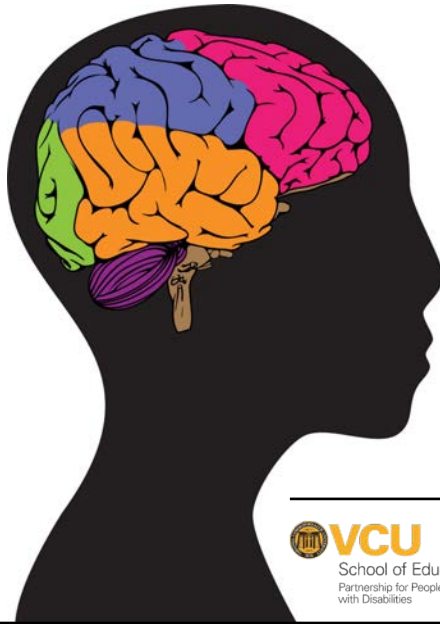


June 4, 2019 • Talks on Tuesdays Webinar



NEUROTYPICAL Brain Development:

*“How Different Is It
from Autism, ADHD,
Language Delay, etc.?”*

PRESENTED BY
John W. Harrington, MD



Call: 1-866-845-1266
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John W. Harrington, MD

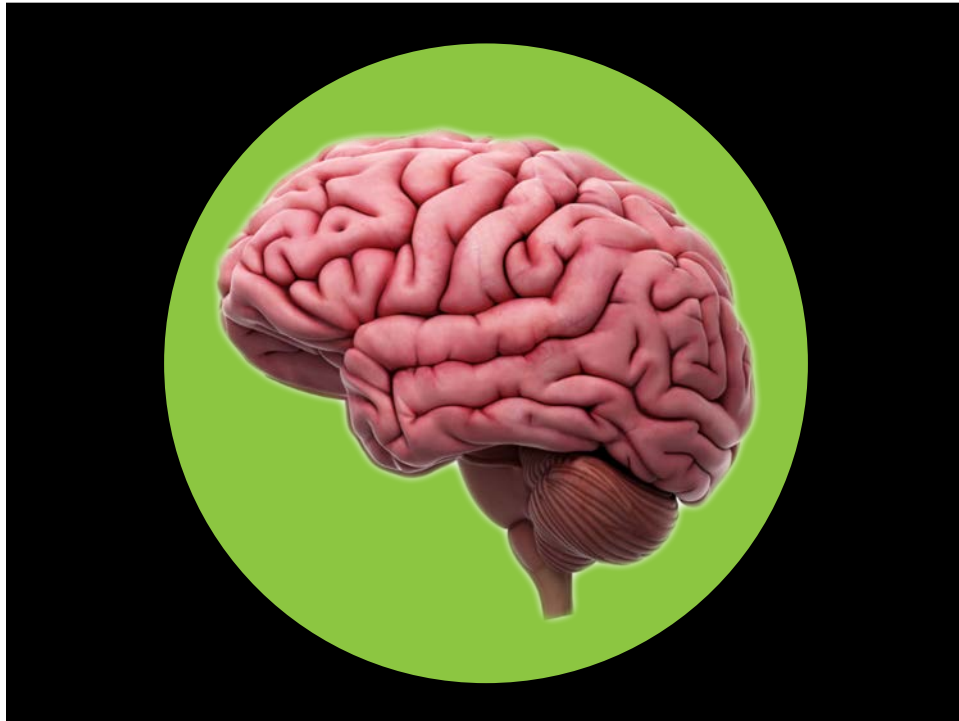
Professor of Pediatrics
Director of General Academic
Pediatrics
Children's Hospital of
The King's Daughters
Eastern Virginia Medical School

