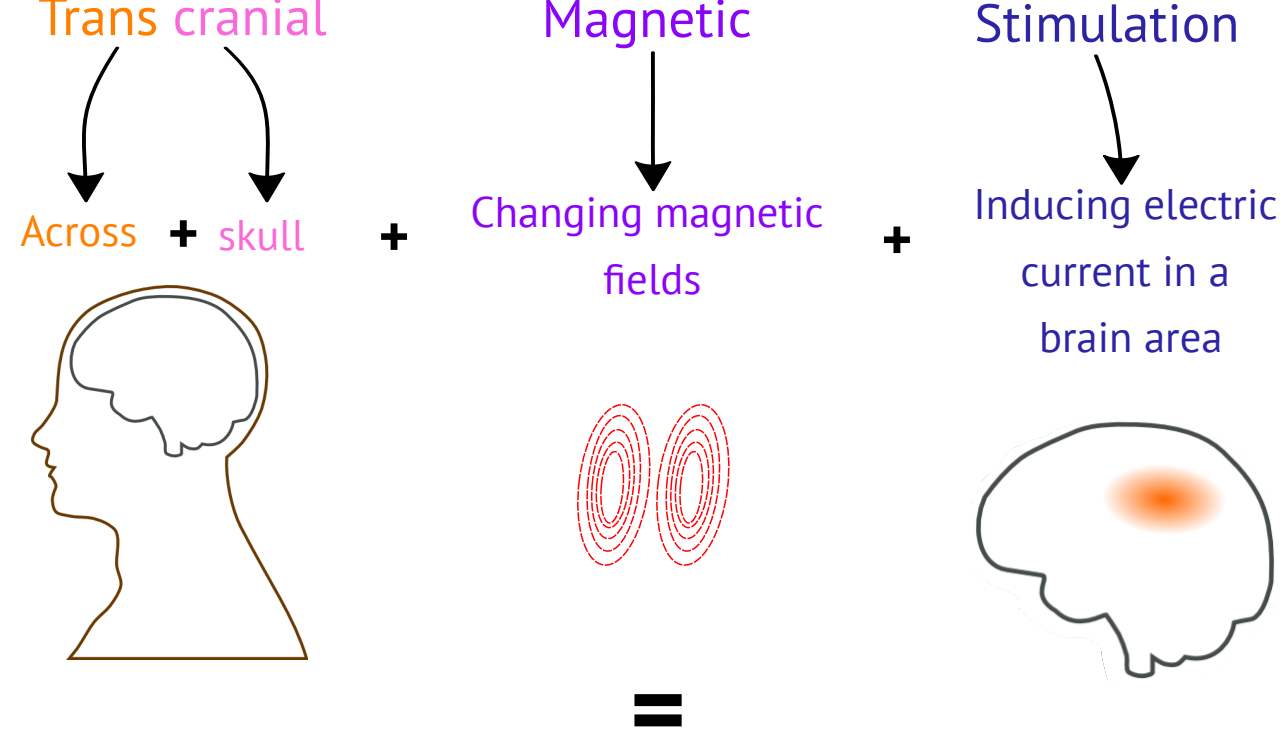


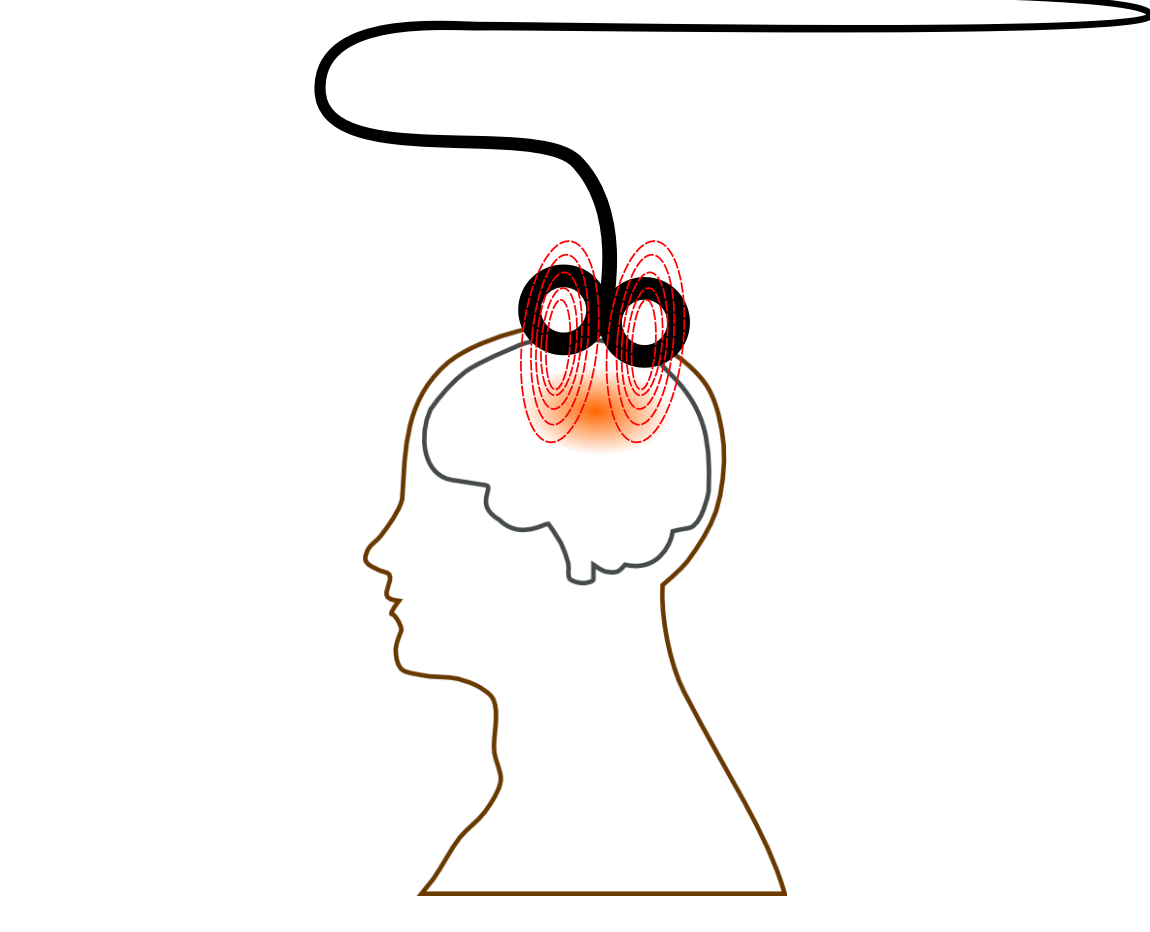
What is TMS?

TMS stands for:

Transcranial
Magnetic
Stimulation



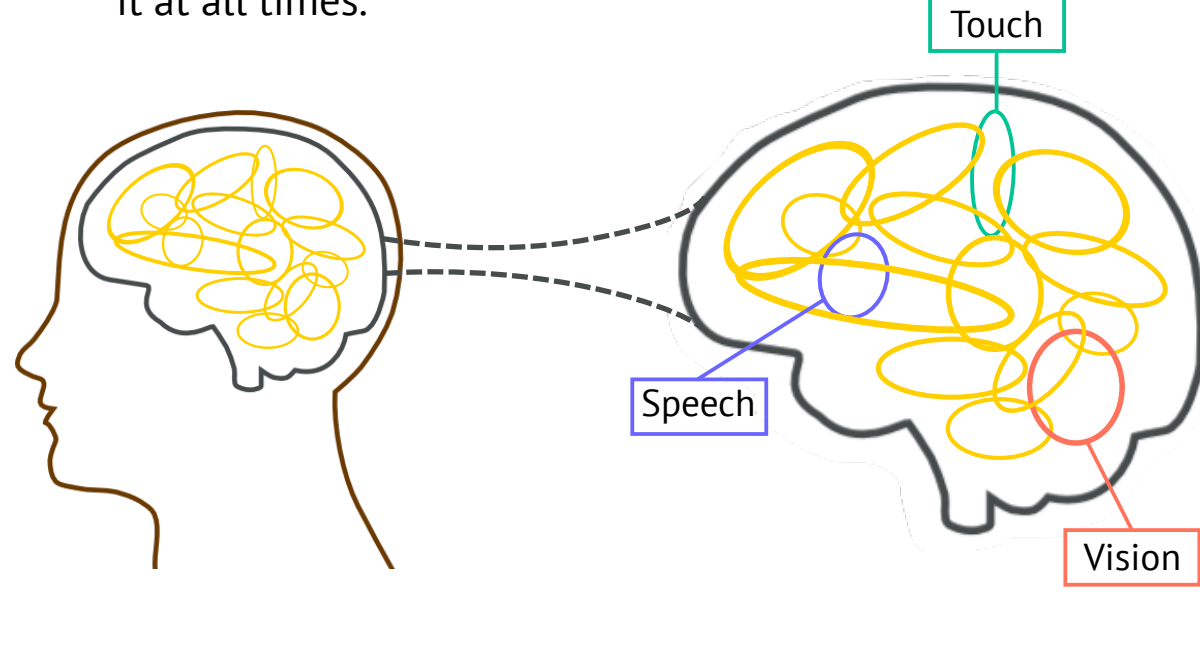
Inducing electric current in a brain area by changing magnetic fields across the skull



What does TMS do to the Brain?

Your brain is a tangle of electrical circuits with current running through it at all times.

These circuits are grouped by the function they perform.

