

Intramuscular diaphragm stimulation for ventilator-dependent chronic respiratory failure from high spinal cord injuries

Information for the public

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There is not enough evidence about how well this procedure works or how safe it is. But it does suggest that this procedure may improve quality of life and enable people to have some ventilator-free time each day. So, it can only be done with special arrangements. This means you will have regular appointments afterwards to check how well it is working or if it has caused problems.

Some people with high spinal cord injuries cannot breathe on their own (chronic respiratory failure) because the main muscle used for breathing (the diaphragm) is paralysed. So, they need a mechanical ventilator to help them breathe. In this procedure, which involves keyhole abdominal surgery, electrodes are implanted into the diaphragm (intramuscular). Wires from the electrodes run under the skin and come out from the chest. They are connected to an external battery-operated electrical stimulation system that causes the diaphragm to contract as in normal breathing. The aim of the procedure is to stimulate and possibly strengthen the diaphragm, enabling people to breathe without a ventilator for periods of time and improving their quality of life.

You can [search the NHS website for information about consultants and hospitals](#) that offer this procedure.

Is this procedure right for me?

You should be included in [making decisions about your care](#).

Your healthcare professionals should explain the risks and benefits of this procedure and how it is done. They should discuss your options and listen carefully to your views and concerns. They should offer you more information about the procedure. Your family or carers can be involved if you want or need them to be.

You will be asked to decide whether you agree (consent) to have the procedure. Find out more about [giving consent to treatment on the NHS website](#).

Some questions to think about

- How many appointments will I need?
- What are the possible benefits? How likely am I to get them?
- What are the risks or side effects? How likely are they?
- Will I have to stay in hospital?
- What happens if it does not work or something goes wrong?
- What happens if I do not want the procedure?
- Are other treatments available?

Information and support

- [NICE's information on interventional procedures guidance](#) explains what an interventional procedure is and how we assess it.
- [NICE's information on interventional procedures recommendations](#) explains what special arrangements are.

You can also get support from your local [Healthwatch](#).

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