

The relationship between CSF flow and physical activity

preliminary data from the USC LEARNit trial

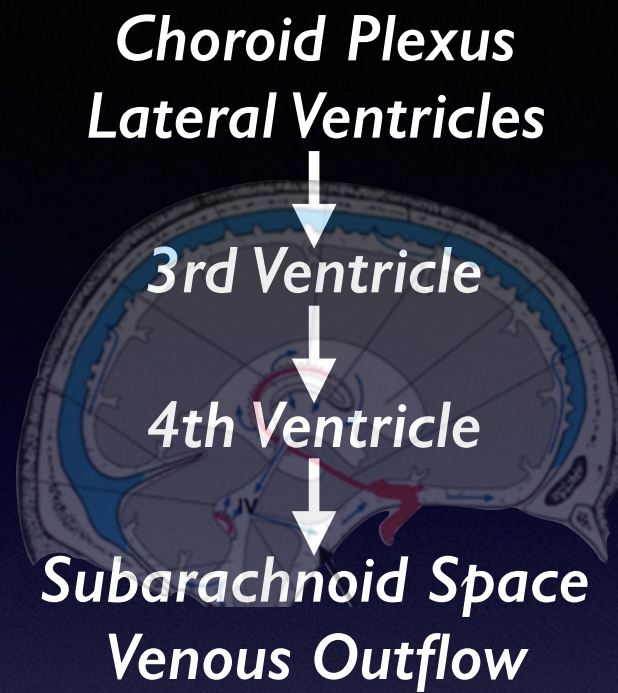
Judy Pa, PhD

Assistant Professor of Neurology, Neuroscience, and Biomedical Engineering
University of Southern California

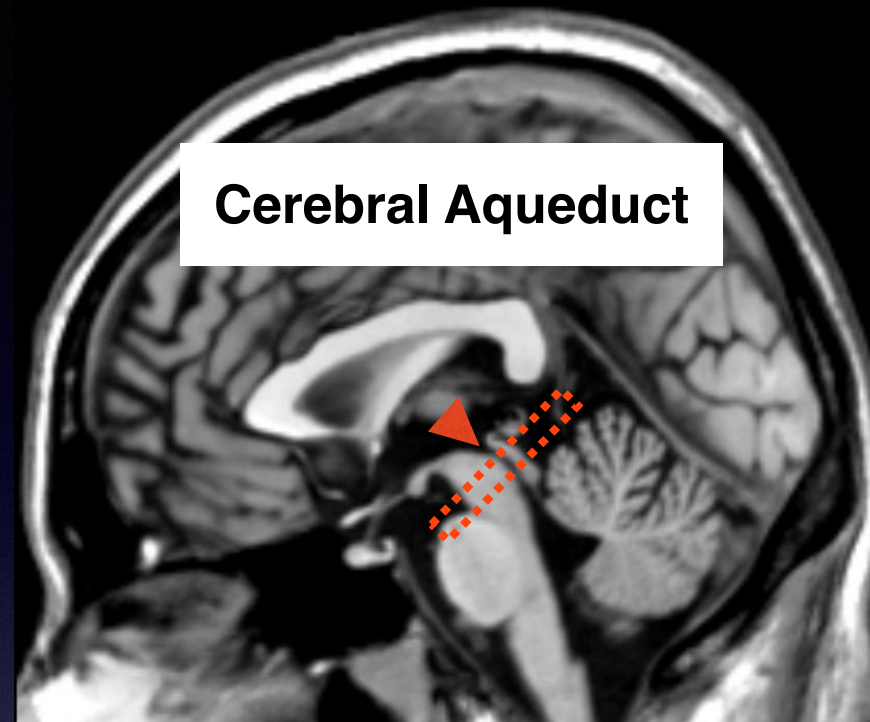
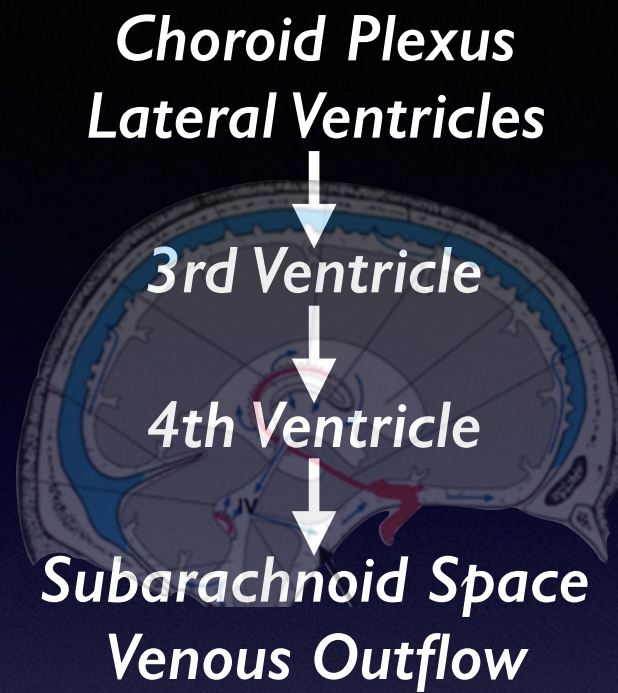
Spring ADC meeting
April 21, 2018

