



CASEY EYE
Institute

Essential Tools for Managing Parkinson's Disease related Vision issues

DATE: October 19, 2017 PRESENTED BY: William L Hills, MD, OD
Associate professor
Ophthalmology and Neurology

A photograph of the Casey Eye Institute building. The building has a white facade with large windows reflecting the sky. In the foreground, there are several bushes with bright pink flowers. The text "CASEY EYE INSTITUTE" and "3375 S.W. TERWILLIGER" is visible on the building's exterior.

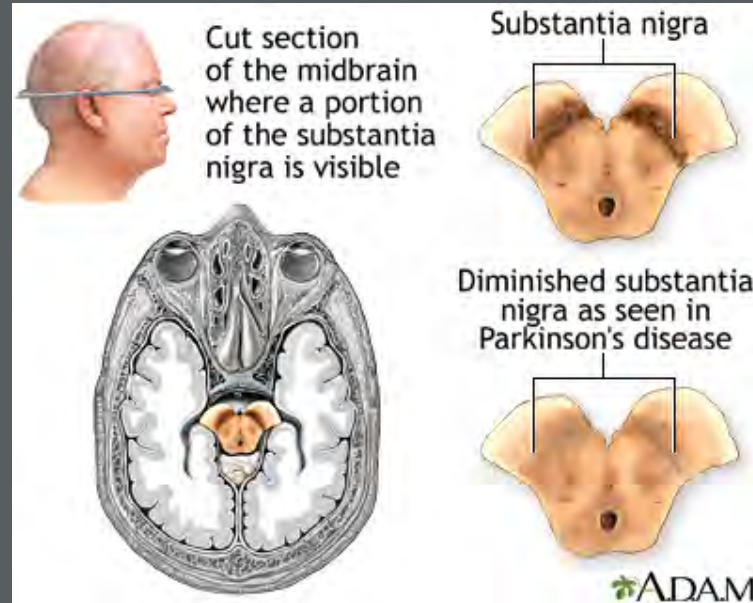
CASEY EYE INSTITUTE
3375 S.W. TERWILLIGER

Nothing to disclose

William L Hills

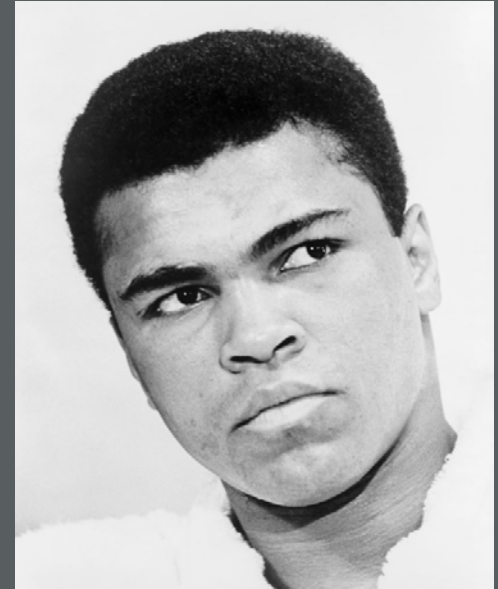
Parkinson's Disease

- Paralysis agitans
- Shaking palsy
- Neuro-degenerative disorder
- Loss of dopamine producing neurons
- Substantia nigra



Visual Problems in Parkinson's Disease

- Dry Eye Syndrome
- Double vision
- Difficulty reading
- Light sensitivity
- Blepharospasm
- Visual hallucinations



Dry Eye Syndrome

- Almost 2/3 of patients with early Parkinson's disease
- Dry, gritty, or “sandy” feeling eyes
- Red or irritated eyes
- Excessive tearing
- Light sensitivity



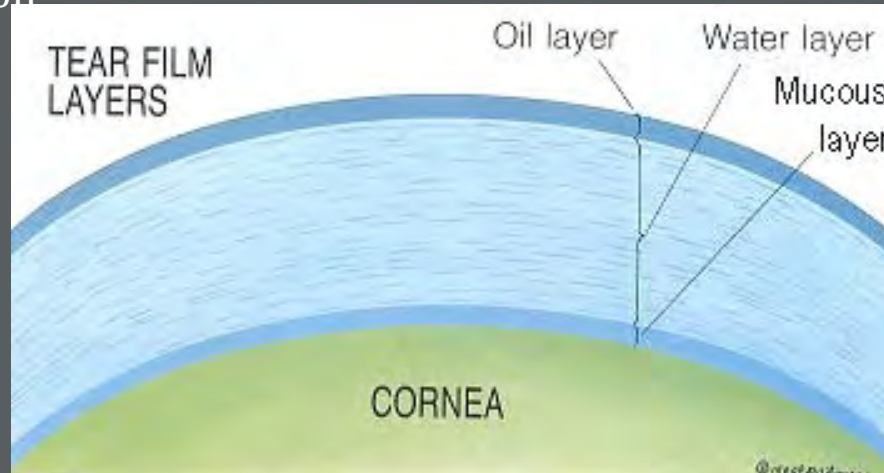
Dry Eye Syndrome

- Decreased eyelid blinking
- Patients with PD blink less
 - 12 blinks/min
- Average
 - 20 blinks/min



