

## Paralyzed man walks using robotic suit

8th October, 2019



A man who is paralyzed from below his shoulders has been able to walk using a robotic suit. The 28-year-old man could not move his arms, hips and legs after an accident. Doctors fitted him with a special robotic exoskeleton - this is a machine that covered his arms, legs and body. The machine was attached to the ceiling so the man could keep his balance and not fall over. He controlled the machine using high-tech sensors that were implanted near his brain. The man used his thoughts to tell the sensors to move the machine. His brain sent messages to the machine and it moved his arms and legs. He was able to walk a few steps using the machine even though he was paralyzed.

Doctors say they are in the early stages of developing this technology. They believe robotic exoskeletons will help disabled people to live better lives in the future. Technology will be able to pick up signals from the brain to control wearable robotic technology. The next stage is to remove the ceiling harness. A neurosurgeon who co-led the exoskeleton trial commented on the exoskeleton suit. He said it was the first wireless, brain-controlled system to be designed that can move all four limbs. The man was very happy with the test. He said: "I can't go home tomorrow in my exoskeleton, but I've got to a point where I can walk. I walk when I want and I stop when I want."

Sources: [sky.com](http://sky.com) / [cnn.com](http://cnn.com) / [yahoo.com](http://yahoo.com)

## Writing

We should spend more time on helping to develop cyborg technology. Discuss.

## Chat

Talk about these words from the article.

shoulders / robots / arms / machine / ceiling / balance / sensors / thoughts / early / technology / future / signals / brain / trial / wireless / limbs / tomorrow / point

## True / False

- a) A man is no longer paralyzed after wearing a robotic suit. T / F
- b) The man was paralyzed from the waist down. T / F
- c) The robotic suit was fixed to the ceiling to help the man's balance. T / F
- d) The man was able to walk a few hundred meters using the suit. T / F
- e) Doctors are in the advanced stages of developing this technology. T / F
- f) Doctors said the next step was to remove the ceiling harness. T / F
- g) This is the first brain-controlled suit to move arms and legs. T / F
- h) The man said he was happy that he could take the suit home. T / F

## Synonym Match

(The words in **bold** are from the news article.)

- |                     |                      |
|---------------------|----------------------|
| 1. <b>paralyzed</b> | a. arms and legs     |
| 2. <b>fitted</b>    | b. stability         |
| 3. <b>attached</b>  | c. initial           |
| 4. <b>balance</b>   | d. assist            |
| 5. <b>a few</b>     | e. equipped          |
| 6. <b>early</b>     | f. phase             |
| 7. <b>help</b>      | g. disabled          |
| 8. <b>stage</b>     | h. wish to           |
| 9. <b>limbs</b>     | i. a small number of |
| 10. <b>want</b>     | j. fixed             |

## Discussion – Student A

- a) What do you think of robots?
- b) Why might people think robots are dangerous?
- c) How will robots help doctors?
- d) Do you think we will become cyborgs one day?
- e) How useful are robots for people who are paralyzed?
- f) What other things could we use brain sensors for?
- g) Will robots control humans one day?
- h) What advice do you have for the man in the story?

## Phrase Match

- |  |                        |
|--|------------------------|
| 1. A man who is paralyzed from           | a. limbs               |
| 2. the man could keep his balance        | b. a few steps         |
| 3. He controlled the machine using high- | c. this technology     |
| 4. His brain sent messages               | d. and not fall over   |
| 5. He was able to walk                   | e. controlled system   |
| 6. in the early stages of developing     | f. to the machine      |
| 7. wearable                              | g. where I can walk    |
| 8. the first wireless, brain-            | h. below his shoulders |
| 9. move all four                         | i. robotic technology  |
| 10. I've got to a point                  | j. tech sensors        |

## Discussion – Student B

- What do you think about what you read?
- What do you think of this technology?
- How does technology help in your life?
- Would you wear an exoskeleton to make you stronger?
- Would you wear an exoskeleton to make you run fast?
- Why might exoskeletons help soldiers or rescue workers?
- What three adjectives best describe this technology?
- What questions would you like to ask the doctors?

## Spelling

- paralyzed from below his lhrdosseu
- after an ntcadice
- The machine was hcdeatat
- high-tech erosnss
- implanted near his abrni
- sent aesssmg to the machine
- in the early egtsa
- help iaedlsbd people
- aearblwe robotic technology
- remove the niecgil harness
- the first iwlesser, brain-controlled system
- move all four lmisb

### Answers – Synonym Match

1. g	2. e	3. j	4. b	5. i
6. c	7. d	8. f	9. a	10. h

## Role Play

### Role A – As Teachers

You think robot teachers would help us most. Tell the others three reasons why. Tell them what is wrong with their robots. Also, tell the others which are the least useful of these (and why): robot chefs, robot comedians or robot soldiers.

### Role B – As Chefs

You think robot chefs would help us most. Tell the others three reasons why. Tell them what is wrong with their robots. Also, tell the others which are the least useful of these (and why): robot teachers, robot comedians or robot soldiers.

### Role C – As Comedians

You think robot comedians would help us most. Tell the others three reasons why. Tell them what is wrong with their robots. Also, tell the others which are the least useful of these (and why): robot chefs, robot teachers or robot soldiers.

### Role D – As Soldiers

You think robot soldiers would help us most. Tell the others three reasons why. Tell them what is wrong with their robots. Also, tell the others which are the least useful of these (and why): robot chefs, robot comedians or robot teachers.

## Speaking – Robots

Rank these with your partner. Put the best uses for robots at the top. Change partners often and share your rankings.

- |                      |                 |
|----------------------|-----------------|
| • As teachers        | • As pets       |
| • As police officers | • As home helps |
| • Driverless cars    | • As soldiers   |
| • As doctors         | • As comedians  |

### Answers – True False

a	F	b	F	c	T	d	F	e	F	f	T	g	T	h	F
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Answers to Phrase Match and Spelling are in the text.