Paralysed man takes hopeful first steps


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22nd May, 2011
A medical breakthrough has given hope to millions of people who are unable to walk. Doctors pioneered a special procedure that electrically stimulated the spine of ex-athlete Rob Summers. Mr Summers, 25, was paralysed below the chest in a hit-and-run car accident in 2006. Professor Susan Harkema, of the Kentucky Spinal Cord Injury Research Center gave the revolutionary treatment to “dead” nerves in Mr Summers’ spinal cords. He was able to move his legs and toes and take a few steps with the help of a walking frame. Dr Harkema said: "This is a breakthrough. It opens a huge opportunity to improve the daily functioning of...individuals...but we have a long road ahead.” She said this is "going to have a major impact" on people with disabilities.

The treatment is called epidural stimulation. It has taken over three decades of research to get to this stage. The process works when electrical signals bypass the brain to tell the spinal cord what to do. The signals allow the limbs to function independently of the brain. Mr Summers said the treatment has been life-changing. "This procedure has completely changed my life. For someone who for four years was unable to even move a toe, to have the freedom and ability to stand on my own is the most amazing feeling," he said. He added: "My sense of well-being has changed. My physique and muscle tone has improved greatly. Most people don't even believe I'm paralysed." Five other patients are also taking part in the trial.
WARM-UPS

1. **DISABILITY:** Walk around the class and talk to other students about disability. Change partners often. Sit with your first partner(s) and share your findings.

2. **CHAT:** In pairs / groups, decide which of these topics or words from the article are most interesting and which are most boring.

   - medical / breakthroughs / pioneered / stimulated / revolutionary / long road ahead / treatment / research / electrical signals / life-changing / well-being / physique / trial

   Have a chat about the topics you liked. Change topics and partners frequently.

3. **DISABILITY:** Complete this table with your partner(s). Change partners and share what you wrote. Change and share again.

<table>
<thead>
<tr>
<th>Disability</th>
<th>What we know about it</th>
<th>How it affects well-being</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paralysis</td>
<td></td>
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<tr>
<td>Autism</td>
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<td>Blindness</td>
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<td>Stroke</td>
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<tr>
<td>Cerebral Palsy</td>
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<td>Alzheimer’s</td>
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4. **BREAKTHROUGHS:** Students A strongly believe scientific breakthroughs will one day enable all paralysed people to walk again; Students B strongly believe the opposite. Change partners again and talk about your conversations.

5. **WELL-BEING:** Which is most important to you? Rank these and share your rankings with your partner. Put the best at the top. Change partners and share your rankings again.

   - walking
   - seeing
   - feeling with your fingers
   - hearing
   - running
   - tasting things
   - thinking
   - feeling happy

6. **SPINE:** Spend one minute writing down all of the different words you associate with the word ‘spine’. Share your words with your partner(s) and talk about them. Together, put the words into different categories.
1. TRUE / FALSE: Read the headline. Guess if a-h below are true (T) or false (F).

a. A new medical development allowed a paralysed man to walk a little. T / F
b. The breakthrough is a special drug that stimulates the spinal cord. T / F
c. The man who was paralysed hit a car while he was running. T / F
d. A professor was happy that the man walked down a long road. T / F
e. The research behind the breakthrough has taken 30 years. T / F
f. Electrical signals moved the man’s legs independently of his brain. T / F
g. The man doubts if the treatment will impact his life so much. T / F
h. He said a lot of people are now surprised to hear he’s paralysed. T / F

2. SYNONYM MATCH: Match the following synonyms from the article.

1. breakthrough a. triggered
2. pioneered b. people
3. stimulated c. go around
4. spine d. arms and legs
5. individuals e. development
6. stage f. feeling
7. bypass g. test
8. limbs h. backbone
9. sense i. step
10. trial j. innovated

3. PHRASE MATCH: (Sometimes more than one choice is possible.)

1. A medical a. below the chest
2. Doctors pioneered b. well-being
3. paralysed c. a major impact
4. “dead” nerves in d. of research
5. going to have e. breakthrough
6. over three decades f. been life-changing
7. electrical signals g. in the trial
8. the treatment has h. a special procedure
9. My sense of i. bypass the brain
10. taking part j. Mr Summers’ spinal cords
GAP FILL: Put the words into the gaps in the text.

