

Direct Current Stimulation



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 an emerging treatment for depression. A significant volume of research suggests that a course of tDCS treatments is useful in treating depression. tDCS can be given in conjunction with medications and psychological therapy for depression and best results are often obtained with a combination therapy approach.

Using Direct Current Stimulation to treat depression

The beneficial effects of Direct Current Stimulation on mood have been reported since the 1960s and 1970s. The first randomised controlled trials of tDCS in depression in Australia were conducted by researchers at the University of NSW and the Black Dog Institute, led by Professor Colleen Loo, which compared DCS with a placebo and provided further evidence that tDCS has antidepressant effects. It is thought that DCS works by working and correcting brain circuit function. Like any treatment, DCS is not suitable for everyone. Care is taken to screen patients to ensure that the treatment is suitable for them and there is a likelihood of responding to the treatment. Both the mood of the patients and the stimulation are carefully monitored during the treatment course.

What is Home Administered tDCS?

The patient is taught how to set up the tDCS equipment and position the treatment electrodes (held in place by a head band). The patient is provided with an instruction booklet, a tDCS stimulator specially designed for home-based treatment, band, electrode wires, electrodes, saline and sponges to take home. Further assistance in set up is provided by video link for the first few treatments. The machine is pre-programmed with stimulation parameters and these cannot be altered by the patient. For any treatment to proceed a code must be entered into the tDCS unit. The code is only provided by the clinic team, after the patient has filled out an online diary for each treatment.

How long does Direct Current Stimulation take to work?

The stimulation takes 30 minutes per session and is usually done every day during the acute course. An acute course of at least 4-6 weeks is recommended for therapeutic results and taper/maintenance sessions are often recommended for patients who experience a good response. Every patient is different; some have responded in less than two weeks, others in months, and some do not respond at all.



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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 or tingling sensation below one or both of the pads.

What is the cost involved?

Treatment is provided on a fee for service basis and is comprised of an infrastructure fee and a per treatment fee. Please call 9382 8318 or email TMSandDCS@unsw.edu.au for further information.

Do I need a referral for the Sydney Neurostimulation Centre?

Yes, a referral from a psychiatrist or GP is required. It is important that a thorough psychiatric evaluation is undertaken for each patient to determine if DCS is a suitable treatment. The referral letter should describe in detail your psychiatric and treatment history and any general medical conditions.

Where to get more information

Phone: (02) 9382 8318

Email: TMSandDCS@unsw.edu.au

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