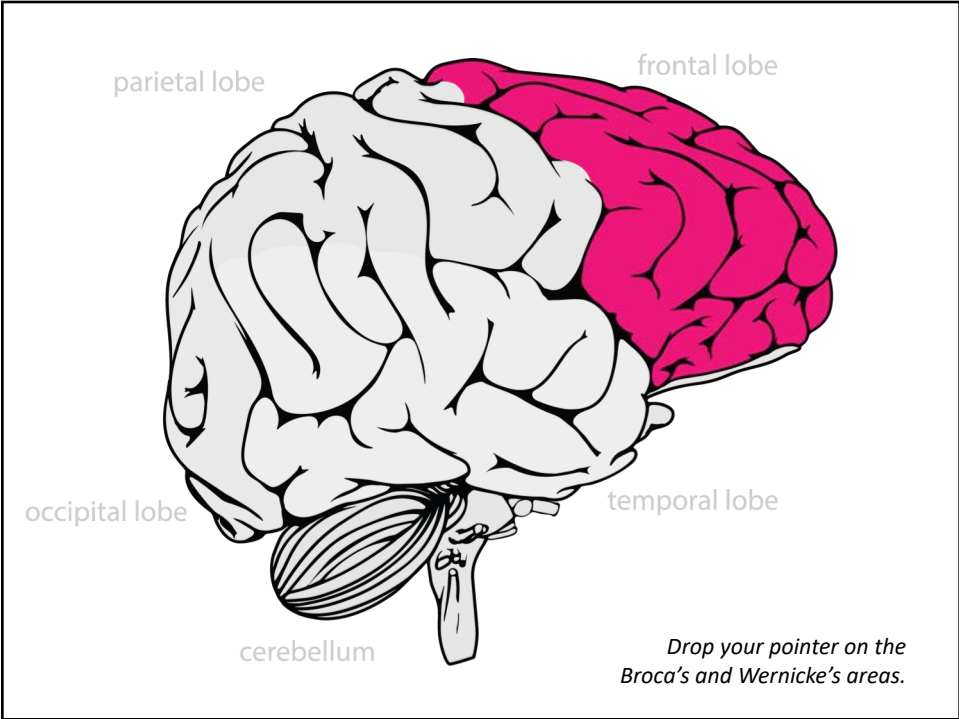
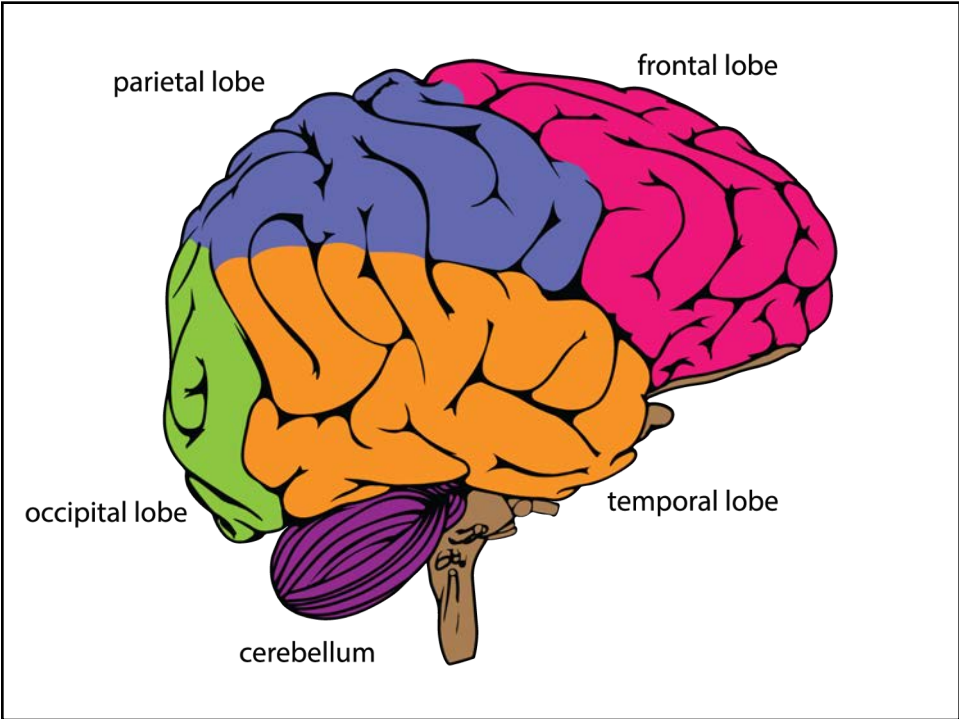


