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Perimetry Phobia: Don't fear the field

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I have no financial interest in this presentation.



"You're sitting, but not pretty."

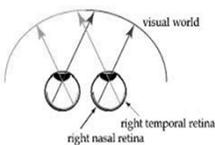
Who am I?

Where am I?

What am I?

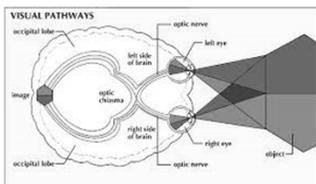


The anatomy of the visual field



"Normal" visual field-

- 60 degrees nasally and superiorly
- 75 degrees inferiorly
- 90 degrees temporally

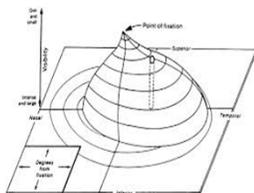


Purpose of Visual Field Testing?

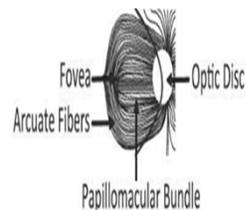
- Diagnose (initial or confirmation)
- Monitor
- Baseline- presurgical / prior to starting medication



Island of Vision Profile



Optic Nerve Bundle



Perimetry

- Static perimetry: visual field testing by using test objects at fixed positions and gradually increasing luminance to the "threshold" which is visible
- Kinetic perimetry: visual field testing by moving a stimulus from a non-seeing area to a seeing area. In kinetic perimetry, the speed of the movement should be standardized but the size and luminance of the target may be altered.

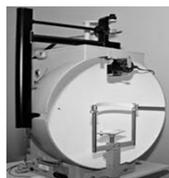
Static Perimetry

- Automated visual field testing (Humphrey Visual Field Analyzer)
- FDT (Frequency Doubling Technology)
- Confrontation visual fields
- Amsler grid



Kinetic Perimetry

- Goldmann Visual field and tangent screen testing (manual kinetic perimetry)
- Octopus and Humphrey visual field (automated kinetic perimetry)



Static vs Kinetic

Static	Kinetic
Patient reliant	Technician reliant
Computer operated	Technician operated
Grey scale results	Color results
Faster than kinetic	Average Glaucoma GVF can take up to 20 mins/eye depending on the patient

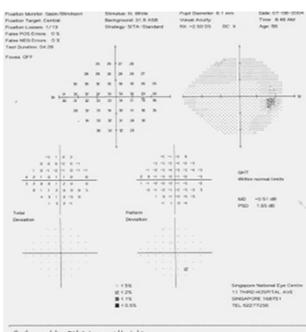
Automated Visual Field

- **dB:** decibels of attenuation (dimming)
- **Threshold:** the intensity of the dimmest stimulus that can be seen 50% of the time
- **Suprathreshold:** brighter than threshold
- **False positives:** patient indicates the presence of a light when none is presented.
- **False negative:** patient indicates that they are unable to see a suprathreshold light stimulus where they previously saw a threshold light.

Automated Visual Field

- Physiological blind spot is located and measured when testing begins. Fixation losses are determined when the patient sees a stimulus that was previously designated within the physiological blind spot.
- SITA (Swedish Interactive Threshold Algorithm):
 SS= 7 mins.
 SF= 4 mins.
 24-2= 54 test points
 30-2= 76 test points

Automated Visual Field



Things to Watch

- Instruct patient well.
- Make sure to have appropriate correction.
- Watch for compliance- ESPECIALLY WHILE BLIND SPOT TESTING!
- Show patient how to pause test if needed.



