NICE information for the public

Deep brain stimulation for refractory epilepsy in adults

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Epilepsy causes seizures because of abnormal electrical activity in the brain. If it cannot be controlled by drugs it is called refractory epilepsy. In this procedure, electrodes are inserted through small holes drilled in the skull and placed deep into the brain. They are connected by wires to a small electrical stimulator implanted under the skin on the chest. The wires pass under the skin behind the ear and down the neck. The aim is that electrical stimulation will stop abnormal electrical activity in the brain and reduce seizures.

There is not much evidence about how well this procedure works or how safe it is for stimulating a part of the brain called the anterior thalamus. This procedure can be used to stimulate the anterior thalamus but only when patients are having regular checks to see how well it is working or if it has caused problems. This is because of the concerns about its long-term effects and complications.

For stimulating other parts of the brain, this procedure can only be done as part of a research study. This is because there is not enough evidence to be sure how well it works or how safe it is for other parts of the brain.

The NHS website may be a good place to find out more. NICE's information on HealthTech guidance has more about what a procedure is and how we assess them.

Is this procedure right for me?

If you've been offered this procedure, your healthcare professionals should discuss with you what is involved, and explain the research study, and tell you about the risks and benefits. They should talk with you about your options, and listen carefully to your views and concerns. Your family can be involved too, if you wish. All of this should happen before you agree (consent) to have the procedure and to be in the study. You should also be told how to find more information about the procedure. Read more about making decisions about your care.

Some questions to think about

- What does the procedure involve?
- What are the possible benefits? How likely am I to get them?
- What are the risks or side effects? How likely are they?
- What happens if the procedure doesn't work or something goes wrong?
- What happens if I don't want the procedure? Are there other treatments available?

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