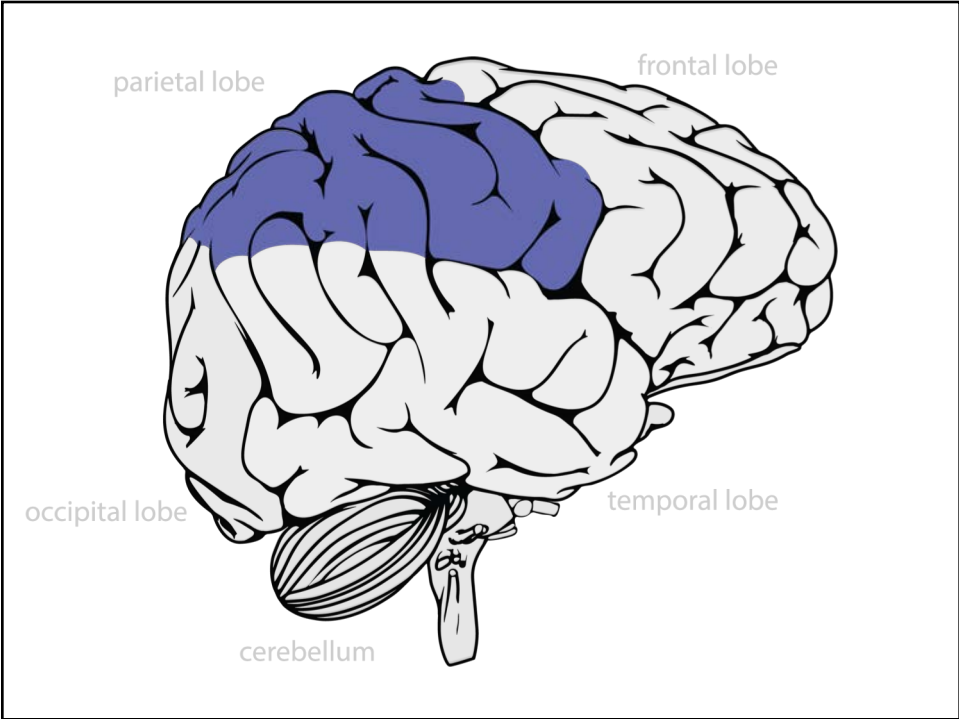
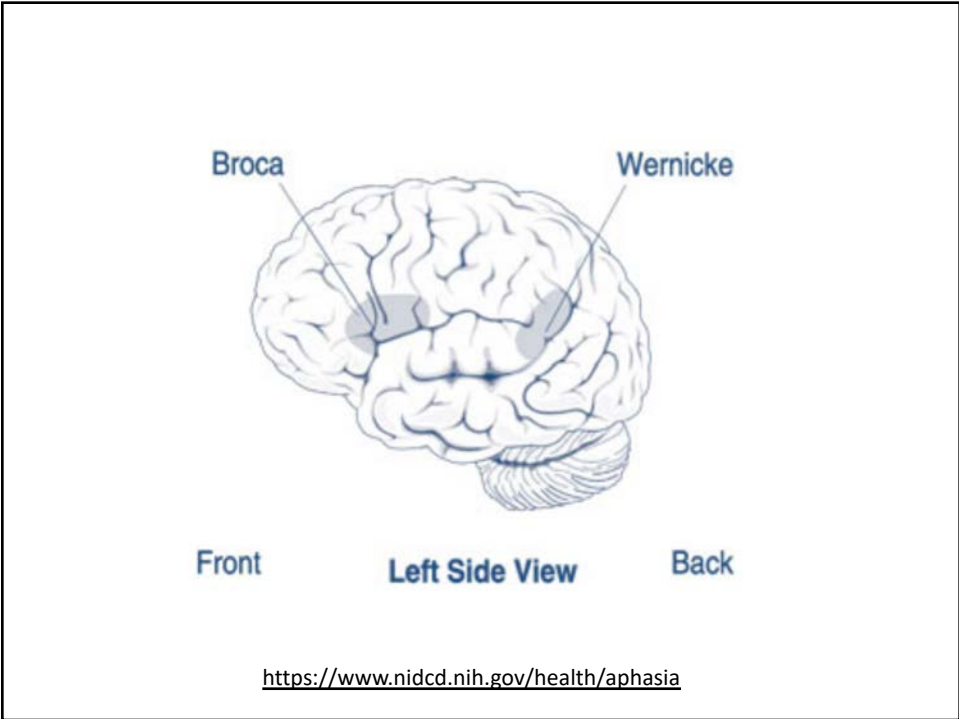
Brain Tutorial

