

Supplemental Material S1. Copy of survey.

[This version reflects content but not exact format, as survey was online. Skip logic is italicized in brackets.]

Survey of Receptiveness to Transcranial Direct Current Stimulation in People with Post-stroke Aphasia

The purpose of this survey is to find out how people with aphasia (after stroke) feel about transcranial direct current stimulation (tDCS). tDCS may change how the brain works and help aphasia.

You must be at least 18 years old to complete this survey. You also must have aphasia because you had a stroke.

This survey could take 10 to 15 minutes, or longer if reading is hard. It is okay to have help, but the answers should be yours.

This survey is anonymous. We will not know who you are or the answers you give.

This survey is voluntary. You do not have to take it. If you start, you do not have to finish it.

Benefits: There are no direct benefits to you from this survey. It will help the researchers understand more about how people with aphasia feel about tDCS. This may help other people with aphasia in the future.

Risks: There are no significant risks from taking this survey. Some of the questions may seem nosy or personal.

If you have any questions, you can contact Susan Duncan at duncan1@lsu.edu or (225) 578 - 8838. You can also contact Neila Donovan at ndonovan@lsu.edu or (225) 578 - 3938.

You can also contact the Institutional Review Board at LSU if you have additional concerns at irb@lsu.edu or (225) 578 - 8692.

Clicking the "—>" arrow at the bottom right of the page means that you have read or been read the information in this consent. It also means that you agree to participate in this study and that your questions have been answered. We will give you a copy of this statement if you contact us.

Please click the "—>" arrow to start the survey.

1. What is your sex?

- ☐ Female ☐ Male ☐ Other / Prefer not to say

2. What is your age?

- ☐ 18 - 29 ☐ 30 - 39 ☐ 40 - 49 ☐ 50 - 59
☐ 60 - 69 ☐ 70 - 79 ☐ 80+ ☐ Prefer not to say

3. What is your race? (Can choose more than one.)

- ☐ Asian ☐ American Indian or Alaska Native
☐ Black or African American ☐ Hispanic or Latino
☐ White ☐ Native Hawaiian or Pacific Islander
☐ Other ☐ Prefer not to say

4. How much school did you attend? (Choose highest level.)

- ☐ I did not finish high school ☐ High school graduate (diploma / GED)
☐ Technical school / certificate program ☐ Some college (no degree)
☐ Associate degree in college (2-year) ☐ Bachelor's degree in college (4-year)
☐ Master's degree (MA, MS, MBA, MFA, etc.) ☐ Doctoral degree (PhD, etc.)
☐ Professional degree (JD, MD) ☐ Prefer not to say

5. Do you work?

- ☐ Yes ☐ No ☐ Prefer not to say

5A. What is or was your job? (Can include more than one answer, or the job you had for longest.)
[Displayed only if Question 5 response is not "Prefer not to say"]

6. What is your annual household income? (Before taxes. It is okay to guess.)

- ☐ \$0 - 9,999 ☐ \$10,000 - 24,999
☐ \$25,000 - 49,999 ☐ \$50,000 - 74,999
☐ \$75,000 - 99,999 ☐ \$100,000 - 149,999
☐ 150,000 + ☐ Prefer not to say

7. Where do you live?

▼ Alabama ... I do not live in the United States

Q7A. In which country do you live? *[Displayed only if Question 7 response is "I do not live in the United States"]*

▼ Afghanistan ... Prefer not to say

8. Have you had more than one stroke?

- ☐ Yes ☐ No ☐ I don't know

9. How long ago was the stroke that caused aphasia?

- ☐ less than one month ☐ 1 - 3 months
☐ 3 - 6 months ☐ 6 months - 1 year
☐ 1 - 2 years ☐ 2 - 5 years
☐ 5 - 10 years ☐ 10 years +

