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Paralysed Woman To Complete Marathon Using Robotic Skeleton

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Paralysed in a horse-riding accident in 2007, Claire Lomas was told by doctors that she would never walk again.

But thanks to a special robotic suit, the 31-year-old Brit is now back on her feet. Lomas, who has been wheelchair-bound since her accident, is so excited by recent developments that she's decided to take on a challenge that even most able-bodied people would balk at — a 26-mile marathon.

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The ReWalk suit, described as a powered exoskeleton that provides user-initiated mobility, will help Lomas complete the course, taking place in London on April 22. Her immediate challenge is learning to walk using the robotic suit in the limited time she has left between now and the day of the event.

“It is physically hard work and incredibly frustrating at times to get the technique right, but when I make progress, it gives me a fantastic feeling,” Lomas told the Telegraph in a recent interview.

ReWalk’s creator, an Israel-based tech company called Argo, says on its website that a user can control the robotic exoskeleton through subtle changes in their center of gravity. Crutches are recommended, to provide extra stability and safety.

The technology comprises a number of motors and gears strapped to the user’s lower body, while sensors attached to the upper body help to control the motion. A computer, together with a rechargeable battery power source, is located in a backpack. Once mastered, a user can even use ReWalk to climb stairs.

When ReWalk detects the user moving their weight onto one foot, it raises the opposite leg and carries the user forward. Lomas says that she’s currently working on getting the rhythm right.

“I keep wanting to look at my legs to see what they are doing,” she told the Telegraph. There is so much to think about and the weight shift is subtle. You have got to learn how to do that and to do it efficiently – it is really frustrating at first. If you don’t get it right, the leg won’t lift. You can’t just strap yourself in and go, you have to work at it.”
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Via Digital Trends
Photo courtesy of Argo Medical Technologies Ltd.