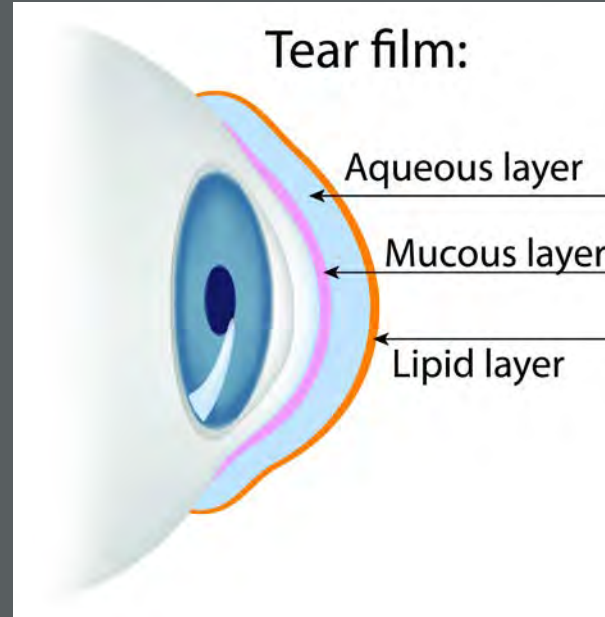
Dry Eye Syndrome

- Tear layer evaporates
- Red, irritated eye
- Blurred vision
- Monocular double vision
- Clears with blink
- Blink less:
 - Reading
 - Computer
 - TV
 - Driving



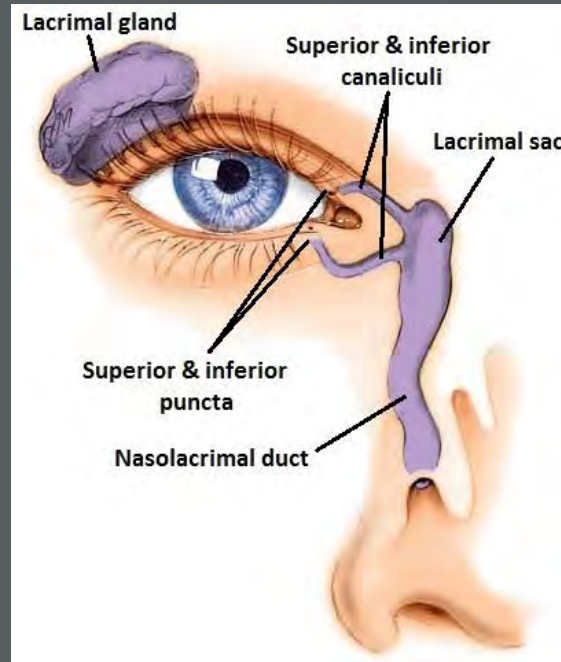
Dry eye syndrome: anatomy

- Tear Film
 - Structure
 - 3 layers
 - Oil/Lipid
 - Water
 - Mucous
 - Function
 - Smooth ocular surface
 - Focuses image

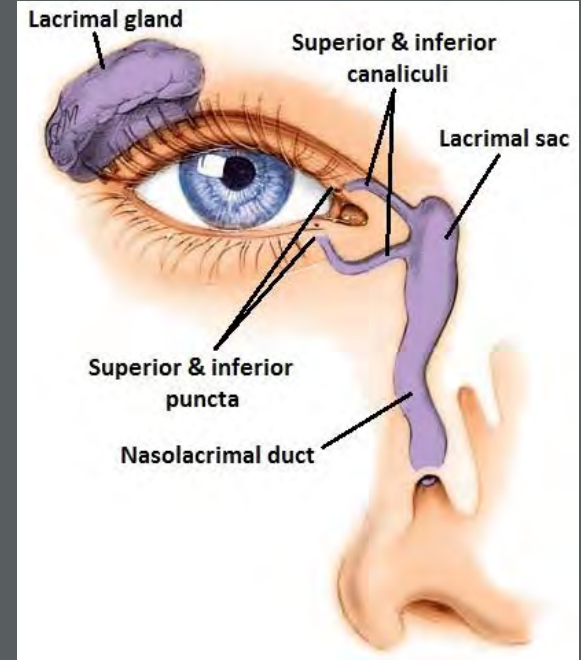
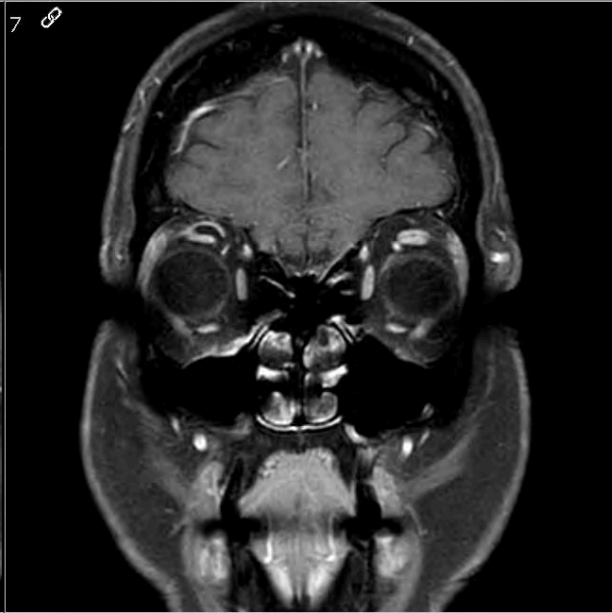
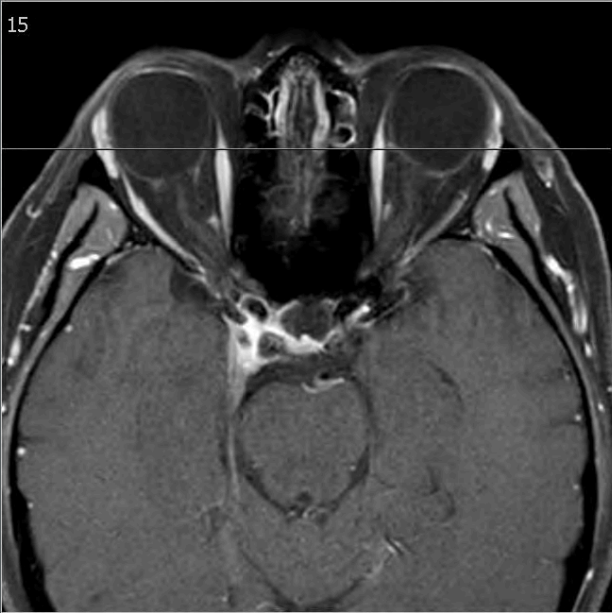


