

New trial may revolutionise treatment of spinal cord injury patients

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IVIg therapy can reduce harmful inflammation in spinal cord injuries. Credit: University of Queensland

Queensland researchers are launching a world-first clinical trial aimed at improving recovery from spinal cord injuries.

In the study, led by The University of Queensland and The Princess Alexandra (PA) Hospital, a new anti-inflammatory drug will be given to participants within hours of spinal trauma in an effort to minimise tissue damage.

Dr Marc Ruitenberg from the UQ School of Biomedical Sciences said when the [spinal cord](#) is injured, it becomes inflamed and this causes a lot of additional damage.

"Up until now, doctors had no real treatment options to deal with this problem," Dr Ruitenberg said.

"What we discovered in our animal studies is intravenous immunoglobulin (IVIg) therapy can reduce this harmful inflammation and, excitingly, significantly improve the recovery from serious [spinal cord injuries](#)."

Spinal surgeon Dr Kate Campbell, who is heading up the trial with Dr Ruitenberg, said one of the great benefits of IVIg is that it is quite safe and already used in the hospital for other conditions.

"As a result, we have been able to quickly progress this treatment from the lab to the clinic," she said.

The trial will run for three years and will aim to recruit 20 participants through the PA Hospital, which is Queensland's primary centre for spinal injury care.

Queensland Health estimates that 90 people sustain spinal cord injuries in the state each year.

"Sadly, the summer holidays can be a busy time for spinal wards," Dr Campbell said.

"It's a time when people are travelling, heading to the beach and spending time outdoors, and unfortunately it's a time when accidents occur.

"We hope this research will help the recovery of those who suffer these serious injuries.

"It can happen to anyone and we therefore urge people to be careful."

Dr Ruitenberg's pre-clinical work received funding support from the Wings for Life Foundation and SpinalCure Australia, while CSL Behring has provided IVIg and funding for the clinical trial.

Dr Andrea Douglas, Vice President R&D Strategy and External Affairs at CSL, said the use of [intravenous immunoglobulin](#) in this setting is a novel application for one of CSL's flagship therapies.

"Spinal injuries are devastating, and with few options available to effectively treat the inflammation that occurs, we are very pleased that Dr Ruitenberg's team are getting closer to finding a solution."

More information: Faith H. Brennan et al. IVIg attenuates complement and improves spinal cord injury outcomes in mice, *Annals of Clinical and Translational Neurology* (2016). [DOI: 10.1002/acn3.318](#)

Provided by University of Queensland

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