

# CAREsearch Day

## Reactivate, Rewire, Restore

Priming the nervous system to optimize function after spinal cord injury

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Spinal cord and brain mechanisms underlying the control of movement adapt in response to training. In persons with spinal cord injury this beneficial neural adaptation, or adaptive neuroplasticity, is supportive of function and can counteract some aspects of the maladaptive plasticity that is associated with neuropathology. Afferent inputs such as stimulation and vibration engage many of the same mechanisms that are activated by training, and these inputs can augment training effects. Using what is known about neural responses to afferent input, treatment strategies can be structured to incorporate stimulation and vibration into training programs to improve motor function in persons with spinal cord injury and other neurologic conditions.



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