Dry eye syndrome: anatomy

- Lacrimal Gland
- Puncta
- Nasolacrimal duct

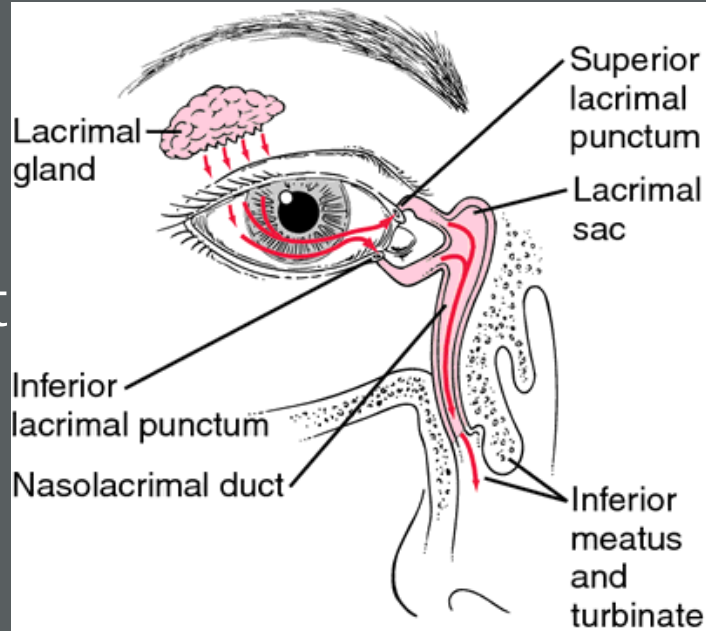


Dry eye syndrome: anatomy Lacrimal Gland



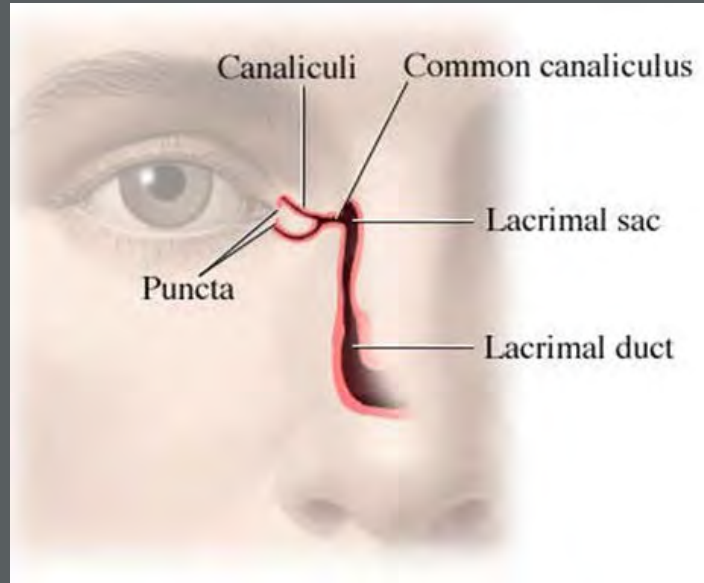
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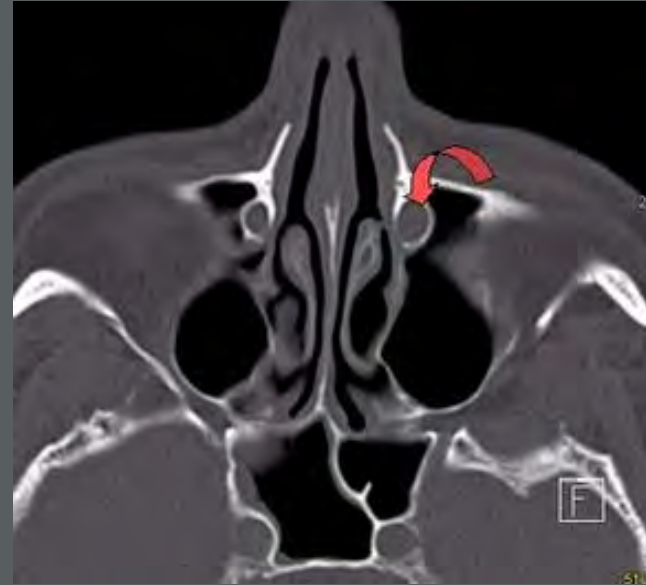
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Dry eye syndrome: anatomy