Judy Pa, PhD, USC - **CSF Flow and Physical Activity**

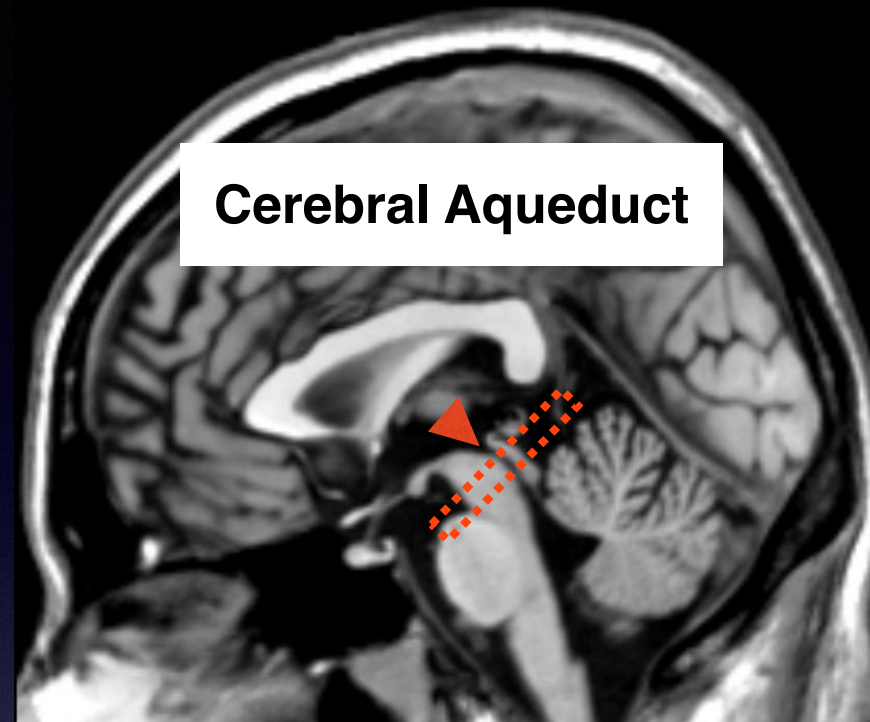
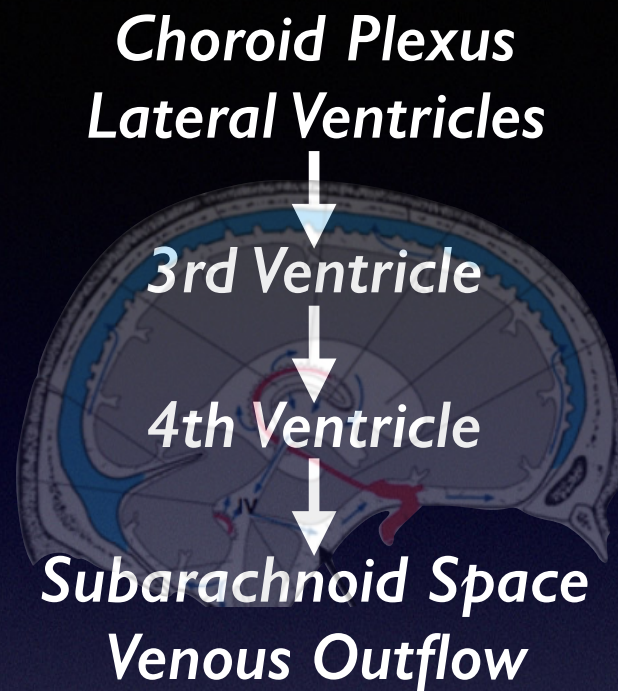
Judy Pa, PhD, USC - CSF Flow and Physical Activity