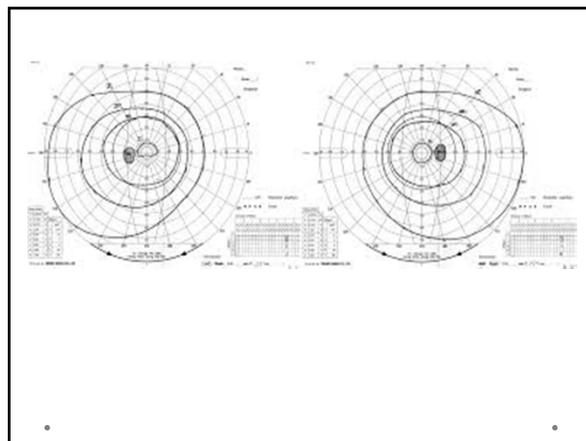
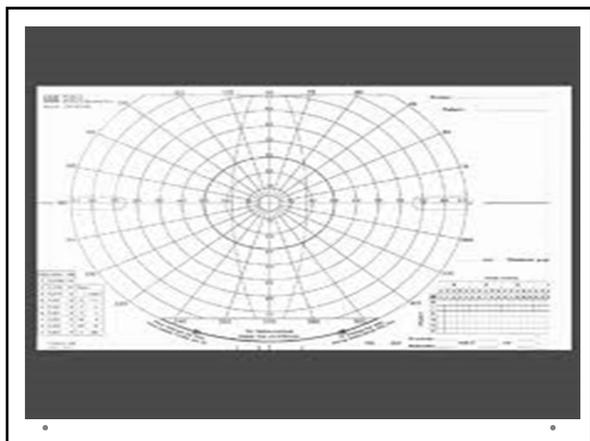
Manual Kinetic Visual Field Testing

- Goldmann Visual Field (GVF)



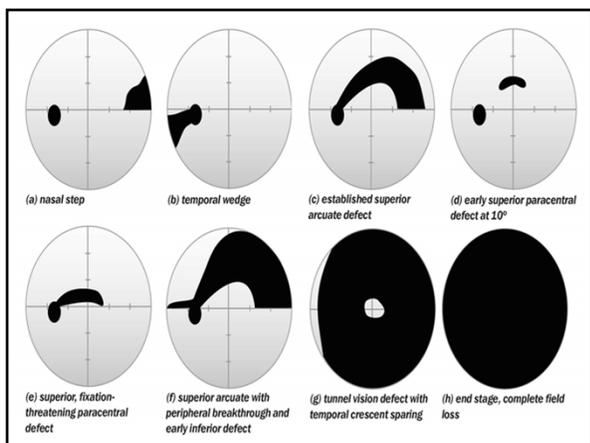
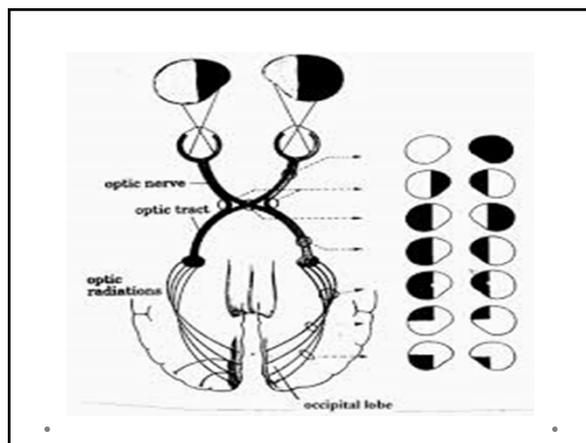
Calibration of GVF

- Start by locking arm in at 70 degrees.
- Open light aperture.
- Begin with light settings at V4e.
- Make sure room lights are dimmed.
- Press button on back of light meter. Reading should measure 1000. If it does not, adjust knob on side of machine to regulate.
- Put block up to keep light from leaving the bowl.
- Change light settings to I4e.
- Adjust the light in the bowl to match light stimulus.