A medical breakthrough has (1) ______ hope to millions of people who are unable to walk. Doctors pioneered a special procedure that electrically (2) ______ the spine of ex-athlete Rob Summers. Mr Summers, 25, was paralysed below the (3) ______ in a hit-and-run car accident in 2006. Professor Susan Harkema, of the Kentucky Spinal Cord Injury Research Center gave the revolutionary (4) ______ to "dead" nerves in Mr Summers’ spinal cords. He was able to move his legs and toes and take a (5) ______ steps with the help of a walking frame. Dr Harkema said: "This is a breakthrough. It opens a (6) ______ opportunity to improve the daily functioning of...individuals...but we have a (7) ______ road ahead." She said this is "going to have a major (8) ______ " on people with disabilities.

The treatment is called epidural stimulation. It has taken over three (9) ______ of research to get to this stage. The process works when electrical signals (10) ______ the brain to tell the spinal cord what to do. The signals allow the (11) ______ to function independently of the brain. Mr Summers said the treatment has been life-changing. "This procedure has (12) ______ changed my life. For someone who for four years was unable to even move a toe, to have the freedom and (13) ______ to stand on my own is the most amazing feeling," he said. He added: "My (14) ______ of well-being has changed. My physique and muscle tone has (15) ______ greatly. Most people don’t even believe I’m paralysed." Five other patients are also taking part in the (16) ______.
LISTENING – Listen and fill in the gaps


A medical breakthrough ________________ millions of people who are unable to walk. Doctors pioneered a special procedure that electrically ________________ of ex-athlete Rob Summers. Mr Summers, 25, was paralysed below the chest ________________ car accident in 2006. Professor Susan Harkema, of the Kentucky Spinal Cord Injury Research Center gave the revolutionary treatment to “dead” nerves in Mr Summers’ spinal cords. He was able to move his legs and toes ________________ with the help of a walking frame. Dr Harkema said: "This is a breakthrough. It opens a huge opportunity to ________________ functioning of...individuals...but we have a long road ahead.” She said this is "going to ________________ " on people with disabilities.

The treatment is called epidural stimulation. It has taken over three decades of research ________________. The process works when electrical ________________ to tell the spinal cord what to do. The signals allow the limbs to function independently of the brain. Mr Summers said the treatment has ________________. "This procedure has completely changed my life. For someone who for four years was unable to even move a toe, to have the freedom and ability to ________________ is the most amazing feeling," he said. He added: "My ________________ has changed. My ________________ tone has improved greatly. Most people don’t even believe I’m paralysed." Five other patients are also taking part in the trial.
1. WORD SEARCH: Look in your dictionary / computer to find collocates, other meanings, information, synonyms … for the words ‘medical’ and ‘breakthrough’.

<table>
<thead>
<tr>
<th>medical</th>
<th>breakthrough</th>
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- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

2. ARTICLE QUESTIONS: Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

3. GAP FILL: In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning…?

4. VOCABULARY: Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

5. TEST EACH OTHER: Look at the words below. With your partner, try to recall how they were used in the text:

- millions
- spine
- accident
- few
- huge
- major
- decades
- bypass
- limbs
- toe
- sense
- trial
Write five GOOD questions about disability in the table. Do this in pairs. Each student must write the questions on his / her own paper. When you have finished, interview other students. Write down their answers.

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<th>Q.1.</th>
<th>STUDENT 1</th>
<th>STUDENT 2</th>
<th>STUDENT 3</th>
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<td>Q.2.</td>
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<td>Q.3.</td>
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<td>Q.4.</td>
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<td>Q.5.</td>
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- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.
DISABILITY DISCUSSION

STUDENT A’s QUESTIONS (Do not show these to student B)

a) What did you think when you read the headline?
b) What springs to mind when you hear the word ‘disability’?
c) What do you think about this story?
d) Do you think this could be the beginning of the end of paralysis?
e) Would you like to work on research like this?
f) What would be (is) the most difficult thing about being paralysed?
g) Do you ever think about how fragile we are and what can go wrong with our body?
h) Is your country good about providing facilities for people in wheelchairs?
i) What impact will this research have on people with disabilities?

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DISABILITY DISCUSSION

STUDENT B’s QUESTIONS (Do not show these to student A)

a) Did you like reading this article?
b) What do you know about the spinal cord?
c) Have you ever had a life-changing experience?
d) How do you think he feels?
e) What do you do to look after yourself?
f) How’s your sense of well-being?
g) Who is the most inspirational person with a disability you know?
h) What three adjectives describe this news story (and why)?
i) What questions would you like to ask Professor Susan Harkema and Rob Summers?
A (1) ____ breakthrough has given hope to millions of people who are unable to walk. Doctors pioneered a special procedure that electrically (2) ____ the spine of ex-athlete Rob Summers. Mr Summers, 25, was paralysed below the chest in a hit-and-(3) ____ car accident in 2006. Professor Susan Harkema, of the Kentucky Spinal Cord Injury Research Center gave the revolutionary treatment to “dead” (4) ____ in Mr Summers’ spinal cords. He was able to move his legs and toes and take a few steps with the help (5) ____ a walking frame. Dr Harkema said: "This is a breakthrough. It opens a huge opportunity to improve the daily functioning of...individuals...but we have a long road ahead.” She said this is "going to have a major (6) ____ " on people with disabilities.