10. How much speech therapy have you had?

- ☐ Less than 2 weeks ☐ 2 weeks - 1 month
☐ 1 - 3 months ☐ 3 - 6 months
☐ 6 months - 1 year ☐ 1 - 2 years
☐ 2 - 5 years ☐ 5 years +
☐ I have never had speech therapy

10A. Are you in speech therapy now? *[Displayed only if Question 10 response is not "I have never had speech therapy"]*

- ☐ Yes ☐ No

10B. Is speech therapy helping you? *[Displayed only if Question 10A response is "Yes"]*

- ☐ Yes ☐ No ☐ Maybe

10C. Would you like to be in speech therapy? *[Displayed only if Question 10 response is "I have never had speech therapy" or Question 10A response is "No"]*

- ☐ Yes ☐ No ☐ Maybe

11. Do you have any of the following medical conditions?

	Yes	No	Maybe
History of seizures or epilepsy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
History of migraines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
History of severe head injury	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skin problem like eczema or psoriasis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pacemaker or other electrical implant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metal in the skull (besides tooth fillings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psychiatric or neurological diagnosis (besides stroke)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. The following questions describe a variety of situations in which you might need to speak to others. For each question, please mark how much your condition interferes with your participation in that situation. By “condition” we mean ALL issues that may affect how you communicate in these situations including speech conditions, any other health conditions, or features of the environment. If your speech varies, think about an AVERAGE day for your speech – not your best or your worst days.

Does your condition interfere with...	Not at all	A little	Quite a bit	Very much
a. ...talking with people you know?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. ...communicating when you need to say something quickly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. ...talking with people you do NOT know?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. ...communicating when you are out in your community (e.g. errands; appointments)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. ...asking questions in a conversation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. ...communicating in a small group of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. ...having a long conversation with someone you know about a book, movie, show or sports event?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. ...giving someone DETAILED information?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. ...getting your turn in a fast-moving conversation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. ...trying to persuade a friend or family member to see a different point of view?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reference: Baylor, C., Yorkston, K., Eadie, T., Kim, J., Chung, H., & Amtmann, D. (2013). The Communicative Participation Item Bank (CPIB): Item bank calibration and development of a disorder-generic short form. *Journal of Speech, Language, and Hearing Research*, 56(4), 1190-1208.

Transcranial direct current stimulation (tDCS) is a form of brain stimulation. It uses weak electrical currents, like a battery. Two or more electrodes are placed on the head to change brain activity.

tDCS has been used over 30,000 times on more than 1,000 people. No one has ever had a serious injury. tDCS has been used on people who have had strokes and have aphasia.

tDCS is experimental. It has helped some people with aphasia. But we do not really know how well it works.

This is a picture of tDCS electrodes on a head model. There are straps to hold the electrodes in place:

References:

Baker, J. M., Rorden, C., & Fridriksson, J. (2010). Using transcranial direct-current stimulation to treat stroke patients with aphasia. *Stroke*, 41(6), 1229-1236.

Bikson, M., Grossman, P., Thomas, C., Zannou, A. L., Jiang, J., Adnan, T., ... & Brunoni, A. R. (2016). Safety of transcranial direct current stimulation: evidence based update



2016. *Brain stimulation*, 9(5), 641-661.

Fridriksson, J., Basilakos, A., Stark, B. C., Rorden, C., Elm, J., Gottfried, M., ... & Bonilha, L. (2018). Transcranial direct current stimulation to treat aphasia: Longitudinal analysis of a randomized controlled trial. *Brain Stimulation: Basic, Translational, and Clinical Research in Neuromodulation*.