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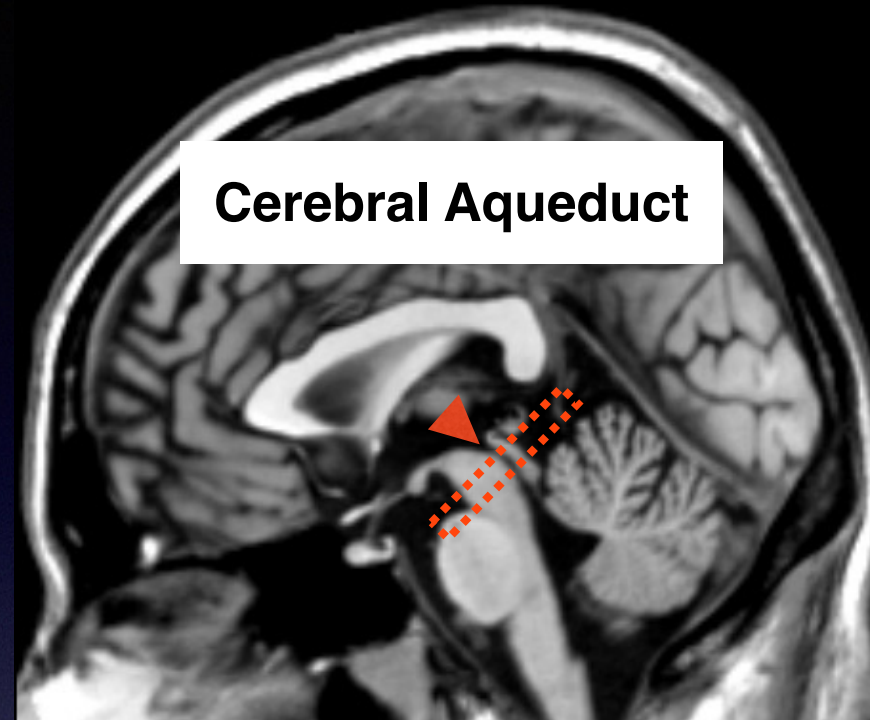
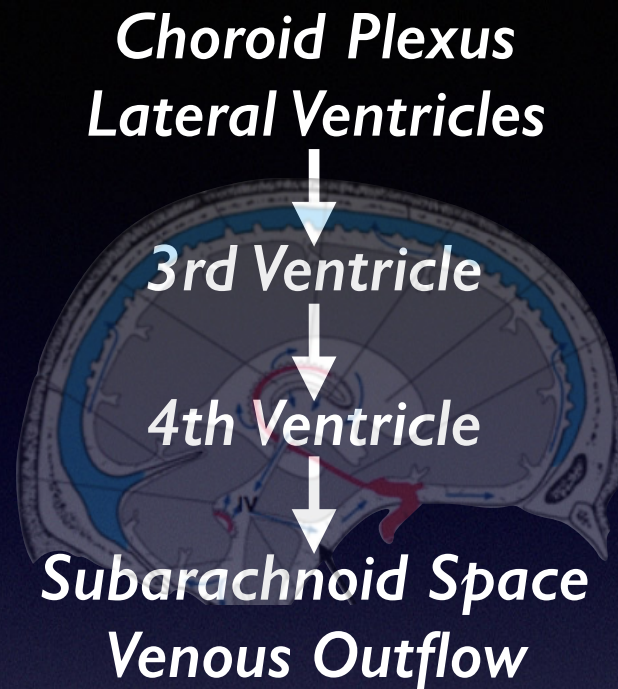
Preliminary analysis (n=12)