Things to Watch

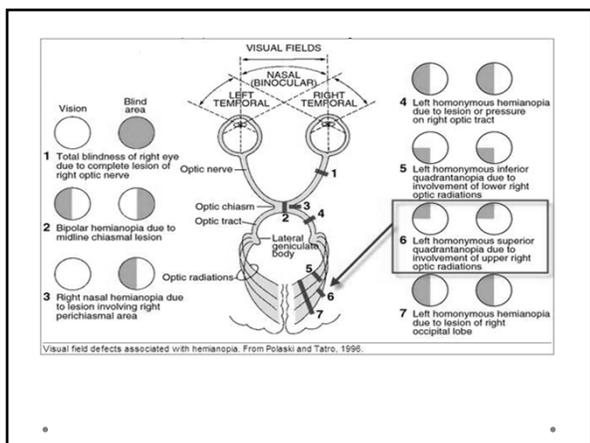
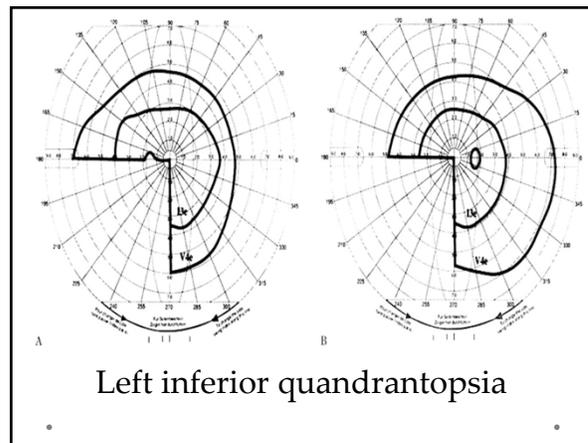
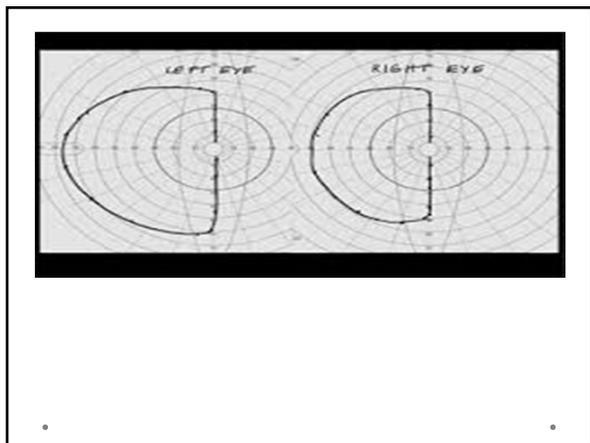
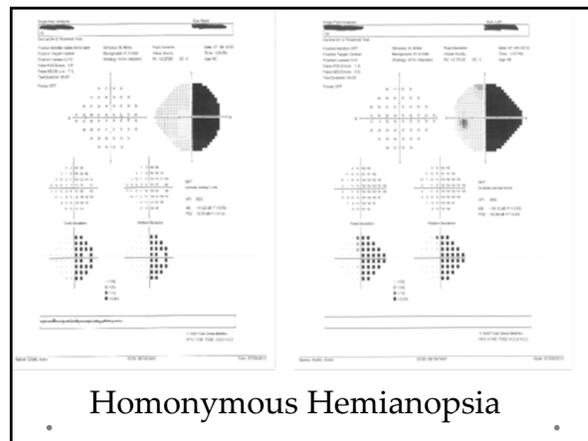
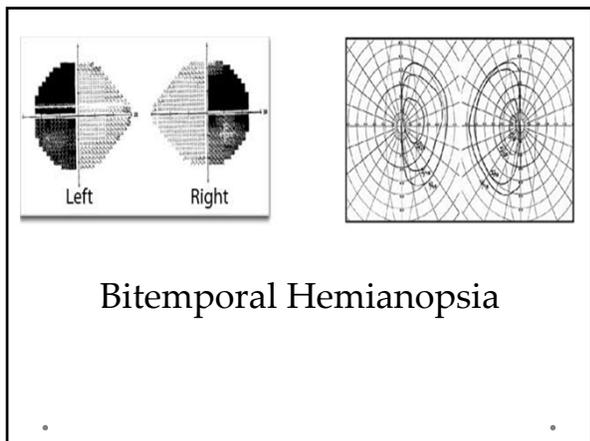
- Instruct patient well.
- Stay consistent with speed. (About 5 degrees/sec)
- MONITOR patient gaze. (Eye image is inverted.)
- Recheck areas as indicated.
- Static test within isopters.
- Poor tester.....