Nasolacrimal duct



Dry eye syndrome: Treatment

- Artificial tears
 - 6-8/day



Dry eye syndrome: Treatment



Dry eye syndrome: Treatment

- Artificial tears
 - Consistency of thick water
 - 6-8/day
- Gel
 - Consistency of olive oil
 - 4-6/day
- Ointment
 - Consistency of Vaseline
 - At bedtime

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Preservative Free
Artificial Tears

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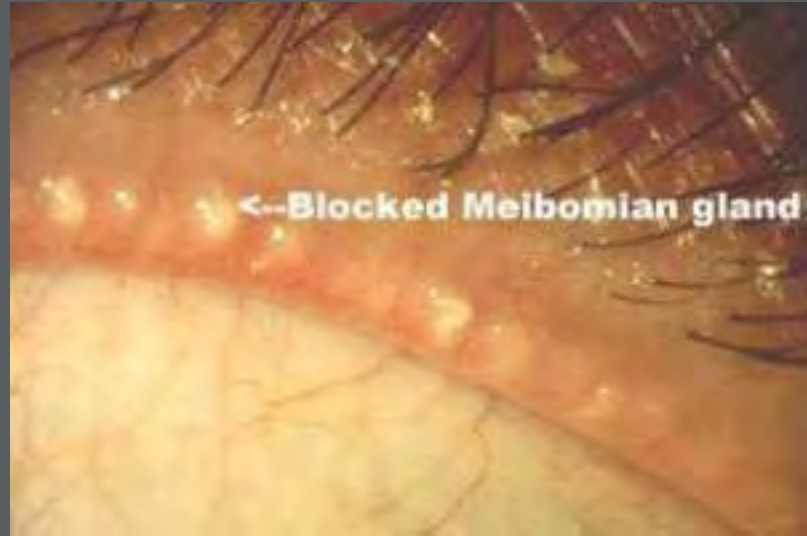
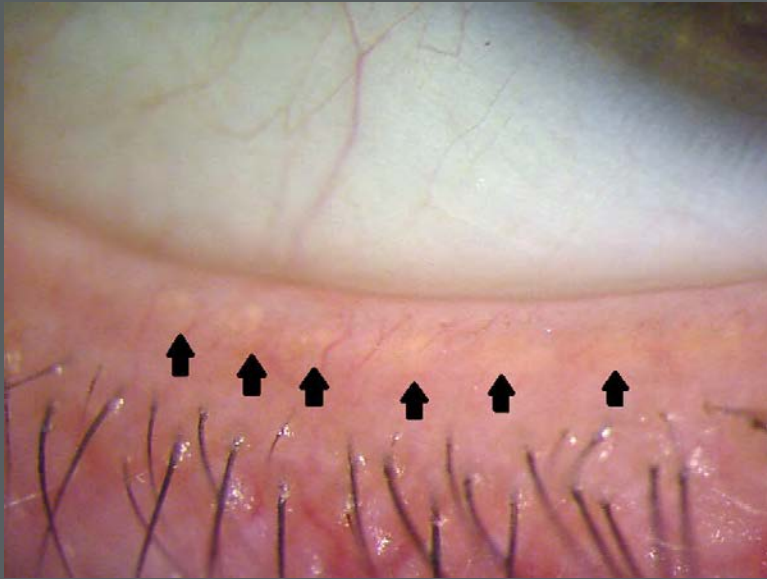


Dry eye syndrome: Treatment

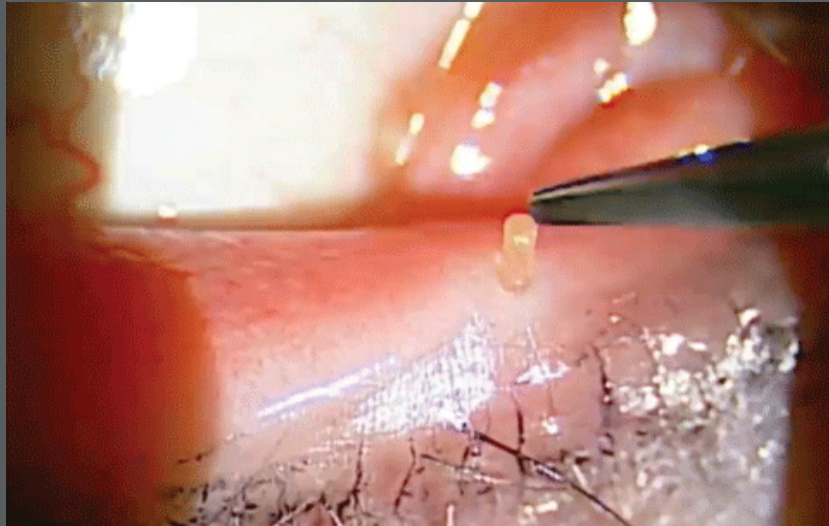
- Artificial tears
 - 6-8/day
- Warm compresses
 - Closed eyelids
 - X 10 minutes



