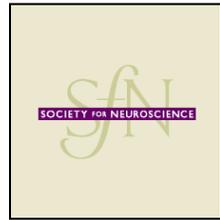




Neuroscience Lecture Series

Spring 2013



Aging Mind and Brain: Decline and Compensation

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Abstract: My presentation is going to consider the frequent finding from neuroimaging studies that older adults display more activation (greater intensity and/or more widespread involvement) than younger adults during cognitive and motor tasks, especially in the context of working memory tasks where frontal-parietal regions show significant engagement. Relevant results from multivoxel patterns analyses will be considered. I will discuss these general outcomes in the context of a theory referred to as CRUNCH, the Compensation-Related Utilization of Neural Circuits Hypothesis. CRUNCH proposes that older adults recruit more neural circuits at lower levels of task demand than younger adults. Several causes of over-activation will be considered. This theory also emphasizes the importance of parametric designs for fMRI measurements, especially those indicating under- and over-activations in older adults compared to younger adults. I will explain how the CRUNCH framework can be useful for identifying patterns of activation related to increased vulnerability and potentially for defining targets for neurocognitive interventions.

Monday, April 29th at 3 p.m.
Morris Library Auditorium

Refreshments served following the lecture
Open to the Public