- Age: 68 ± 6.3 years, 6 women
- Older adults with early MCI
- Continuous monitoring of physical activity for 30 days via accelerometer

Imaging Outcome

- Phase-contrast MRI scan for CSF flow

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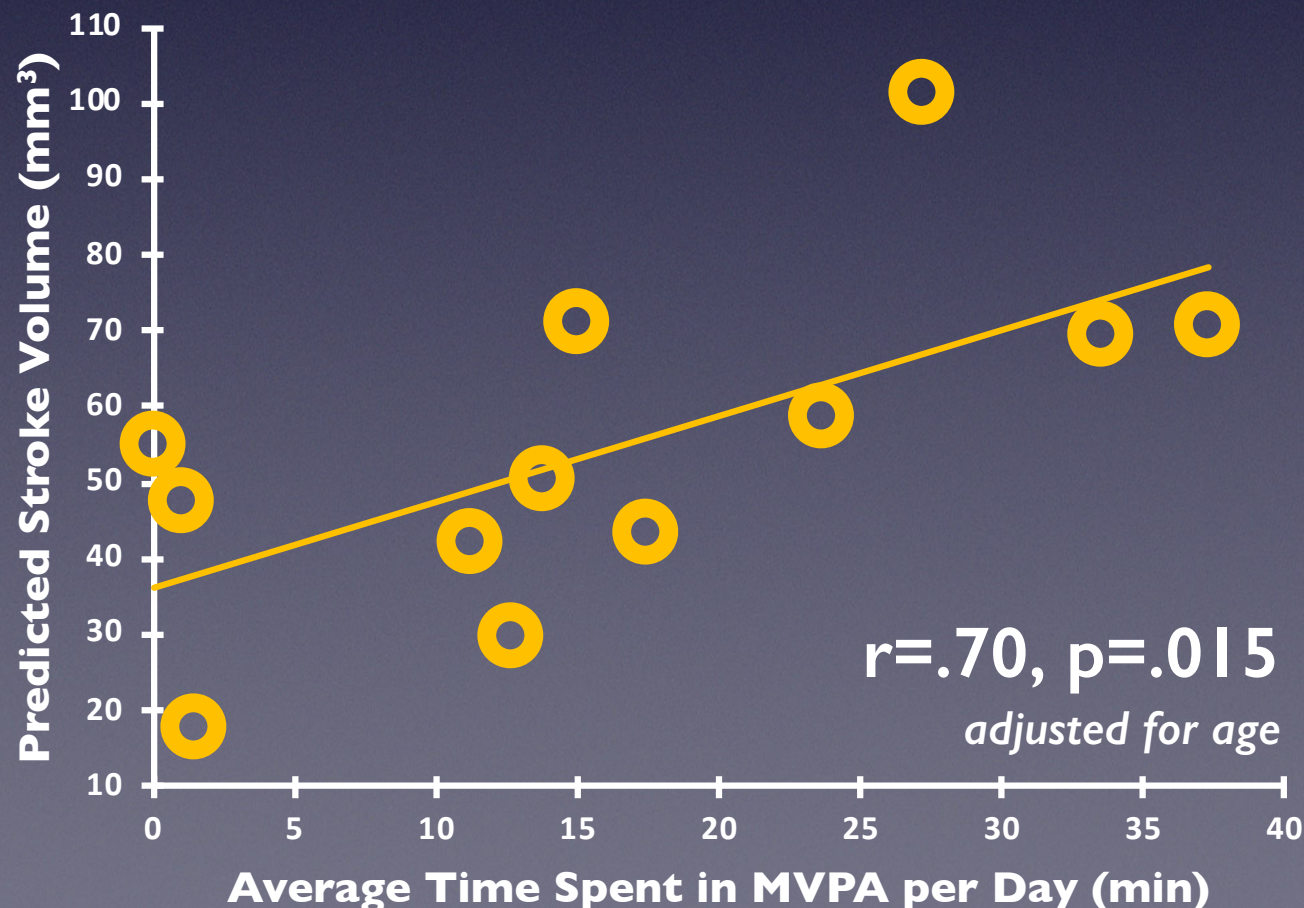