Dry eye syndrome: Treatment



Dry eye syndrome: Treatment

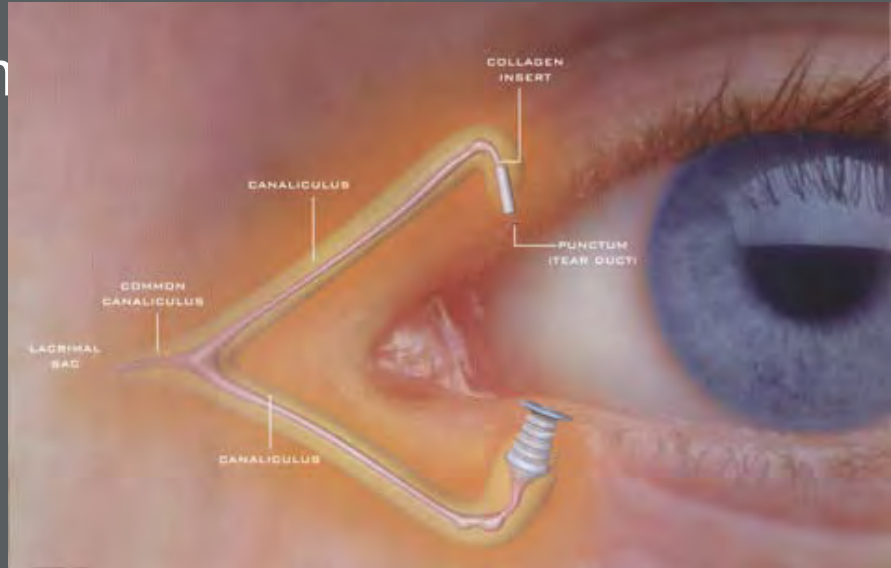


Dry eye syndrome: Treatment



Dry eye syndrome: Treatment

- Punctal Occlusion
- Usually lower lid
- Blocks drainage

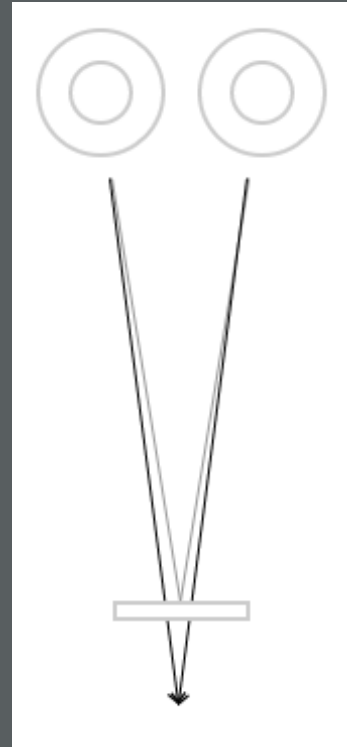


Dry eye syndrome: Treatment

- Which drops?
- Which ointment?
- Brand name vs generic?
- Preservative free?
- Ask your eye care provider for recommendations

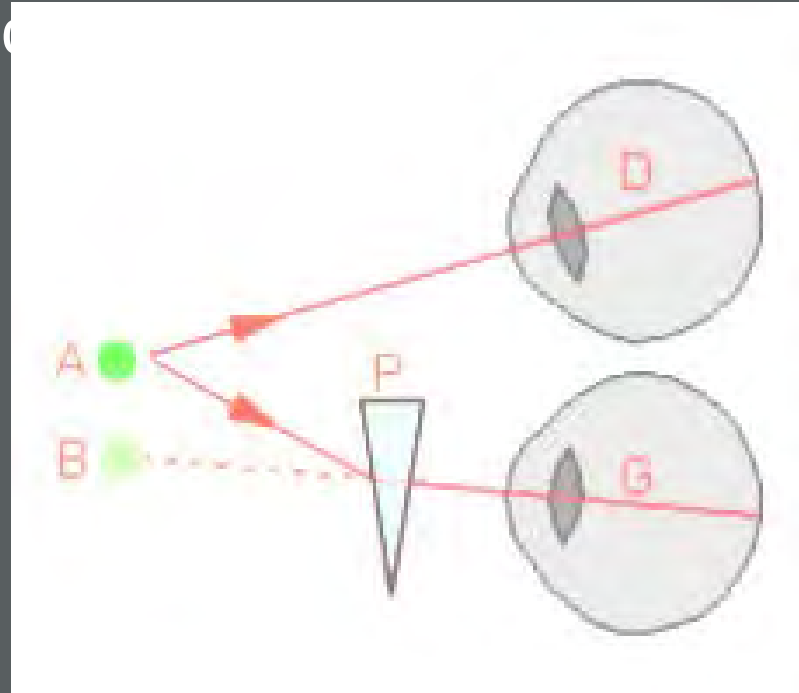
Parkinson's Disease: Double Vision

- Convergence insufficiency
 - Typically two images side-by-side
 - Reading up close, however, not usually in the distance
 - Close one eye and resolves
 - More common as the disease progresses over the years



