



mindalive inc



[TRANSCRANIAL DC STIMULATION]

[PROTOCOL GUIDE]

For use with the Oasis Pro

WARNING/WAIVER

Transcranial DC Stimulation is very powerful and if applied improperly, may cause mental impairments and behavioral dysfunction. The tDCS sessions are to be used only by qualified clinicians who have a thorough understanding of tDCS and the clinical ability to recognize and treat any adverse reactions resulting from usage of tDCS. Mind Alive Inc., and its employees will not be responsible for any undesirable side effects that may be caused by the use of this device. We recommend that all clients sign a waiver before use. It is the responsibility of the clinician to determine proper electrode placement and appropriate and safe current usage. Mind Alive Inc. does not claim any medical benefits from the use of tDCS nor claim to have any expertise in the use of tDCS. The use of the Oasis Pro as a tDCS device is solely the responsibility of the user.

If you would like more information about our products and research on AVE and CES, visit our website at www.mindalive.com. If you require additional assistance, please call us toll free at 1-800-661-MIND(6463). Outside Canada and the U.S., please call 780-465-6463.

All rights reserved
Reproduction in whole or in part is forbidden without
the express written consent of Mind Alive Inc.

© 2003-2024
Mind Alive Inc.
Edmonton, Alberta, Canada

***GO ONLINE TO VIEW THIS MANUAL AT
<https://mindalive.com/manuals/>***

Version 2, Revision 13
March 2024

WHAT IS tDCS

When a DC current is applied over the scalp with the intention of altering neuronal activity, it is known as transcranial DC Stimulation. tDCS is effective in modulating spontaneous neuronal firing. Applying tDCS at intensities of 1 milliamp for roughly 20 minutes has been shown to either excite or inhibit the sensori-motor cortex, with the effects typically lasting a few hours. However, effects from repeated use may be permanent.

Anodal stimulation has also been shown to increase both beta and gamma activity in the visual cortex, while cathodal stimulation has decreased beta and gamma activity. Stimulation is generated by putting a wet cloth, cotton ball, or sponge on the scalp over the brain regions to be affected and/or a sponge or cotton ball on the shoulder or the face. The tDCS sessions deliver a maximum intensity of 2.2 milliamps. To determine electrode placement and intensity to use, you will need to consult research. See **Dave's tDCS article** at:

<https://mindalive.com/tdcs/>

The effectiveness and comfort of the Oasis Pro tDCS is based on a current density of $50 \mu\text{A}/\text{cm}^2$ for the small and long thin active electrodes, and less than $20\mu\text{A}/\text{cm}^2$ for the large reference electrode. The active electrode/sponge contact area is approximately 20 cm^2 . A current of $1\text{mA}/20 \text{ cm}^2 = 50\mu\text{A}/\text{cm}^2$. The reference electrode/sponge contact area is approximately 60 cm^2 . A current of $1\text{mA}/60 \text{ cm}^2 = 17\mu\text{A}/\text{cm}^2$.





Therefore, we recommend using the 1mA session with the electrodes provided with this kit. Using currents higher than 1mA with the electrodes provided may cause discomfort with no clinical gains.

Neuronal excitation of 30 to 40% is achieved by anodal (+) stimulation, while inhibition of 20 to 30% is achieved by cathodal (-) stimulation.

tDCS SESSIONS

STARTING A SESSION

The tDCS sessions on the Oasis Pro have their own session group to distinguish them from CES/MET sessions.

Tap  until the tDCS light comes on. Use the INT  or  to highlight a tDCS session and press  to start the session.

There are six (6) tDCS sessions: 0.25mA, 0.50mA, 0.75mA, 1.00mA, 1.50mA, and 2.00mA. Each of these sessions is 20 minutes long. Additionally, two slots are available to store custom tDCS sessions ($\oplus 1$ and $\oplus 2$).



