Balance
and
Visual Field Loss

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Why balance?

Critical element of health

Essential for independent lifestyle

Balance problems → ↑ fall risk
Vision and balance

Vision: important sensory input in balance

Previous studies: Location of vision loss impacts balance

Because of your contribution...
We understand relationship of balance and visual field loss in the largest studied sample of glaucoma patients
What is balance?

Maintain a center mass within the base of support

We used lightweight motion sensors
  Measured movements in real time
Methods

Two testing conditions

Visual field loss: visual field test

Balance: sway and jerk data from wearable sensors
Total sway  Area bounded by vectors of acceleration
Jerk  Smoothness of sway
Visual field loss significantly associated with increased total sway when you stood with eyes open on a foam surface.
Visual field loss significantly associated with increased jerk when you stood with eyes open on a foam surface.
Visual field loss significantly associated with increased jerk and sway when you stood with your feet together.
Visual field loss in the **superior visual field** was significantly associated with increased sway.
Take home points

1. Increased sway/jerk (measures of worse balance)
   A) foam surface with eyes open
   B) feet together

2. Increased sway: superior visual field > inferior visual field loss

3. Be aware that if your glaucoma is advanced, your balance may be poor.
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YOU
(FIGS Participants)

THANK YOU!