Parkinson's Disease: Double Vision

- Convergence insufficiency
- Base in prism
- Reading only glasses



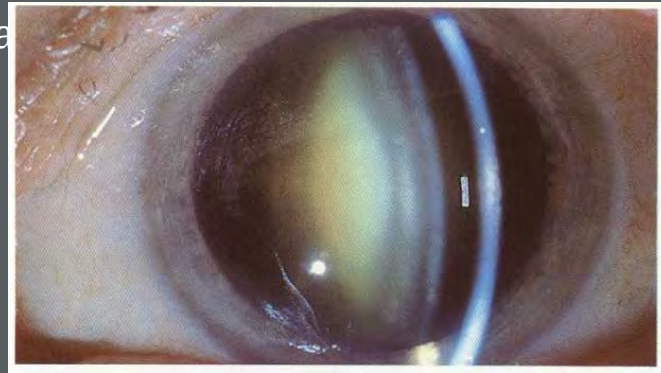
Parkinson's Disease: Double Vision

- Sometimes improved with medication
 - Effect is not typically long-lasting
- “Pencil push-ups”
 - Simple exercises
- Prism lenses
- “Near vision only”
 - Glasses designed only for reading
- Traditional bifocal or progressive bifocal lenses
 - typically very challenging



Parkinson's Disease: Double Vision

- Monocular diplopia
 - Double vision with only one eye (each eye separately)
 - Most commonly due to dry eyes
 - Blinking improves vision temporarily
- Cataracts
- Uncorrected Astigmatism
- Retinal changes
 - Epiretinal membrane
 - Macular degeneration
 - Diabetic retinopathy



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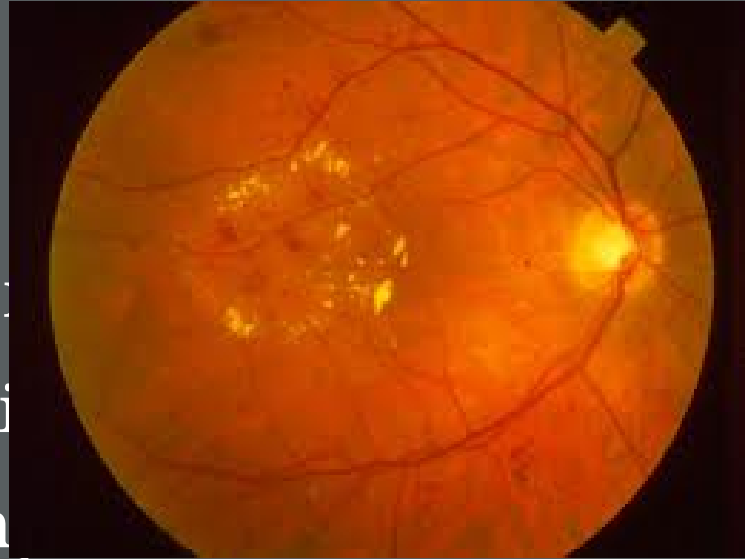
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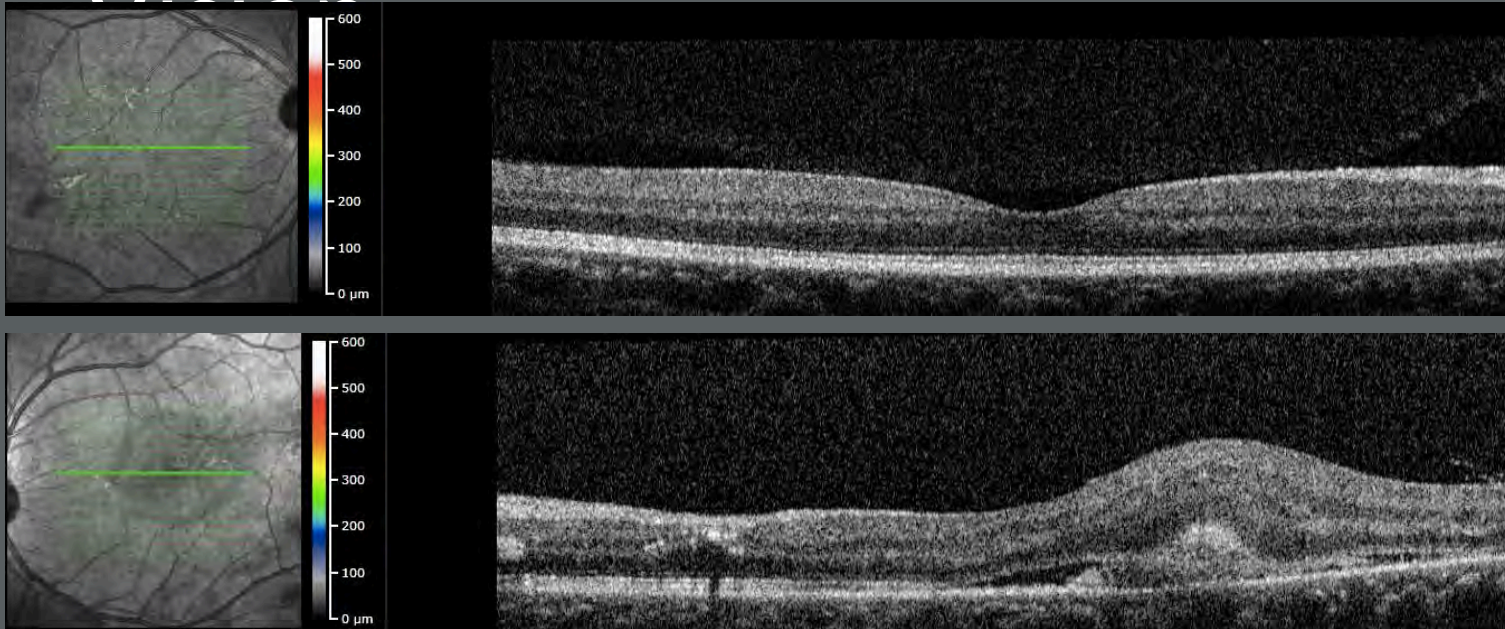