13. Have you heard of transcranial direct current stimulation (tDCS) before?

☐ Yes ☐ No ☐ I'm not sure

13A. Have you ever had tDCS? *[Displayed only if Question 13 response is "Yes"]*

☐ Yes ☐ No ☐ I'm not sure

14. Would you consider having tDCS if it could help your aphasia?

☐ Yes ☐ No ☐ Maybe

14A. Would you be willing to do speech therapy exercises during tDCS? *[Displayed only if Question 14 response is not "No"]*

☐ Yes ☐ No ☐ Sometimes

14B. Would you come to a clinic or office regularly for tDCS? *[Displayed only if Question 14 response is not "No"]*

☐ Yes ☐ No ☐ Maybe

14C. How often would you be willing to come to the clinic or office for tDCS? *[Displayed only if Question 14 response is not "No" and Question 14B response is not "No"]*

- | | |
|--|---|
| <input type="checkbox"/> Less than once a week | <input type="checkbox"/> Once a week |
| <input type="checkbox"/> Twice a week | <input type="checkbox"/> Three or four times a week |
| <input type="checkbox"/> Five + times a week | |

14D. How long should the clinic or office sessions be? *[Displayed only if Question 14 response is not "No" and Question 14B response is not "No"]*

- | | |
|--|--|
| <input type="checkbox"/> 15 - 30 minutes | <input type="checkbox"/> 30 - 45 minutes |
| <input type="checkbox"/> 45 - 60 minutes | <input type="checkbox"/> 60 - 90 minutes |
| <input type="checkbox"/> 90 + minutes | |

14E. How long would you be willing to come to the clinic or office for tDCS? *[Displayed only if Question 14 response is not "No" and Question 14B response is not "No"]*

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> 1 - 2 weeks | <input type="checkbox"/> 3 - 4 weeks |
| <input type="checkbox"/> 1 - 3 months | <input type="checkbox"/> 3 - 6 months |
| <input type="checkbox"/> 6 months - 1 year | <input type="checkbox"/> 1 + years |
| <input type="checkbox"/> Forever, if it helped | |

14F. Would you or your family be willing to administer tDCS at HOME after training? *[Displayed only if Question 14 response is not "No"]*

- ☐ Yes ☐ No ☐ Maybe

14G. How often would you be willing to get tDCS at HOME? *[Displayed only if Question 14 response is not "No" and Question 14F response is not "No"]*

- | | |
|--|---|
| <input type="checkbox"/> Less than once a week | <input type="checkbox"/> Once a week |
| <input type="checkbox"/> Twice a week | <input type="checkbox"/> Three or four times a week |
| <input type="checkbox"/> Five + times a week | |

14H. How long should the HOME sessions be? *[Displayed only if Question 14 response is not "No" and Question 14F response is not "No"]*

- | | |
|--|--|
| <input type="checkbox"/> 15 - 30 minutes | <input type="checkbox"/> 30 - 45 minutes |
| <input type="checkbox"/> 45 - 60 minutes | <input type="checkbox"/> 60 - 90 minutes |
| <input type="checkbox"/> 90 + minutes | |

14I. How long would you be willing to use tDCS at HOME? *[Displayed only if Question 14 response is not "No" and Question 14F response is not "No"]*

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> 1 - 2 weeks | <input type="checkbox"/> 3 - 4 weeks |
| <input type="checkbox"/> 1 - 3 months | <input type="checkbox"/> 3 - 6 months |
| <input type="checkbox"/> 6 months - 1 year | <input type="checkbox"/> 1 + years |
| <input type="checkbox"/> Forever, if it helped | |

14J. What TEMPORARY risks would you be willing to take to help your aphasia? *[Displayed only if Question 14 response is not "No"]*

	Yes	No	Maybe
Scalp tingling / Itching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scalp redness / Irritation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sleepiness / Fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mood change / Difficulty concentrating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Burning sensation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scalp burn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electric shock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seizure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Did you have assistance completing this survey?

- ☐ Yes ☐ No

15A. Who helped you? *[Displayed only if Question 15 response is "Yes"]*

- | | |
|--|---|
| <input type="checkbox"/> Spouse or partner | <input type="checkbox"/> Parent (father or mother) |
| <input type="checkbox"/> Child (son or daughter) | <input type="checkbox"/> Friend |
| <input type="checkbox"/> Speech therapist | <input type="checkbox"/> Other (please specify relationship to you) |
