

## A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

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**Spinal cord** injury (SCI) damages axons and disrupts myelination interrupting sensory and motor neuronal transmission to and from the brain. Patients suffering from SCI although continue to survive, are often left chronically disabled and with no promise of a cure. Advances in **stem cell** biology has o ...

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## [Stem cells for the treatment of spinal cord injury](https://pubmed.ncbi.nlm.nih.gov/17950280)

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This article **reviews stem cell**-based strategies for **spinal cord** injury repair, and practical issues concerning their translation to the clinic. Recent progress in the **stem cell** field includes clinically compliant culture conditions and directed differentiation of both embryonic **stem cells** and somatic **stem cells**.

**Cited by:** 226**Author:** Margaret Coutts, Hans S. Keirstead**Publish Year:** 2008

## Stem-cell therapy

Stem-cell therapy is the use of stem cells to treat or prevent a disease or condition. As of 2016, the only established therapy using stem cells is hematopoietic stem cell transplantation. This usually takes the form of a bone-marrow transplantation, but the cells can also be derived from umbilical cord blood. Research is underway to develop various sources for stem cells as well as to apply stem-cell treatments for neurodegenerative diseases and conditions such as diabetes and heart disease.

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### Advances in stem cell therapy for spinal cord injury

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Spinal cord injury (SCI) is a devastating condition producing great personal and societal costs and for which there is no effective treatment. Stem cell transplantation is a promising therapeutic strategy, though much preclinical and clinical research work ...

Cited by: 209

Author: Andrea J. Mothe, Charles H. Tator

Publish Year: 2012

### A Review of Stem Cell Therapy for Spinal Cord Injury ...

<https://www.sciencedirect.com/science/article/pii/S1878875016312013>

Feb 01, 2017 · A literature search using the following search terms was performed on PubMed: stem cell(s), spinal cord injury, swine, monkey, canine, dog, primate, pig. Any article between 1980 and 2015 that included direct parenchymal injections of stem cells into injured spinal cord was included in the study.

Cited by: 11

Author: Brandon C. Gabel, Erik I. Curtis, Martin ...

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## Stem-cell therapy

Stem-cell therapy is the use of stem cells to treat or prevent a disease or condition. As of 2016, the only established therapy using stem cells is hematopoietic stem cell transplantation. This usually takes the form of a bone-marrow transplantation, but the cells can also be derived from umbilical cord blood. Research is underway to develop various sources for stem cells as well as to apply stem-cell treatments for neurodegenerative diseases and conditions such as diabetes and heart disease.

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## [Stem cells for the treatment of spinal cord injury](https://pubmed.ncbi.nlm.nih.gov/17950280)

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We **review** the practical **considerations** and risks that must be addressed before human treatments can begin. With a growing understanding of these practical issues, **stem cell** biology, and **spinal cord** injury pathophysiology, **stem cell**-based therapies are moving closer to clinical application.

**Cited by:** 227

**Author:** Margaret Coutts, Hans S. Keirstead

**Publish Year:** 2008

## [Spinal cord injuries: how could cell therapy help?](https://www.ncbi.nlm.nih.gov/pubmed/28306359)

<https://www.ncbi.nlm.nih.gov/pubmed/28306359>

Expert opinion: Most preclinical studies, and an increasing number of clinical trials, are finding that single **cell therapies** have only modest benefits after SCI. These **considerations**, alongside issues of **therapy** cost-effectiveness, need to be addressed at the bench.

**Cited by:** 26

**Author:** Anna Badner, Ahad M. Siddiqui, Michael G. ...

**Publish Year:** 2017

## [Stem cell-based cell therapy for spinal cord injury.](https://www.ncbi.nlm.nih.gov/pubmed/17658126)

<https://www.ncbi.nlm.nih.gov/pubmed/17658126>

1. *Cell Transplant.* 2007;16(4):355-64. **Stem cell-based cell therapy** for **spinal cord** injury. Kim BG(1), Hwang DH, Lee SI, Kim EJ, Kim SU. Author information: (1)Brain Disease Research Center, Ajou University School of Medicine, Suwon, 443-721, Republic of Korea. Traumatic injuries to the **spinal cord** lead to severe and permanent neurological deficits.

**Cited by:** 138

**Author:** Byung Gon Kim, Dong Hoon Hwang, Seung ...

**Publish Year:** 2007

## [Review of transplantation of neural stem/progenitor cells ...](https://pubmed.ncbi.nlm.nih.gov/23928260)

<https://pubmed.ncbi.nlm.nih.gov/23928260>

**Spinal cord** injury (SCI) is a debilitating condition often resulting in paralysis, yet currently there is no effective **treatment**. **Stem cell** transplantation is a promising therapeutic strategy for promoting tissue repair after SCI. **Stem cells** offer a renewable source of **cells** with inherent plasticity for ...

**Cited by:** 134

**Author:** Andrea J. Mothe, Charles H. Tator

**Publish Year:** 2013