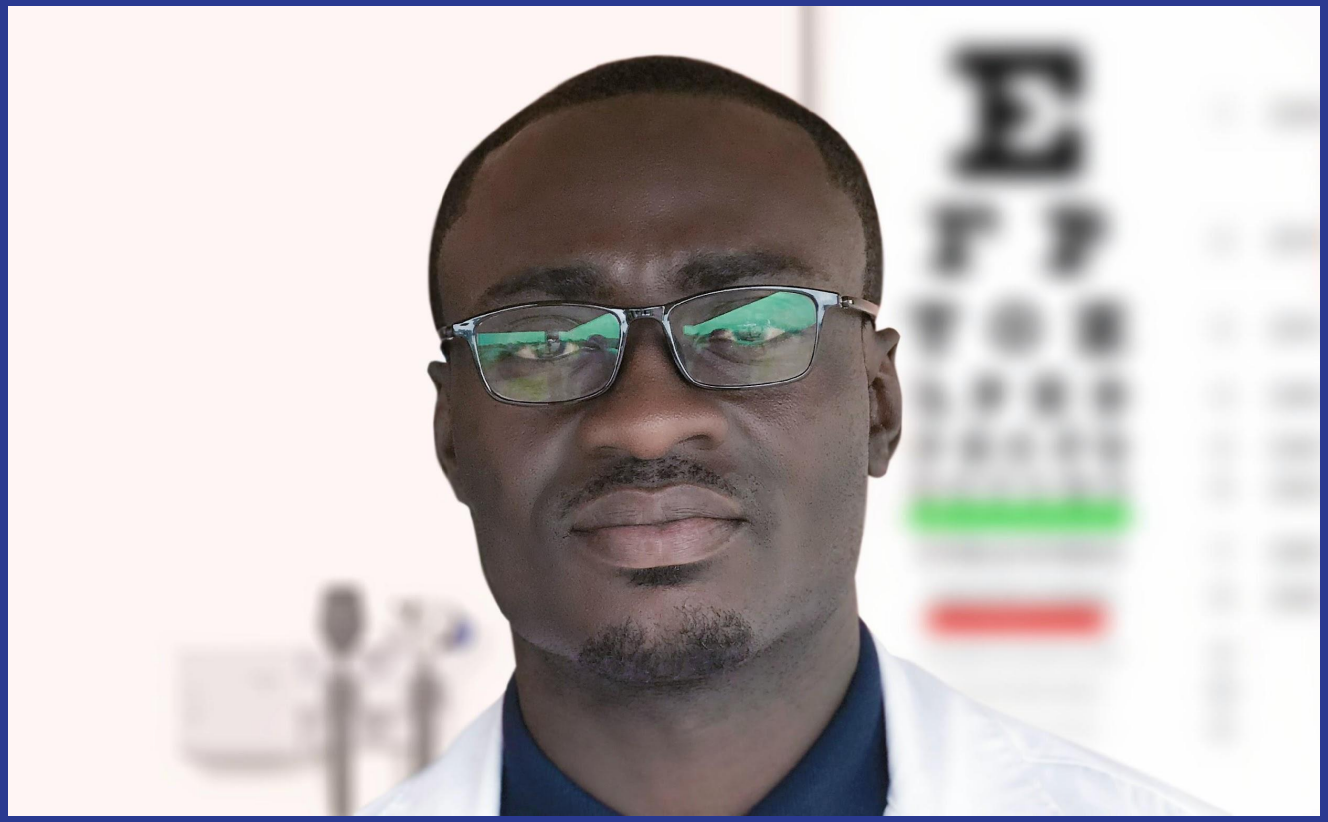
Diagnosis



GO TO THE EYE DOCTOR!