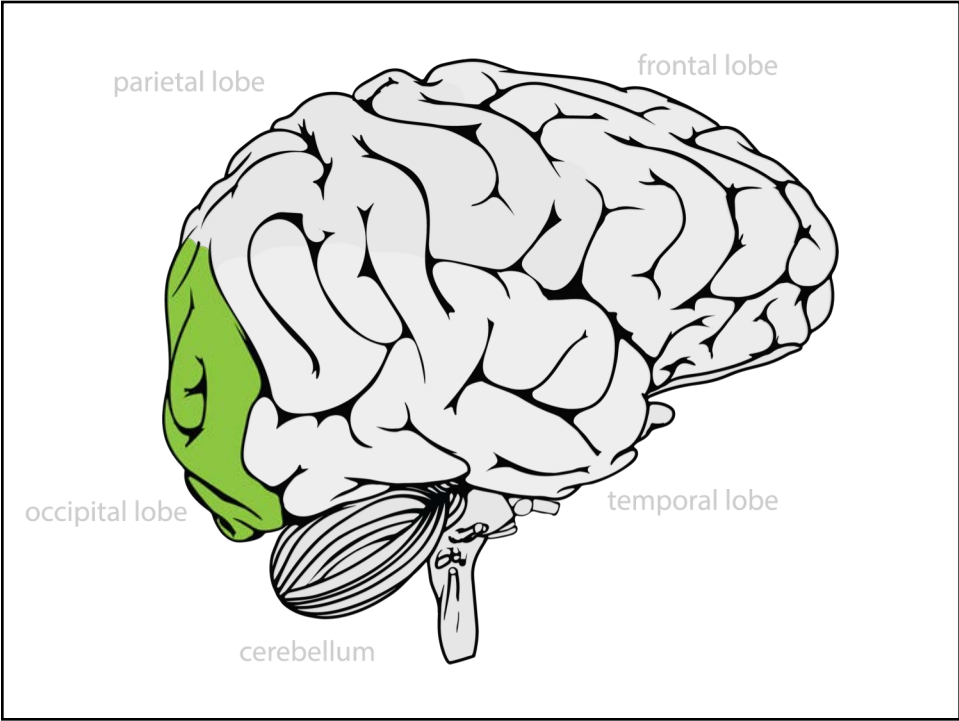
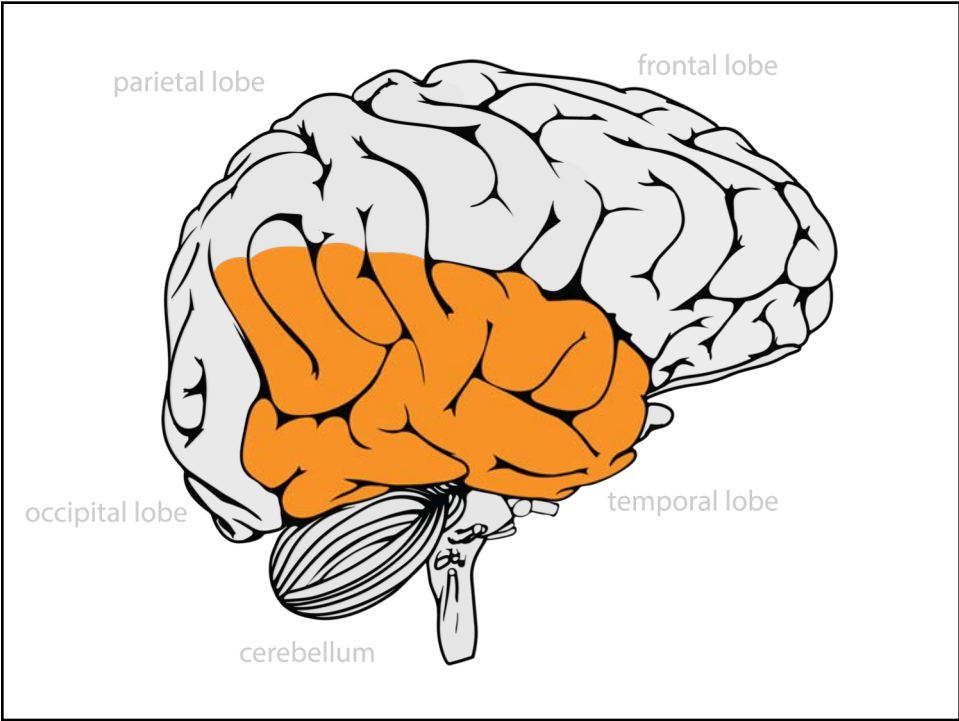


