

Stem cells may hold promise for Lou Gehrig's disease

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Apparent stem cell transplant success in mice may hold promise for people with amyotrophic lateral sclerosis (ALS), or Lou Gehrig's disease. The results of the study were released today and will be presented at the American Academy of Neurology's 65th Annual Meeting in San Diego, March 16 to 23, 2013.

"There have been remarkable strides in stem cell transplantation when it comes to other diseases, such as cancer and heart failure," said study author Stefania Corti, MD, PhD, with the University of Milan in Italy and a member of the American Academy of Neurology. "ALS is a fatal, progressive, degenerative disease that currently has no cure. Stem cell transplants may represent a promising avenue for effective cell-based treatment for ALS and other neurodegenerative diseases."

For the study, mice with an animal model of ALS were injected with human [neural stem cells](#) taken from human induced pluripotent stem cells (iPSCs). iPSC are adult cells such as skin cells that have been genetically reprogrammed to an embryonic stem cell-like state. Neurons are a basic building block of the nervous system, which is affected by ALS. After injection, the stem cells migrated to the spinal cord of the mice, matured and multiplied.

The study found that stem cell transplantation significantly extended the lifespan of the mice by 20 days and improved their neuromuscular function by 15 percent.

"Our study shows promise for testing [stem cell transplantation](#) in human clinical trials," said Corti.

Provided by American Academy of Neurology

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