SUGGESTED PLACEMENTS

For use with the 1mA session, using the provided carbon electrodes.

| Application | Anode | Cathode |
|--|---|---------------------------------|
| Anxiety/Depression | F3 | F4 or Right Shoulder |
| Cingulate Issues - OCD | FZ & CZ , CZ &PZ (long thin electrode) | Base of Neck or under Chin |
| Prefrontal Lobe - Cognition/Alertness | FP1 FP2 | Right shoulder Left Shoulder |
| Boost Attention | FP1 & FP2 (long thin electrode) | Base of the Neck |
| Math | P4 | P3 |

*Brodmann Area brain charts can be used as a reference
for electrode placement.*

Available online at

https://en.wikipedia.org/wiki/Brodmann_area

USING tDCS

CONNECTION TEST

When a tDCS session first starts, the OASIS Pro checks the electrical connection by entering test mode just as it does for the CES sessions. The graph will display one of the following codes to indicate the status of the connection. **The tDCS session will begin automatically only when a good connection is detected.**

| Open/Bad Connection (blinking) | Good Connection (solid) |
|--------------------------------|-------------------------|
| 8 | 8 |
| 7 | 7 |
| 6 | 6 |
| 5 | 5 |
| 4 | 4 |
| 3 | 3 |
| 2 | 2 |
| 1 | 1 |

*tDCS will only run with a **good** connection rating.*


If a bad connection is detected, please adjust the electrodes, re-wet the sponges, or add salt to the water to achieve a better connection.

While the Oasis Pro is resetting the $\Rightarrow \Leftarrow$ and $\Rightarrow \Leftarrow$ lights may turn on. This is to reduce the reset time. No stimulus is being generated.

If an open connection is detected during a session, the Oasis Pro will pause the output and wait for the electrodes to be reconnected. The open connection error (red) will display for a couple of seconds. The graph may scroll up and down indicating that the unit is returning the voltage to a safe testing level; this may take up to 20 seconds. If a connection is not made within two (2) minutes, the Oasis Pro will shut off.

USING tDCS

IMPORTANT

If at any time the client has an adverse reaction, disconnect one or both electrodes or unplug the cable to pause the session. You may also press the power button  to end the session. Unlike CES, the intensity cannot be manually adjusted, and preferences cannot be set for tDCS sessions.

ELECTRODE PLACEMENT AND SETUP

In order to perform tDCS, you must always connect two electrodes to the body in order to have a complete circuit. Your tDCS kit includes a high-quality cable with pin connectors. There are also four carbon electrodes: two small, one large, and one long thin. Place a small electrode over the specific site to be treated. Use long thin electrode for treating two sites simultaneously such as FP1 and FP2 (for ADHD) or FZ and CZ, then CZ and PZ (for OCD). Use the large electrode as the receiver to complete the circuit.

Soak the sponges in tap water or an appropriate saline solution. Put the small electrode inside the sponge pouch and place it on the area of the head being treated. Place the large electrode inside the large sponge pouch on the opposite side of the body (eg. opposite side of the head, face, or opposite shoulder). Use the headband to secure the sponges and electrodes to the head.

Red pin is anodal (+), which enhances neuronal activity.

Appropriate saline solutions include contact lens saline solution, or a mixture of salt and tap water (½ tsp/ 500 ml).

HARDWARE SETUP

ACCESSORIES INCLUDED

- ✓ Stimulus Cable with Pin Connectors
- ✓ 1 Large Reference Electrode/Sponge Pouch (60 cm²)
- ✓ 2 Small Square Stimulation Electrodes/Sponge Pouches (20 cm²)
- ✓ 1 Long Thin Stimulation Electrode/Sponge Pouch (20 cm²)
- ✓ 2 Headbands
- ✓ tDCS Protocol Guide for Oasis Pro

EQUIPMENT CARE

- Unplug pin cable from the device after the session is complete.
- Rinse sponges with mild soapy water before first use and after each use to keep clean.
- To sanitize, soak in a mixture of hydrogen peroxide and water in a 1:5 ratio (i.e. 1 tbs of hydrogen peroxide to 5 tbs of water)
- Hang sponge (pouches) to dry completely. Do not lie flat.
- Wash headbands by hand in warm soapy water and hang them to dry.



Mind Alive Inc.

6716 75 St NW
Edmonton, Alberta
Canada T6E 6T9

800.661.MIND(6463)
780.465.MIND(6463)
info@mindalive.com
www.mindalive.com