

# Gaming reduces pain for burns victims

19 January 2016, by Denise Cahill, Sciencenetwork Wa



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Released in 2006, the Nintendo Wii was snapped up by Australian families and gaming enthusiasts in just four days, becoming the fastest selling console in our history, and now it is helping local burns victims manage their pain and aid in their rehabilitation.

WA researchers have found that [burns patients](#) who played Nintendo Wii video games over a period of seven days for between 20 and 30 minutes recorded a 17 per cent decline in [pain](#) levels.

"Considering this was a pilot trial we have got a significant result in terms of statistics but we have also got a clinically significant result," University of Notre Dame Burn Injury Research Node's Associate Professor Dale Edgar says.

Burns patients often experience intense pain, A/Prof Edgar says, because the wound damages not just the skin and limbs but nerves, who have effectively had their heads chopped off and are blind.

"In normal circumstances pain is a protective mechanism for us, in a burn situation that becomes maladaptive, it is a problem because the nerves are not giving you good information, they are just firing wily nilly," he says.

## Misfiring nerves severely hinders complex movements

The lack of [nerve](#) function means the patient loses the ability to understand where their body is in time and space, meaning they can't control or do odd body movements because they are trying to avoid pain or can't work out where their hand or leg is in space.

The 22 pilot trial participants aged between 16 and 59, which included 17 men and five women had burns to around 10 per cent of their body, mainly to the hands and 15 required surgery for skin grafts.

He says the idea to have patients play boxing, tennis and yoga on the Nintendo Wii was because the activity required them to be active through holding the control in their hand, stepping up to the console and the television gave them visual feedback on what their body was doing.

"We are trying to give people other methods of feedback so we can tap into what the nerves aren't doing," he says.

"We are trying to tell the nerves that they need to tell us where that hand is in space, how it is moving, and to give good positive feedback rather than the negative pain feedback."

The researchers have now turned their attention to having patients use X-box Connect to test if it reduces their pain levels.

**More information:** Matthew Parker et al. Interactive gaming consoles reduced pain during acute minor burn rehabilitation: A randomized, pilot trial, *Burns* (2015). DOI: [10.1016/j.burns.2015.06.022](https://doi.org/10.1016/j.burns.2015.06.022)

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