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## 葛瑞格·库尔坦致力于帮助瘫痪者重新行走

### 档案



编码: rolex-media-brochure\_empty

葛瑞格·库尔坦致力于帮助瘫痪者重新行走 - 新闻稿

鸣谢: © Rolex

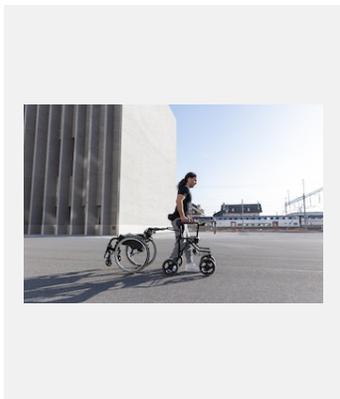
### 图片



编码: rae19\_courtine\_23vd\_227

Grégoire Courtine hopes to restore lost movement to paralysed people around the world. Here he is holding the Epidural Electrical Stimulation (EES) device. Behind him, Gert-Jan Oskam stands with the aid of the ESS and a newly developed brain implant, which form a digital bridge, allowing him to control his limbs through thought alone.

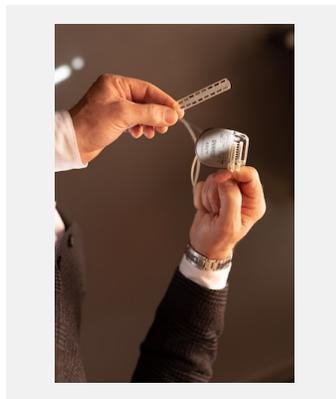
鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_173

Michel Roccati, a patient with complete spinal cord lesion, had the Epidural Electrical Stimulation (EES) of the spinal cord implanted in 2021. Here Roccati tows his wheelchair with the support of a walker that connects to the ESS.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_246

Grégoire Courtine, in the gait analysis lab, holds a Targeted Electrical Stimulation, or ESS, device, which is implanted into the spine and used to deliver electrical pulses to the spinal cord to stimulate the muscles in the legs to walk.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_263

Andrea Galvez, PostGrad; Jocelyne Bloch, Neurosurgeon and Co-Director of .Neurorestore Laboratory; Grégoire Courtine, Rolex Laureate and Co-Director of .Neurorestore; and Henri Lorach, Head of BSI; programme software to enable Gert-Jan to move this legs just by thinking.

鸣谢: © Rolex/Victoria Dawe

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## 葛瑞格·库尔坦致力于帮助瘫痪者重新行走



编码: rae19\_courtine\_23vd\_286

Rolex Awards Laureate Grégoire Courtine and his research partner, neurosurgeon Jocelyne Bloch, at Laboratoire .NeuroRestore.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_321

Neurosurgeon Jocelyne Bloch holds the implant that she will surgically place on Gert-Jan Oskam's brain the following day.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_039

Gert-Jan Oskam and Rolex Award Laureate Grégoire Courtine discuss the treatment schedule in the gait analysis lab.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_178

Gert-Jan Oskam walking after his operation. The brain implant he received signals the Epidural Electrical Stimulation (EES), implanted on his spine, which deliver electrical pulses to the spinal cord to stimulate the leg muscles, allowing him to walk simply by thinking about it.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_176

Nadine Interer, Research Physiotherapist, supports Gert-Jan Oskam whilst Andrea Galvez, Postdoc, and Henri Lorach, Head of Brain Spine Interface at .NeuroRestore, prepare the software which will enable Oskam to walk.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_181

Gert-Jan Oskam, Andrea Galvez, Jimmy Ravier, content manager, and Grégoire Courtine all prepare for Oskam to take his first steps after his brain implant surgery.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_204

Grégoire Courtine watches Gert-Jan Oskam take his first steps after surgery at the gait analysis lab.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_209

Grégoire Courtine chats with Gert-Jan Oskam, his first patient to receive the brain implant necessary to form the "digital bridge".

鸣谢: © Rolex/Victoria Dawe

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## 葛瑞格·库尔坦致力于帮助瘫痪者重新行走



编码: rae19\_courtine\_23vd\_251

Gert-Jan Oskam, Andrea Galvez, Jocelyne Bloch, Grégoire Courtine and Henri Lorach review the software that is allowing Oskam to move his legs.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_293

Gert-Jan Oskam and Grégoire Courtine head outside to test his ability to walk on different terrains.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_304

Jocelyne Bloch, Neurosurgeon and Co-Director of .Neurorestore Laboratory, ahead of surgery to place their device into a patient's brain.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_342

Gert-Jan Oskam at the Gait Lab. Oskam suffered a spinal cord injury cycling in 2011 and volunteered to participate in the research at .Neurorestore. He is the first person to receive both implants necessary to form the "digital bridge".