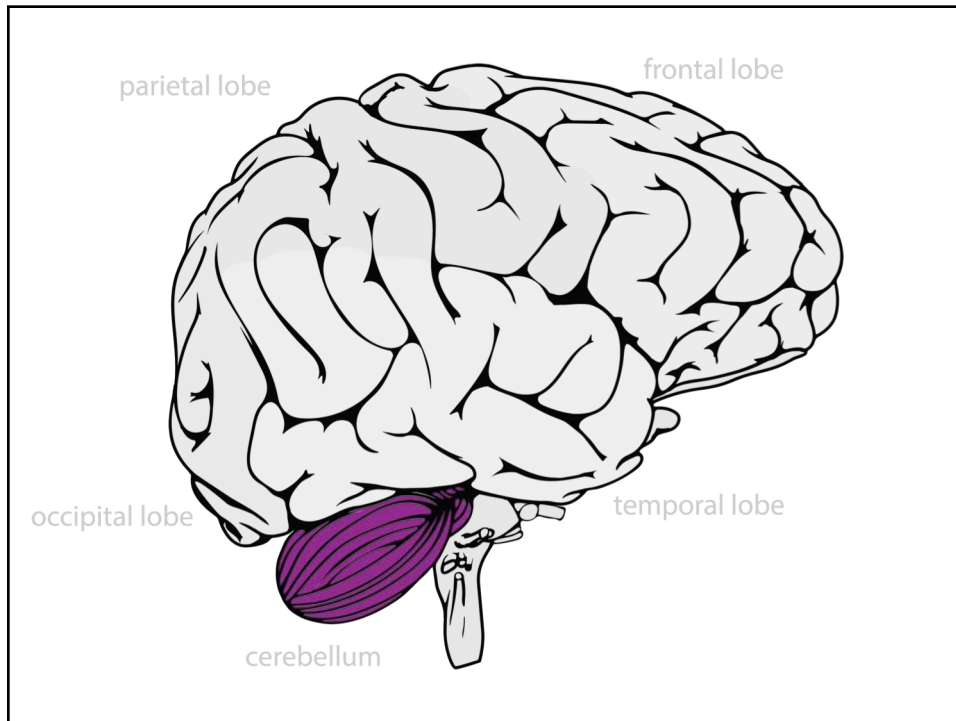
- Most complex organ of the body
- Only weighs 1,300 grams
- Contains billions of neural networks that interact to create human behavior











Which part of the brain is not important in helping with social function?

Frontal Lobe

Temporal lobe

Cerebellum

Parietal lobe

Occipital Lobe

All parts provide some social function

Use your pointer tool to make your selection.

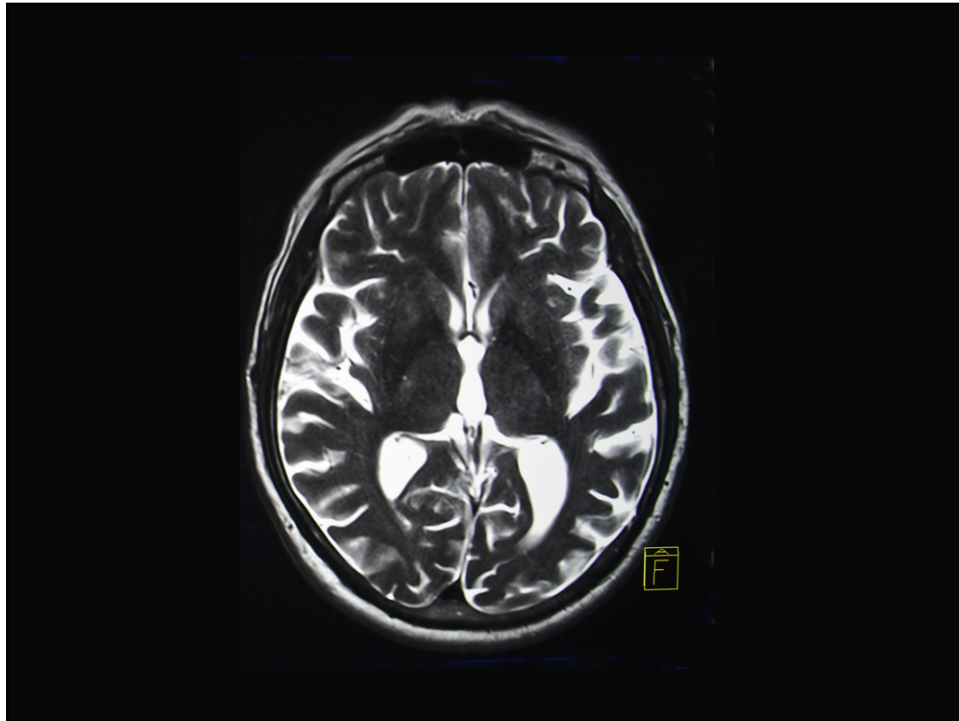
What's the Matter?

