

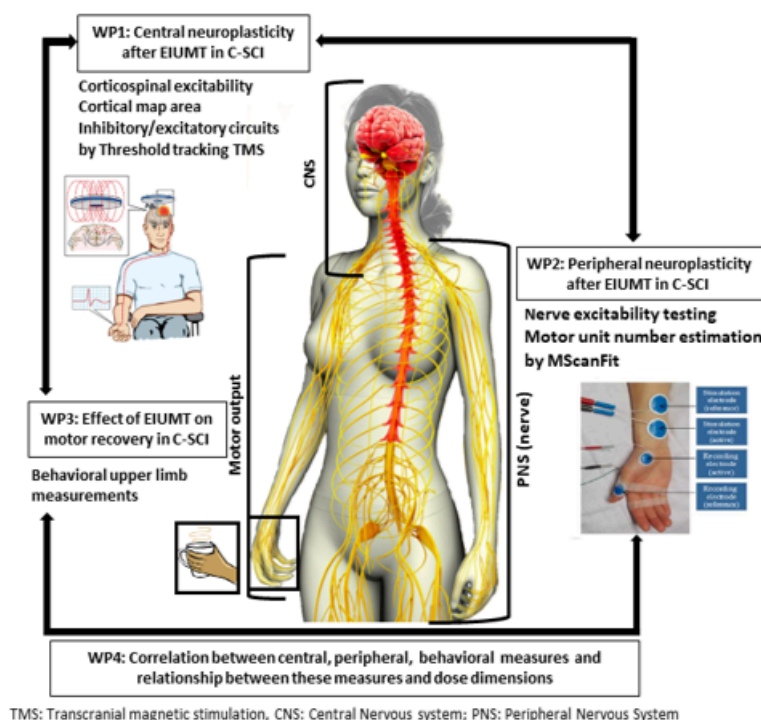
News from research in the rehabilitation settings

Multicentric rehabilitation research project:

‘Neural plasticity and recovery after early and intensive upper extremity motor training in people with cervical spinal cord injury’

Currently, an international multicenter randomized trial is running, led by prof. Annemie Spooren from Hasselt University, with the Universities of Sydney and Aarhus as academic partners; and the Rehabilitation Centers UZ Gent, Pellenberg UZ Leuven, RH RevArte in Belgium, and Adelante in the Netherlands, as clinical partners.

The purpose of the study is to determine whether early and intensive upper limb motor training (EIUMT) enhances arm and hand functioning and nervous system plasticity more than standard therapy. This intensive training is a form of occupational and physical therapy that includes task-specific and goal-oriented exercises targeting muscles at and below lesion level, such as practicing daily functioning, hand use and strength training. The researchers will investigate whether 6 hours of EIUMT per week during 8 weeks, on top of the usual rehabilitation treatment after tetraplegia, improves arm and hand functioning more than the usual treatment on its own. Besides, they will study where nervous system plasticity occurs (peripheral or central), and whether this occurs to a higher degree than after standard therapy. Measurements are done before the start of (intensive) therapy, after 4 and 8 weeks, and at 6 months follow-up.



Central plasticity is measured by Transcranial Magnetic Stimulation (TMS), and peripheral plasticity by nerve conduction studies of sensory and motor nerves, as well as Threshold Tracking and measurement of the number of motor units activated. Arm and hand function is measured with a questionnaire about daily activities, with upper limb strength measurement, and observation of some basic arm and hand skills.

For more information, please see [Neural Plasticity and Motor Recovery After Early and Inte... \(clinicaltrials.be\)](https://clinicaltrials.be)