

Human embryonic stem cells relieve common side effects of spinal cord injuries in mice

People with spinal cord injuries suffer from many complications in addition to paralysis and numbness. Some of these problems are caused by a lack of the neurotransmitter GABA in the injured spinal cord. Now research in mice is showing that human embryonic stem cells differentiated into medial ganglionic eminence (MGE)-like cells, which produce GABA, may help alleviate two of the most severe side effects — chronic neuropathic pain and bladder dysfunction.

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The neural precursor cells were placed into the spinal cords of mice two weeks after injury had been induced, where they could differentiate into GABA-producing neuron subtypes and form synaptic connections.

“Rather than implanting these cells into the site of injury, at the mid-thoracic level, we injected them in the lumbosacral region, where the circuits are known to be overactive,” says Thomas Fandel, a research specialist at UCSF...“Six months later we could see broad dispersion of the cells in that area. They were integrated into the spinal cord.”

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By six months after transplant, animals exhibited significantly reduced pain sensitivities.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Human stem cells treat spinal cord injury side effects in mice](#)