



Paralyzed Dogs Walk Again Thanks to Nose Cells



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In what could be a major scientific breakthrough, dogs with paralyzed hind legs were able to walk again after their limbs were injected with cells from inside their noses.

Researchers at Cambridge University's Veterinary School conducted a [study](#) involving 34 dogs with paralyzed rear legs. The promising results were published this month in [Brain, a Journal of Neurology](#).

In the study, olfactory ensheathing cells (OEC) were removed from the lining of the dogs' noses.

According to [BBC News](#), scientists have long believed these cells could be used to repair damaged spinal cords. In adult humans, the olfactory system is the only part of the body in which nerve fibers continue to grow.

For several weeks, OECs extracted from the paralyzed dogs were grown and expanded in a laboratory. Then 23 of the dogs were injected with the OECs, while 11 others in a control group were injected with a neutral fluid.

The control group showed no improvement, but most of the dogs injected with OECs were able to walk on a treadmill using a harness.

While the transplanted OECs successfully regenerated nerve fibers in the dogs' spinal cords, they didn't restore the connection between the brain and the legs.

Naomi Kleitman, a stem cell researcher with the Craig H. Nielsen Foundation, told [ABC World News](#), "For those dogs that had the cells, something about having those cells in their spinal cord made them walk better, a little better, but not as if they were never injured. It's a phenomenon, and we need to learn more about how this can happen."

"Our findings are extremely exciting because they show for the first time that transplanting these types of cell into a severely damaged spinal cord can bring about significant improvement," report co-author Robin Franklin, a [professor](#) and regeneration biologist with the Wellcome Trust-MRC Stem Cell Institute, told BBC News.

"We're confident that the technique might be able to restore at least a small amount of movement in human patients with spinal cord injuries, but that's a long way from saying they might be able to regain all lost function."

One of the study participants was May Hay's [Dachshund, Jasper](#), whose hind legs were paralyzed in an accident four years ago.

"Before the treatment we used to have to wheel Jasper 'round on a trolley because his back legs were useless," Hay told BBC News. "Now he whizzes around the house and [garden](#), and is able to keep up with the other dogs. It's wonderful."

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