

[About the versions](#) | [Low graphics](#) | [Help](#) | [Contact us](#)

Last Updated: Monday, 3 January, 2005, 23:57 GMT

 [E-mail this to a friend](#)

 [Printable version](#)

[News Front Page](#)

[World](#)

[UK](#)

[England](#)

[Northern Ireland](#)

[Scotland](#)

[Wales](#)

[Business](#)

[Politics](#)

[Health](#)

[Medical notes](#)

[Education](#)

[Science/Nature](#)

[Technology](#)

[Entertainment](#)

[Have Your Say](#)

[Magazine](#)

[In Pictures](#)

[Week at a Glance](#)

[Country Profiles](#)

[In Depth](#)

[Programmes](#)

[BBC SPORT](#)

[BBC WEATHER](#)

[BBC NEWS](#)

[On This Day](#)

[NEWSWATCH](#)

Parkinson's damage repaired

Monkey stem cells can repair the brain damage caused by Parkinson's disease, Japanese researchers have shown.

The findings, published in the Journal of Clinical Investigation, offer renewed hope of a similar treatment for humans.

Until now, research showing stem cell therapy can work in Parkinson's has mainly been carried out on rodents.

The Kyoto University team said more research was now needed to prove the treatment was safe and effective.

Repair

Stem cells are premature cells that are capable of becoming any of a number of mature cells within the body, given the right conditions.

Dr Jun Takahashi and colleagues took some stem cells from monkeys and encouraged them to grow into the brain cells, or neurons, that are damaged in Parkinson's disease.

These are neurons that produce the chemical messenger dopamine.

To encourage their development the researchers exposed the stem cells to a growth factor that is produced exclusively in the area of the brain affected by Parkinson's disease and is thought to have a protective effect on dopamine-producing neurons.

They then transplanted the stem cell-derived dopamine-producing neurons into monkeys with a condition analogous to human Parkinson's disease.



Parkinson's is caused by a chemical imbalance in the brain

SEE ALSO:

- [Stem cell therapy for Parkinson's](#)
30 Jun 04 | Health
- [Parkinson's risk 'cut by dieting'](#)
14 Dec 04 | Health
- [Exercise may ward off Parkinson's](#)
25 Oct 04 | Health

RELATED BBC LINKS:

- [Parkinson's disease](#)

RELATED INTERNET LINKS:

- [Journal of Clinical Investigation](#)
- [Kyoto University](#)

The BBC is not responsible for the content of external internet sites

TOP HEALTH STORIES NOW

- [Face op woman braves media glare](#)
- [Drug refusal 'a death sentence'](#)
- ['Hit squads' to help tackle MRSA](#)
- [UK pledges £3m for safe abortions](#)

[RSS](#)

| [What is RSS?](#)

The transplanted cells worked as hoped, and reduced the symptoms of Parkinson's in the monkeys.

The researchers said: "These results suggest that transplantation using embryonic stem cells as a clinical therapy for Parkinson's disease is approaching the point of technical feasibility."

“ These results suggest that transplantation using embryonic stem cells as a clinical therapy for Parkinson's disease is approaching the point of technical feasibility. ”

The study authors

But they said a number of safety and efficacy concerns still needed addressing.

Rodents treated in a similar way went on to develop tumours.

Also, the number of cells produced by the stem cell technique may still be too few to treat humans.

Commenting on the research, Dr J William Langston of the Parkinson's Institute in California, US, said: "While the observations in the current study are encouraging, the number of surviving dopamine-producing neurons was very low.

"It is good news that tumours were not observed, but this could also be related to the small number of surviving cells."

 [E-mail this to a friend](#)

 [Printable version](#)

LINKS TO MORE HEALTH STORIES

[News Alerts](#) [E-mail services](#) [Mobiles/PDAs](#) [Headlines for your site](#)

[Help](#) [Privacy and Cookies Policy](#) [News sources](#) [About the BBC](#) [Contact us](#)

[News Front Page](#) | [World](#) | [UK](#) | [England](#) | [Northern Ireland](#) | [Scotland](#) | [Wales](#) | [Politics](#)

[Business](#) | [Entertainment](#) | [Science/Nature](#) | [Technology](#) | [Health](#) | [Education](#)

[Have Your Say](#) | [Magazine](#) | [In Pictures](#) | [Week at a Glance](#) | [Country Profiles](#) | [In Depth](#) | [Programmes](#)