

# Translated Research Article in Plain Language

by the University Center for Excellence in Developmental Disabilities

## Key Words:

**Brain-computer interface (BCI) systems:** BCI systems allow people to control a computer or other electronic equipment using only signals from their brain. Some people with disabilities have a hard time talking and moving parts of their body to let others know their thoughts, feelings, and needs, or to get around and do day-to-day things. BCI systems could help them control assistive technology using their brains, without moving their muscles.



## What is the name of the article?

Trends in research participant categories and descriptions in abstracts from the International BCI Meeting series, 1999 to 2016.



## Who are the authors of the study?

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## What was the goal of this study?

There were six International BCI Meetings from 1999 to 2016 that brought researchers together from all over the world to share about their work on BCI systems. This research looked at the BCI studies shared at those meetings, and how many of them had people with disabilities as participants and testers. Another goal was to see how people with disabilities taking part in these studies were described (for example, their diagnoses and communication needs).

## What did we find?

We looked at a total of 627 studies from the six meetings. Over half of the research studies were about BCI systems that could help people with disabilities with things like communication or wheelchair control. However, only 22 percent of the studies had people with disabilities as participants.

## What did we learn?

BCI systems are often tested by people without disabilities, even if they are meant to help people with disabilities. Over the six years, researchers did start to do a better job of describing study participants with disabilities. Better descriptions are still needed.

## Why is this important?

People with disabilities will be using BCI systems. That is why it is important for them to be part of creating and making them better. People with disabilities should be testing the systems since they may have different wants and needs than people without disabilities. Researchers should give good descriptions of the people who take part in their studies so we can learn more about what kinds of BCI systems work well for what kinds of needs.

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