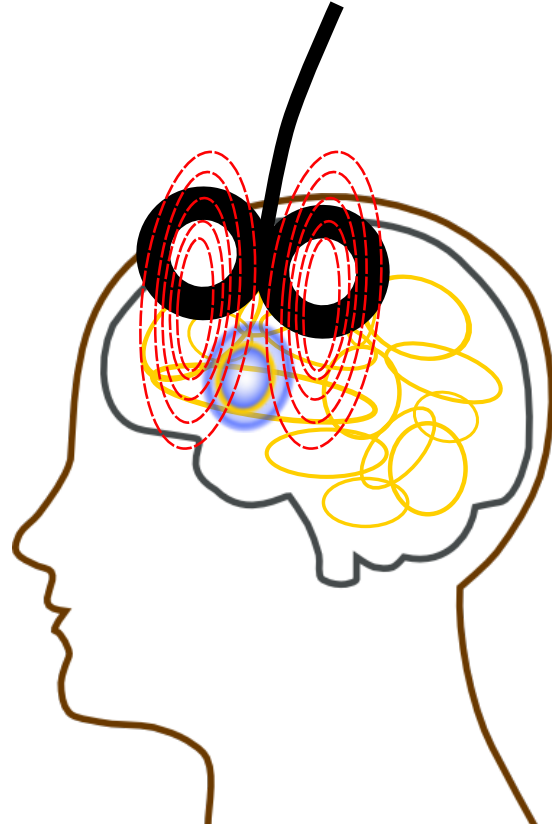


The electrical current increases in the group of circuits involved in performing that function.

Like when talking.

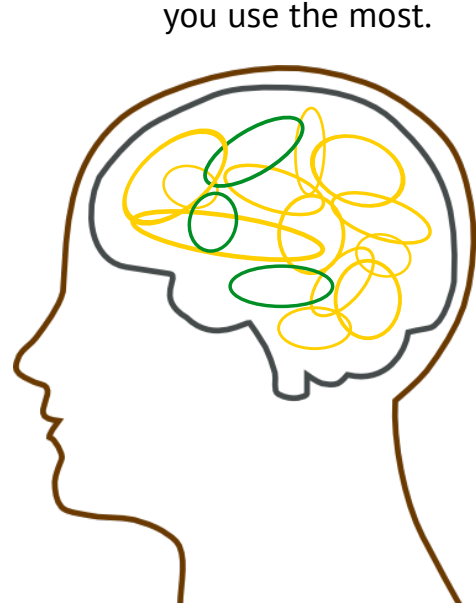


TMS allows us to temporarily increase or decrease the electrical current in a targeted group of circuits that are important for a certain function.

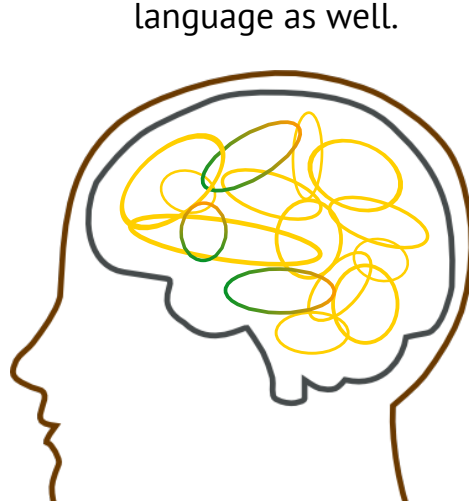


What do we use TMS for?

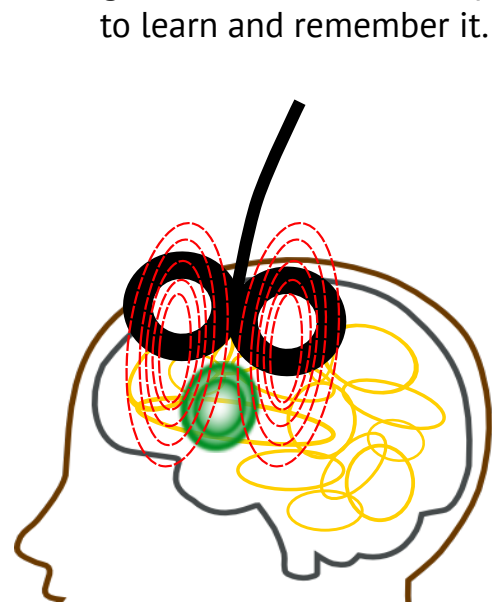
Certain circuits are responsible for the ability to understand and produce language. These circuits become finely tuned to the first language you learned and the language you use the most.



Learning a new language as an adult is so difficult because these circuits have become strongly tuned to the language someone grew up with. But as someone practices the new language more and more, the circuits start becoming tuned to that language as well.



If we use TMS to stimulate those circuits while someone is trying to learn a new language, since the circuits are far better tuned to the person's native language, they're less likely to take in information about the new language, making it much harder for the person to learn and remember it.



By applying TMS to the various circuits that are responsible for learning and remembering new languages, we can determine which circuits correspond to which components of the language that's being learned depending on which components the TMS interfered with.