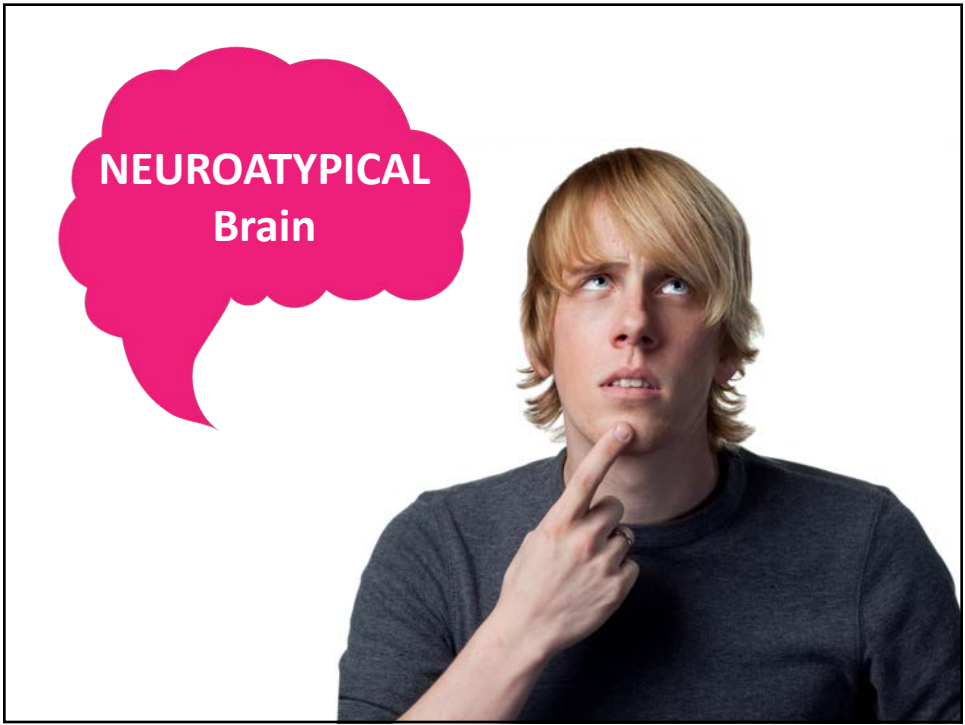
GREY MATTER

has a pinkish-grey color in the living brain, contains the cell bodies, dendrites and axon terminals of neurons, so it is where all synapses are.

WHITE MATTER

is made of axons connecting different parts of grey matter to each other. A fatty material called myelin covers the axons and gives it the white color.