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Parkinson's Disease: Double



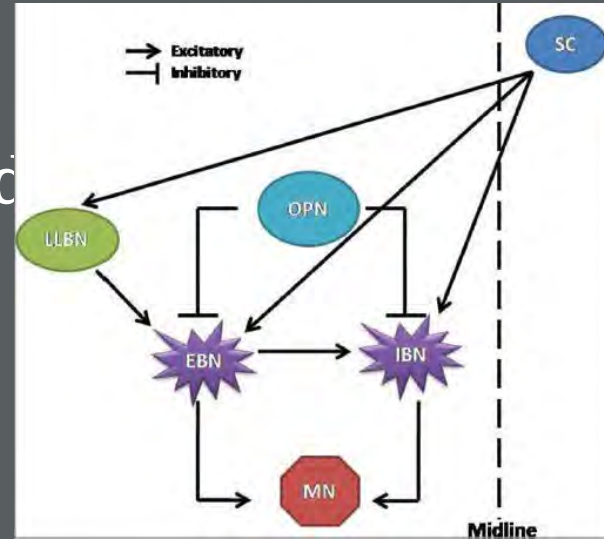
Parkinson's Disease: Reading

- Dry Eye Syndrome
- Double Vision
- Tremor
 - Music stand
 - cook book stand
- Slowed eye movements
 - Use finger or ruler as guide
- Decreased color vision
- Decreased contrast sensitivity
 - Certain colored lenses may help
 - Use bright task lighting



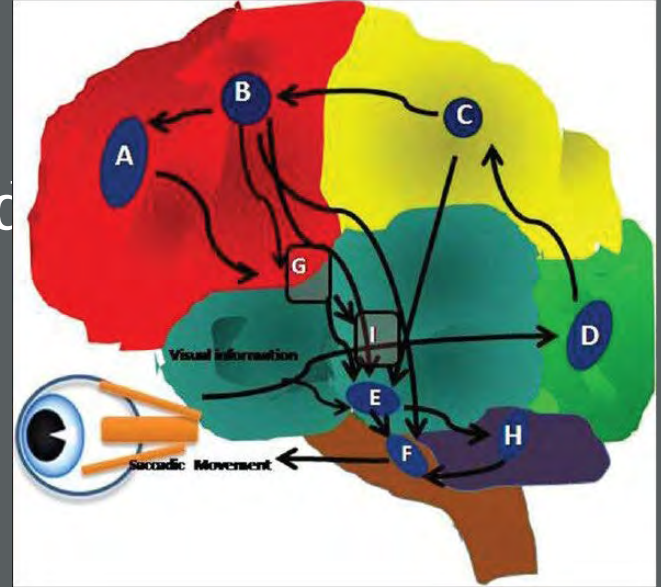
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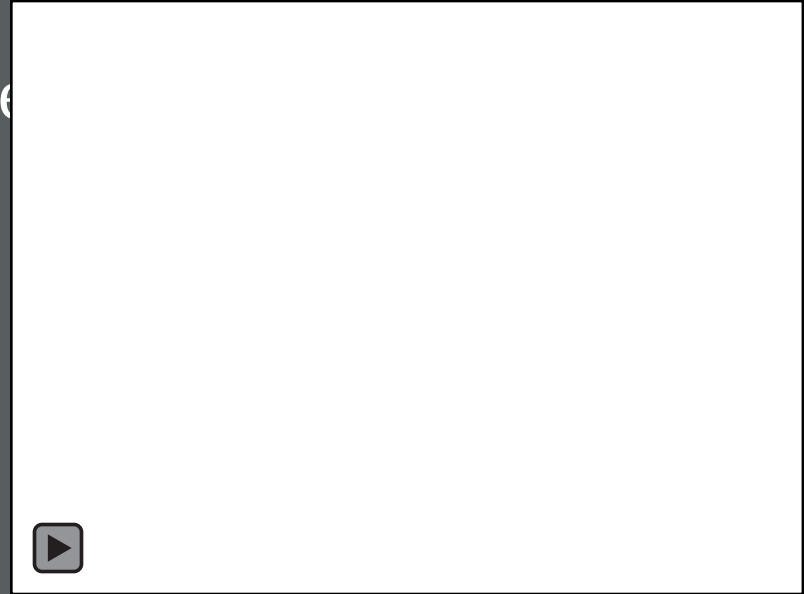
Parkinson's Disease: Reading

