

# Press Release

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## CNS Neuroscientists Publish Three Papers on Traumatic Brain Injury

**Bakersfield, CA (Mar. 2, 2016)** – Centre for Neuro Skills (CNS) announced today that its research department has published three papers in two high ranking neuroscience publications, *Journal of Neurotrauma* and *Brain Research*. All three papers focus on traumatic brain injury (TBI) and either directly or indirectly indicate the benefits derived from postacute rehabilitation.

The first paper in *Journal of Neurotrauma* was written by CNS National Director of Clinical Research, Grace S. Griesbach, Ph.D., and is titled "Post-Acute Traumatic Brain Injury Rehabilitation: Effects on Outcome Measures and Life Care Costs." CNS Senior Neuroscientist, Lisa Kreber, Ph.D., Chief Operating Officer David Harrington and CEO and President Dr. Mark J. Ashley also contributed to this paper.

In it, they reveal the benefits and life care cost savings associated with postacute rehabilitation. Key points were:

- Over \$1.5 million was saved in lifetime costs for patients who received postacute care with no benefit limitations from insurance carriers.
- Notable decreases in disability can still be obtained after an acute period when a TBI or stroke patient participates in an intensive rehabilitation program.
- Post-acute TBI rehabilitation improved outcome, independent of the age of the patient.

The second paper, also in *Journal of Neurotrauma*, authored by Drs. Kreber, Griesbach and Ashley, is titled "Detection of Growth Hormone Deficiency in Adults with Chronic Traumatic Brain Injury," and reveals the prevalence of growth hormone deficiency (GHD). Key points were:

- Of the 235 adult TBI patients tested, 17% presented moderate GHD; 45% presented severe GHD.
- Patients with moderate and severe GHD showed more disability compared to patients without GHD.
- Patients that presented severe GHD had significantly more symptoms of depression.

The review paper in Brain Research, written by Drs. Kreber and Griesbach, is titled "The Interplay Between Neuropathology and Activity Based Rehabilitation After Traumatic Brain Injury." Key points were:

- Activity based rehabilitation following TBI is influenced by ongoing pathophysiological processes.
- Intense or stress-inducing exercise during the acute post-injury period may impede mechanisms that facilitate recovery and worsen cognitive performance.
- Return to play assessments in sports activities are necessary after a TBI.
- Exercise can facilitate recovery after TBI and can be utilized as a therapeutic intervention.

For a full list of research publications, visit CNS at <http://www.neuroskills.com/brain-injury/cns-research.php>

### **About Centre for Neuro Skills**

CNS is recognized as an experienced and respected world leader in providing intensive rehabilitation and medical programs for individuals recovering from all types of brain injury. CNS effectively covers a full spectrum of care from inpatient and assisted living to outpatient/day treatment. For additional information about CNS, please visit [neuroskills.com](http://neuroskills.com), [#neuroskills](https://twitter.com/neuroskills), or call us at 800.922.4994.

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