Hint:



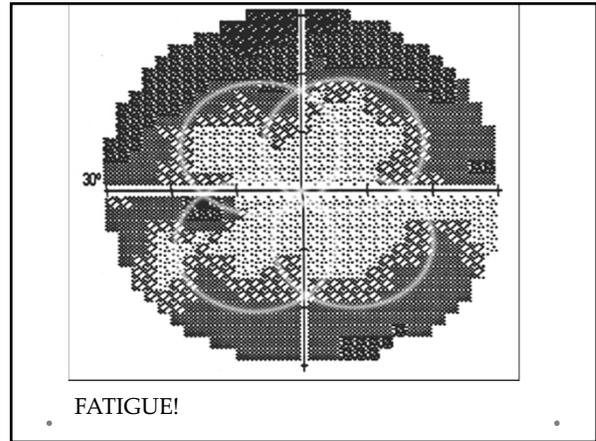
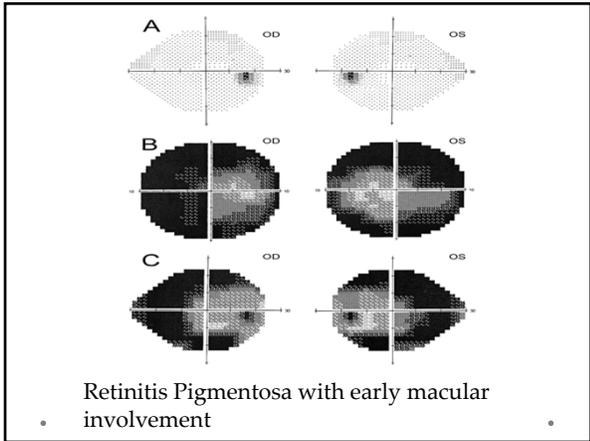
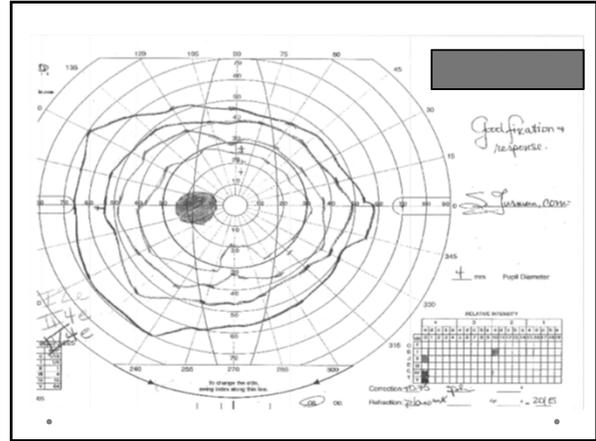
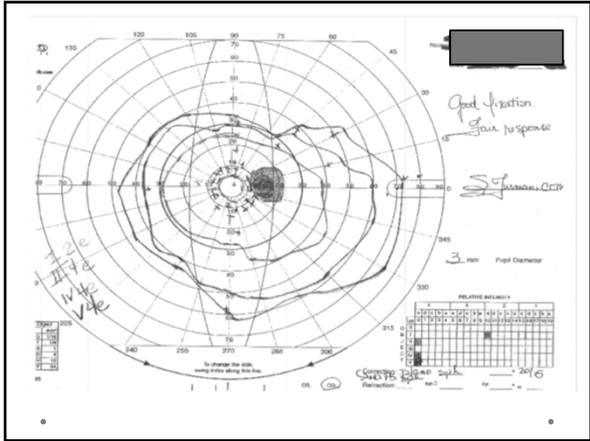
- Glaucoma defects "respect" the horizontal meridian.
- Neurological defects "respect" the vertical meridian.



This Way to the UN

Fun Ones!

I had to leave. They were having fun wrong.



Final thoughts

- VISUAL FIELDS ARE IMPORTANT!
- Performing the visual field test can be just as important as the patient responding to the test.
- You could be the key to an appropriate diagnosis!



Thank you!

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Peace Love Ophthalmology