

Direct Current Stimulation



What the fact sheet covers:

- What is Direct Current Stimulation (DCS)?
- When is DCS used?
- Using DCS to treat depression
- How long does it take for DCS to work?
- The side effects of DCS
- What is the cost?

What is Direct Current Stimulation?

Direct Current Stimulation (DCS) is a very mild form of brain stimulation. The stimulation is short and continuous (for 30 minutes). It is painless and given while the person is awake.

When is Direct Current Stimulation used?

DCS (Direct Current Stimulation) is a potential treatment for depression, offered as an alternative to antidepressants and ECT. Research suggests that DCS may have an antidepressant effect when applied over the frontal areas of the brain.

Using Direct Current Stimulation to treat depression

The beneficial effects of Direct Current Stimulation on mood have been reported since the 1960s and 1970s. A large research trial in Sydney at the Black Dog Institute, which compared DCS with a placebo, provided further evidence that it has antidepressant effects. Multiple recent analyses combining results across different trials of DCS for treating depression also indicate DCS is an effective treatment although further research is needed to optimise its use. It is thought that DCS works by modifying and correcting brain activity levels (e.g. increase brain activation in areas that are underactive or reduce brain activation in areas that are overactive).



Like any sort of treatment, DCS is not suitable for everyone. Within clinical research trials, care is taken to screen participants to ensure that the treatment is suitable for them and there is a likelihood of responding to the treatment. Both the mood of the participants and the stimulation are carefully monitored during the treatment.

How long does Direct Current Stimulation take to work?

The stimulation takes 30 minutes per session and is done every day. A course of at least four weeks is recommended for therapeutic results.

Are there any side effects?

Direct Current Stimulation is delivered with little or no sensation for the participant, and is painless. Some people may feel a slight itching sensation below one or both of the pads.

When will Direct Current Stimulation be available for widespread use?

Direct Current Stimulation is currently under clinical trial but if research continues to provide promising results it should be available in the next five years.

What is the cost involved?

Treatment is provided on a fee for service basis and includes infrastructure, treatment, and one-off training (for use of the tDCS equipment) costs. Please call 9382 9262 or email TMSandDCS@unsw.edu.au for further information.

Where can I find out more information?

Phone: (02) 9382 2987

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