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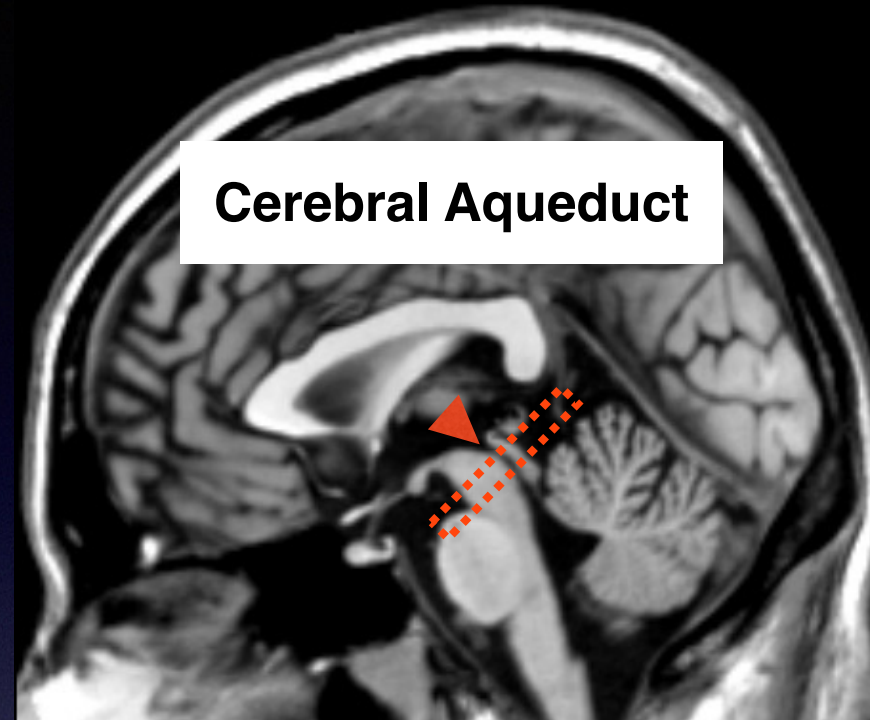
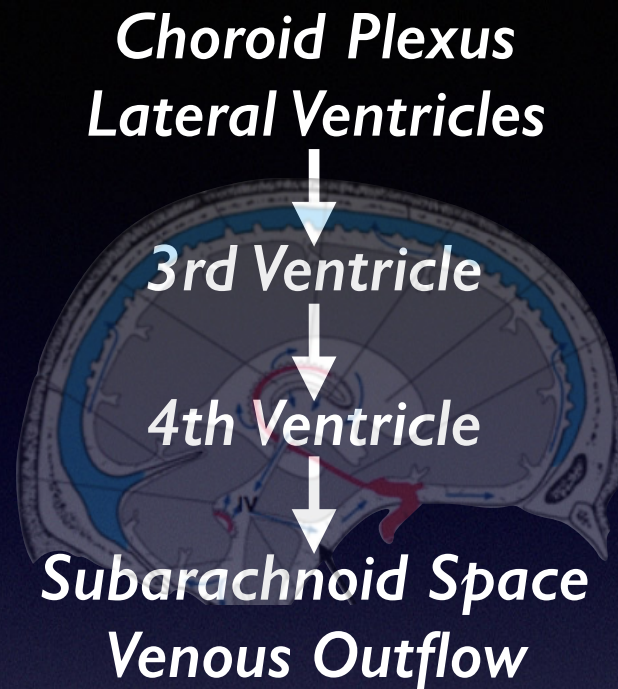
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CSF Flow X Physical Activity



