

Weekly Colloquium

Tuesday, 6/6/2017, 12:30pm, Billings Building – Rosedale Conference Room

"Taking a critical look at Neurorehabilitation"

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There are fundamental differences in the potential for rehabilitation of impairment early and late after stroke. Early after stroke the proportional recovery rule for spontaneous biological recovery applies, as does the idea of a sensitive period. Late after stroke, rehabilitation relies on motor learning principles. We will need new behavioral treatments augmented by pharmacology and perhaps non-invasive brain stimulation to rectify the overall ineffectiveness of current neurorehabilitation.

Publications:

A Short and Distinct Time Window for Recovery of Arm Motor Control Early After Stroke Revealed With a Global Measure of Trajectory Kinematics. Cortes JC, Goldsmith J, Harran MD, Xu J, Kim N, Schambra HM, Luft AR, Celnik P, Krakauer JW, Kitago T. *Neurorehabil Neural Repair*. 2017 Jun;31(6):552-560.

Robotic therapy for chronic stroke: general recovery of impairment or improved task-specific skill? Kitago T, Goldsmith J, Harran M, Kane L, Berard J, Huang S, Ryan SL, Mazzoni P, Krakauer JW, Huang VS. *J Neurophysiol*. 2015 Sep;114(3):1885-94.

Getting neurorehabilitation right: what can be learned from animal models? Krakauer JW, Carmichael ST, Corbett D, Wittenberg GF. *Neurorehabil Neural Repair*. 2012 Oct;26(8):923-31.