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Diagnosis continued…

Comprehensive Eye Exam

-Thorough **case history**

Exploring symptoms, health problems, medications, environmental factors contributing

-Visual acuity measurements

-Refraction to determine appropriate lens powers needed

-Functional testing

Binocularity-analyze how the eyes work together as a team

Accommodation-how the eyes focus

Oculomotor Control-how the eyes move

Stereopsis-how the brain perceives depth and sees in 3D

Suppression-whether the brain is ignoring sensory input from an eye

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Treatment

Screen recommendations to reduce digital eyestrain

- -20/20/20 Rule
- -Reduce ambient room lighting
- -Reduce glare
  - Regular screen cleaning
  - anti-glare screen
  - anti-reflective or blue blocking filters
  - dark painted walls with matte finish
- -Bigger the better
- -Enlarge text size
- -Remembering to blink often

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Treatment continued…

-Ensuring proper visual ergonomics
(see Dr. Zolman's section)
-Appropriate updated spectacle/contact lens Rx
-Rx specific for computer distance
-Therapeutic lens Rx aka "Digital Performance Lenses"
(see Dr. Davis' section)
-Special lens designs (Neurolens etc.)
-Tints or coatings
-Optometric Vision Therapy

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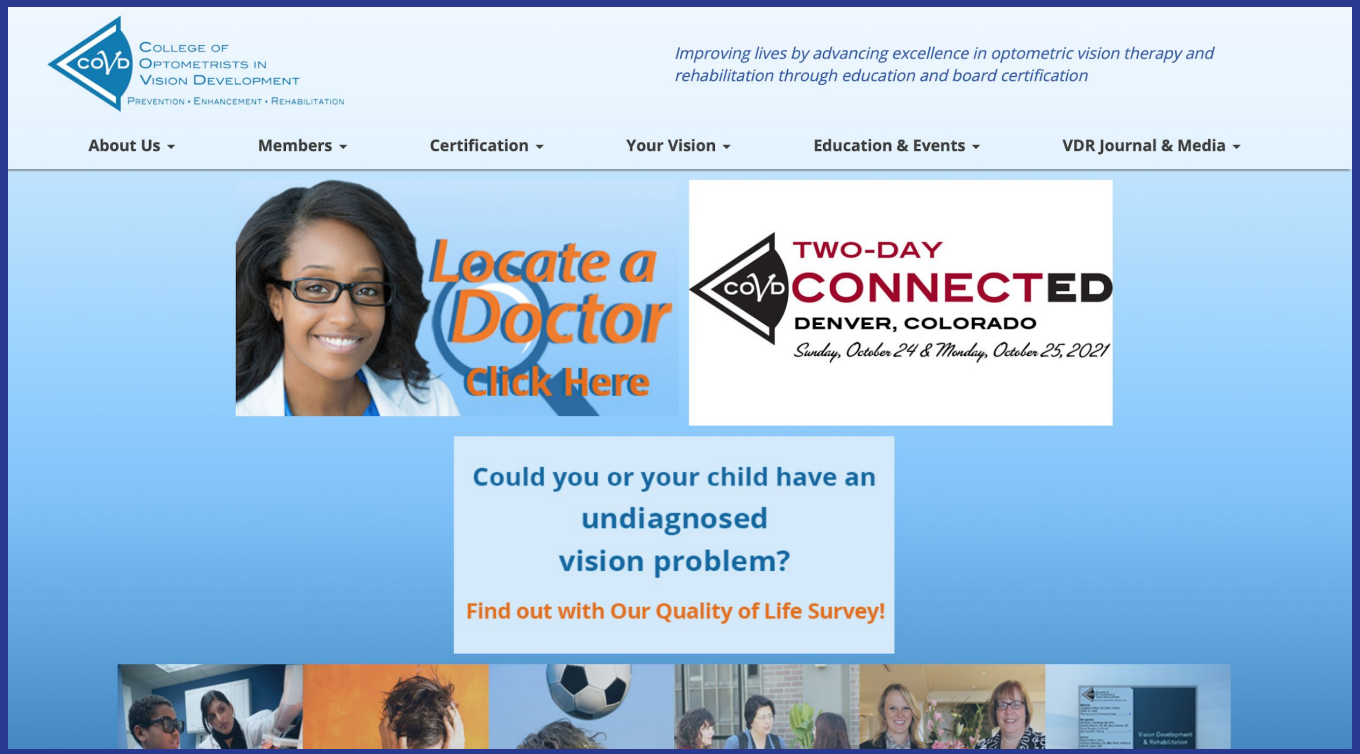
College of Optometrists in Vision Development (COVD) www.COVD.org



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Research - Computer Vision Syndrome

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