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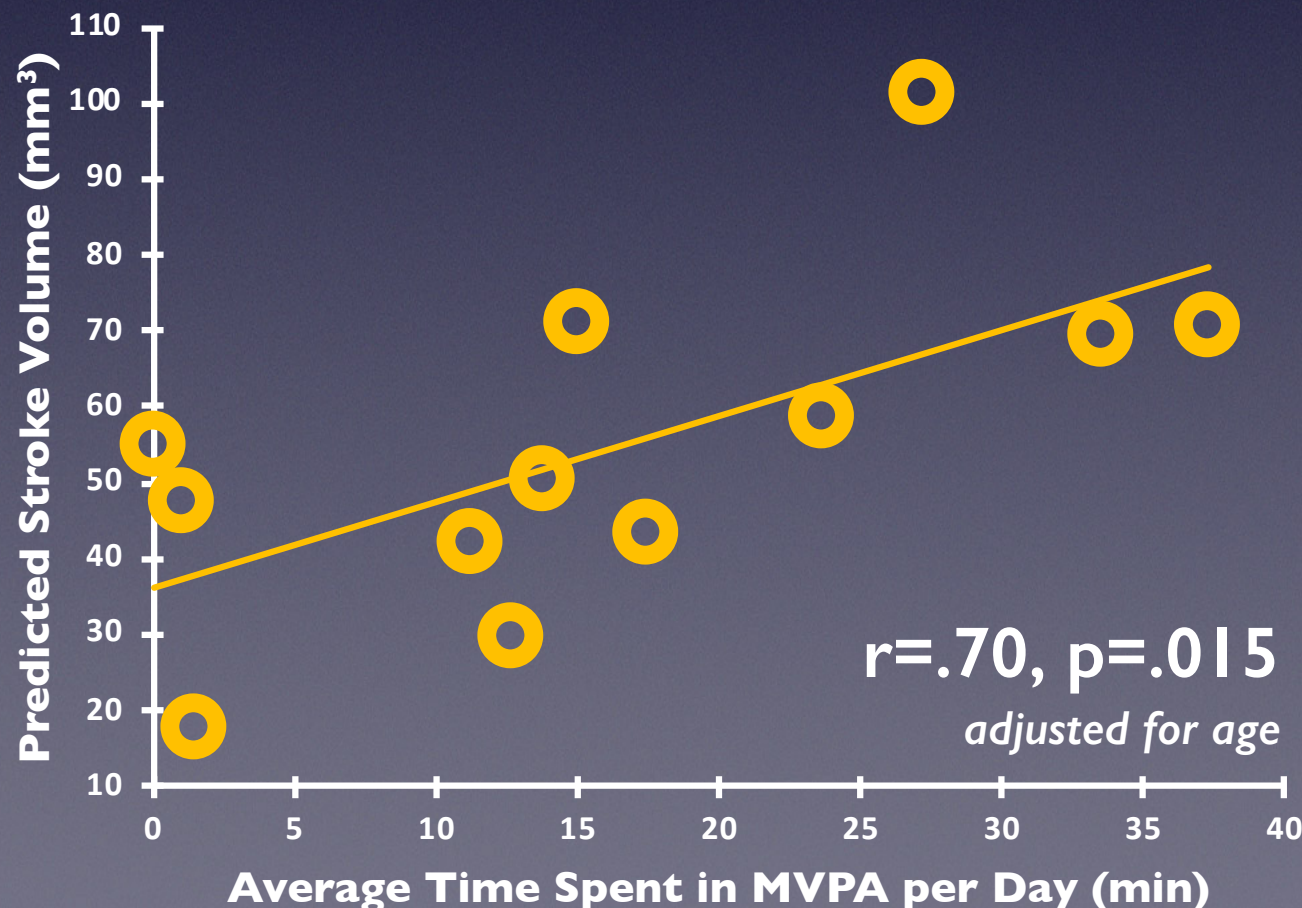
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CSF Flow X Physical Activity



↑ Physical activity = ↑ CSF flow

- Potential mechanistic pathway for exercise as a disease-modifying intervention
 - amyloid, tau PET scans
- Full trial will address this question

NIH AD Clinical Trial R01-AG055469

Validation paper: Sakhare, Isenberg & Pa (under revision)



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Pa Lab

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