The treatment is called epidural stimulation. It has taken over three decades of research to get to this (7) ____. The process works when electrical signals bypass the brain to tell the spinal cord what to do. The signals allow the (8) ____ to function independently (9) ____ the brain. Mr Summers said the treatment has been life-changing. "This procedure has completely changed my life. For someone who for four years was unable to (10) ____ move a toe, to have the freedom and ability to stand on my own is the most amazing feeling," he said. He added: “My sense of (11) ____-being has changed. My physique and muscle tone has improved greatly. Most people don't even believe I'm paralysed." Five other patients are also taking part in the (12) ____.

Put the correct words from the table below in the above article.

1. (a) medical (b) medics (c) medicinal (d) medical
2. (a) simulated (b) stimulated (c) simulation (d) stimulus
3. (a) run (b) walk (c) jog (d) sprint
4. (a) nervous (b) nery (c) nerves (d) nervousness
5. (a) by (b) to (c) of (d) at
6. (a) affect (b) impact (c) compact (d) impress
7. (a) stage (b) ladder (c) stair (d) consent
8. (a) bombs (b) lambs (c) combs (d) limbs
9. (a) for (b) of (c) from (d) four
10. (a) evens (b) never (c) ever (d) even
11. (a) good (b) nice (c) well (d) lovely
12. (a) trial (b) toil (c) trial (d) tile
WRITING


Write about disability for 10 minutes. Correct your partner’s paper.

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HOMEWORK

1. VOCABULARY EXTENSION: Choose several of the words from the text. Use a dictionary or Google’s search field (or another search engine) to build up more associations / collocations of each word.

2. INTERNET: Search the Internet and find out more about the spinal cord and injuries to it. Share what you discover with your partner(s) in the next lesson.

3. DISABILITY: Make a poster about disability. Show your work to your classmates in the next lesson. Did you all have similar things?

4. BREAKTHROUGH: Write a magazine article about this breakthrough. Include imaginary interviews with Rob and Professor Summers.

   Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

5. LETTER: Write a letter to an expert on disability. Ask him/her three questions about it. Give him/her three suggestions on how we can make the world more accessible for them. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.
ANSWERS

TRUE / FALSE:
a. F  b. F  c. F  d. F  e. F  f. F  g. F  h. F

SYNONYM MATCH:
1. breakthrough  a. development
2. pioneered  b. innovated
3. stimulated  c. triggered
4. spine  d. backbone
5. individuals  e. people
6. stage  f. step
7. bypass  g. go around
8. limbs  h. arms and legs
9. sense  i. feeling
10. trial  j. test

PHRASE MATCH:
1. A medical  a. breakthrough
2. Doctors pioneered  b. a special procedure
3. paralysed  c. below the chest
4. "dead" nerves in  d. Mr Summers’ spinal cords
5. going to have  e. a major impact
6. over three decades  f. of research
7. electrical signals  g. bypass the brain
8. the treatment has  h. been life-changing
9. My sense of  i. well-being
10. taking part  j. in the trial

GAP FILL:
Paralysed man takes hopeful first steps
A medical breakthrough has (1) given hope to millions of people who are unable to walk. Doctors pioneered a special procedure that electrically (2) stimulated the spine of ex-athlete Rob Summers. Mr Summers, 25, was paralysed below the (3) chest in a hit-and-run car accident in 2006. Professor Susan Harkema, of the Kentucky Spinal Cord Injury Research Center gave the revolutionary (4) treatment to “dead” nerves in Mr Summers’ spinal cords. He was able to move his legs and toes and take a (5) few steps with the help of a walking frame. Dr Harkema said: “This is a breakthrough. It opens a (6) huge opportunity to improve the daily functioning of...individuals...but we have a (7) long road ahead.” She said this is "going to have a major (8) impact" on people with disabilities.

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LANGUAGE WORK
1- d  2-b  3-a  4-c  5-c  6-b  7-a  8-d  9-b  10-d  11-c  12-a

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