

Wheelchair you can steer by ear: Chair uses pulses from muscular movements in spinal injury patients to propel it forward

- Scientists at three German universities have invented the new device
- Chip detects pulses of muscular movement in the ear converting the transmission into a signal to a computer attached to the wheelchair
- Ten participants managed to navigate around Goettingen hospital by the end of the trial - wiggling their ears to propel the wheelchairs
- New technology is aimed at people with serious spinal cord injuries

By [Allan Hall](#)

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German scientists have invented a device allowing disabled people to steer their wheelchairs using their ears.

Patients are fitted with chips that pick up the pulses of muscular movements in the human ear. Those tiny transmissions are converted into a signal to a computer attached to the wheelchair which propels it into motion.

David Liebetanz, who led the researchers from three top German universities, said; 'The advantage this has over breathing or eye movement to make wheelchairs move is that people do not have to give up looking or speaking to use it.

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Scientists at three German universities have invented a chip which uses muscular movements in a person's ear to propel a wheelchair forwards

'Ten study participants spent five days learning how to use their ear muscles to communicate with the software, which adapts to each individual user and provides feedback based on the signals received from the muscles.'

'By day five, all ten participants had managed to navigate their wheelchairs around the main building of a hospital in Goettingen - because they learned to wiggle their ears.'

Psychologist Leonie Schmalfluss told a German website: 'Clearly we are talking about an ability which can be learnt in a short space of time, like learning to juggle three balls.'

Liebetanz added: 'We were really baffled by this because half of our participants went into the study claiming that they could not wiggle their ears.'

'The results from our clinical trial have exceeded our expectations.'

'This new technology is intended in particular for people with serious spinal cord injuries, that is for patients who can no longer use their arms and legs.'

[German scientists invent wheelchair steered by your EARS](#)



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Ten participants took part in the study, spending five days learning to navigate through Goettingen hospital, wiggling their ears to move the wheelchairs



It is hoped the new technology will help people with serious spinal cord injuries

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