- Slowed eye movements
 - Use finger or ruler as guide



Parkinson's Disease: Blepharospasm

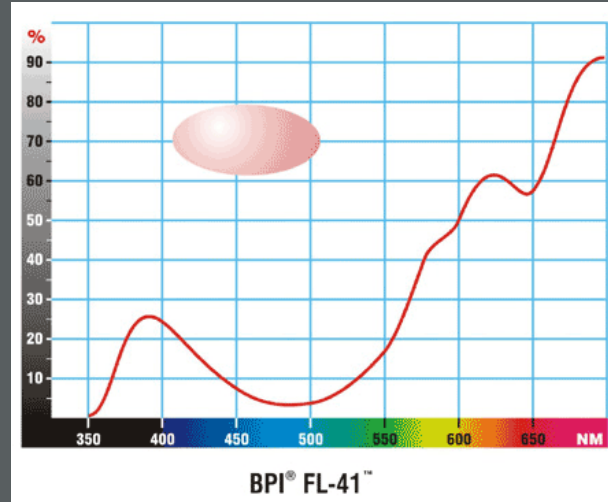
- Involuntary closure of the eye
- Frequent blinking
- Forceful closure



Parkinson's Disease: Blepharospasm

Treatment

- Dry eye therapy
- FL-41 tinted lenses
- Medications
- Botox injections



Parkinson's Disease: Blepharospasm

Treatment

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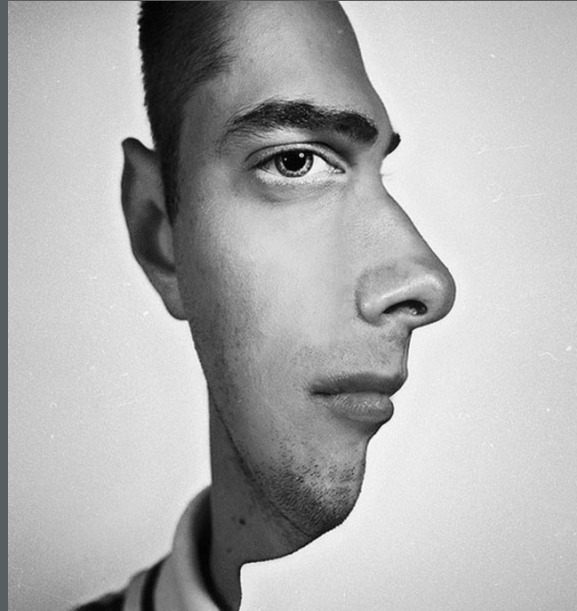
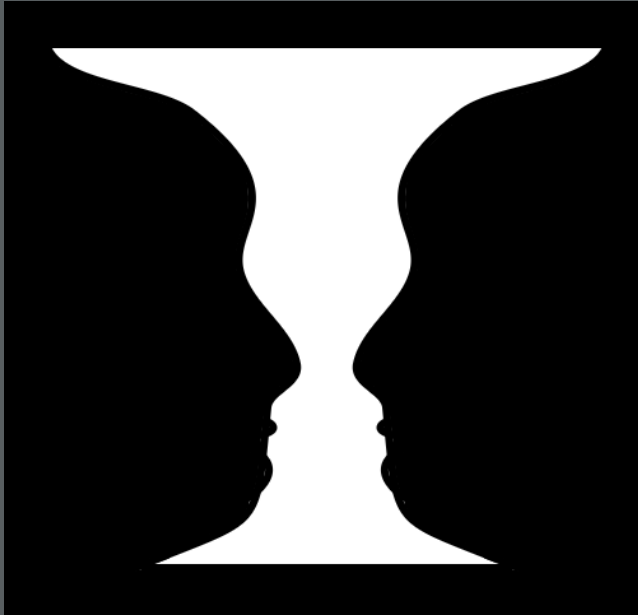


Parkinson's Disease: Visual Hallucinations

- Up to 25% of PD
- Early in disease
- Formed images
 - People
 - Objects
- Aware that they are not real
- Can be helped or caused by medication



Parkinson's Disease: Visual Hallucinations vs Illusions



Parkinson's Disease: Visual Hallucinations

- Check for a urinary tract infection or pneumonia
- Consider the medication - pain medications, muscle relaxants, and benzodiazepines (valium, ativan, clonazepam)
- In some severe cases experts may consider temporarily stopping or reducing certain medications
- In some severe case small doses of sinemet or madopar are used to try to gain control of the hallucinations/psychosis, but one must be aware this strategy could worsen Parkinson's disease symptoms
- Experts will frequently use dopamine blocking medications such as seroquel or clozaril, but almost never will use other dopamine blockers such as haldol, resperidal, and olanzapine– which all may worsen Parkinson's symptoms.

- # Parkinson's Disease:
- Dry Eye Syndrome
 - Double vision
 - Difficulty reading
 - Light sensitivity
 - Blepharospasm
 - Visual hallucinations
- Talk to your:
 - Eye care provider
 - Neurologist



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Thank You

DATE: October 19, 2017 PRESENTED BY: William L Hills, MD