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_093

Rolex Awards for Enterprise Laureate Grégoire Courtine stands outside with his patient Michel Roccati. Roccati suffered a complete spinal lesion, and volunteered to work with Courtine in 2021. He had a Epidural Electrical Stimulation (EES), device implanted and after some training has been able to walk again.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_173

Michel Roccati tows his wheelchair with the support of a walker that connects to the Epidural Electrical Stimulation (EES) in the spinal cord.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_072

Grégoire Courtine helping Michel Roccati to stabilize his walking. Roccati has been fitted with a Epidural Electrical Stimulation (EES) of the spinal cord, device after an accident that left him with a complete spinal cord lesion.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_046

Michel Roccati, who has been fitted with an Epidural Electrical Stimulation (EES) device works with Nicolas Hankov, Field Clinical Research Engineer, and Grégoire Courtine, Rolex Laureate and Co-Director of .Neurorestore, at the Gait Lab.

鸣谢: © Rolex/Victoria Dawe

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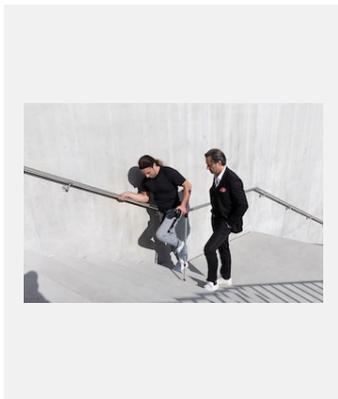
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编码: rae19\_courtine\_23vd\_075\_263x292

Grégoire Courtine working with Michel Roccati, his patient, in his lab. The pair work together twice a year to check in and see how Roccati's device is working.

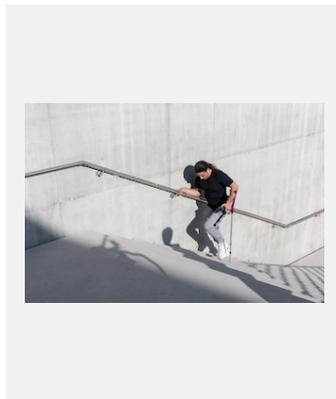
鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_090

Michel Roccati and Grégoire Courtine walk up steps together. The steps are part of ongoing tests that Roccati undergoes with the team from .NeuroRestore.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_118

Michel Roccati walks up steps as part of ongoing tests with the team from .NeuroRestore. This is the greatest number of steps he has climbed to date.

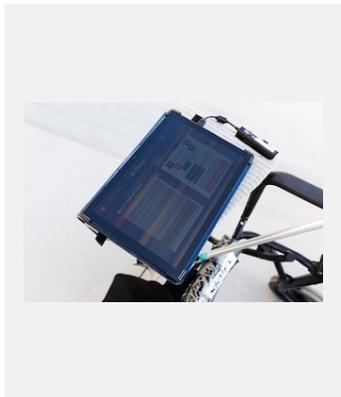
鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_129

Detail shots of the external tech used to help Michel Roccati walk. Used to simulate his implant, enabling spinal cord stimulation.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_133

Michel's walker that connects to the Epidural Electrical Stimulation (EES) device on his spine.

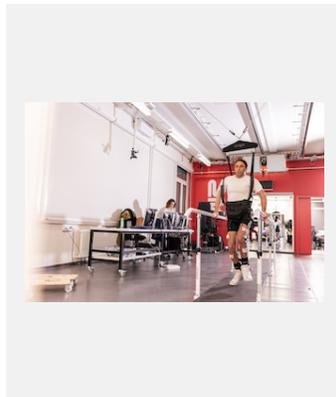
鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_300

Michel Roccati using the hoist for further tests during his check up visit to .NeuroRestore.

鸣谢: © Rolex/Victoria Dawe



编码: rae19\_courtine\_23vd\_301

Michel Roccati using the hoist for further tests during his check up visit to .NeuroRestore.

鸣谢: © Rolex/Victoria Dawe