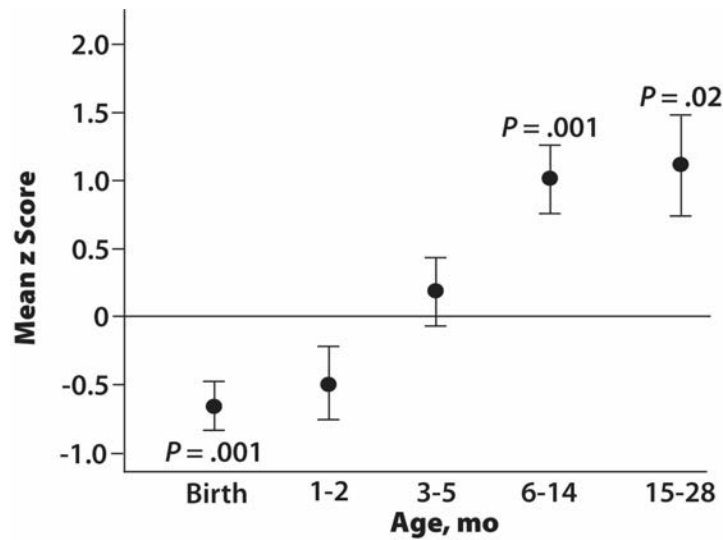




**Do kids with
autism have
bigger heads?**

- A. Yes
- B. No
- C. Yes and No
- D. It depends

Rapid Brain Growth and then a Plateau

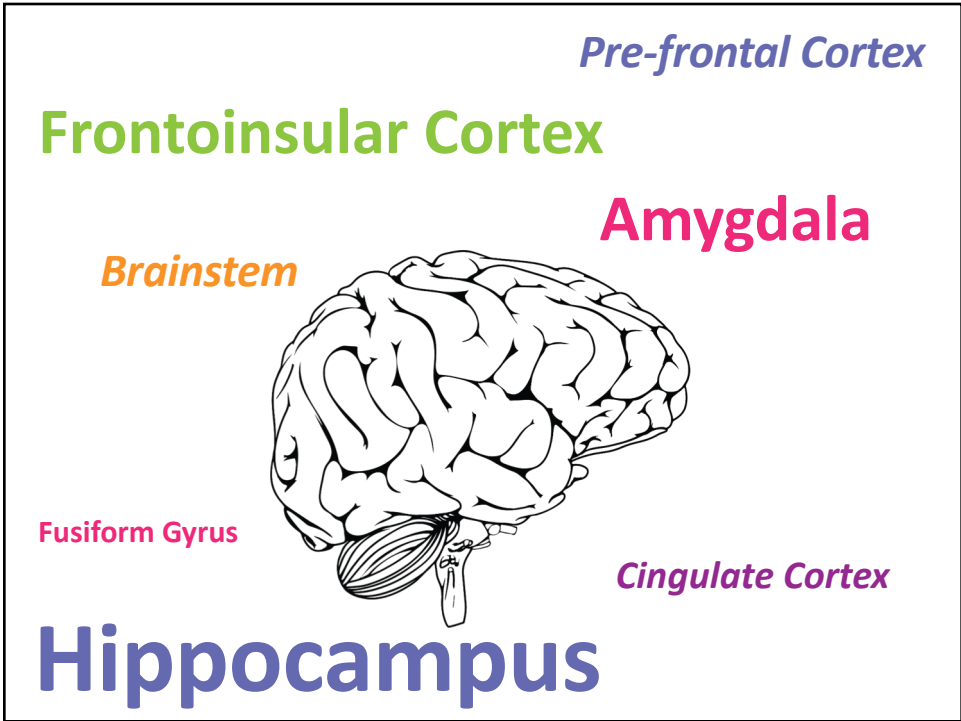


Courchesne E, Campbell K, Solso S. Brain growth across the life span in autism: Age specific changes in anatomical pathology. Brain Res 2011;1380:138-145.

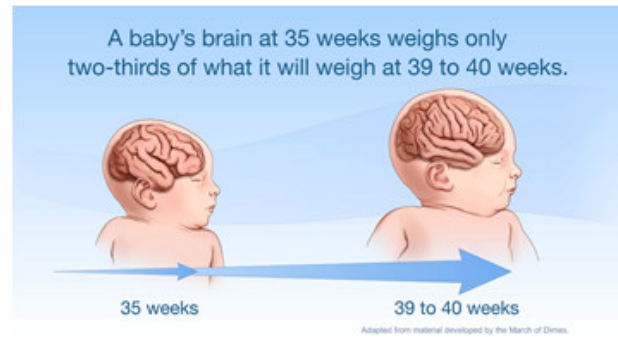
Based on your current knowledge, what parts of the brain might be affected in rapid growth?



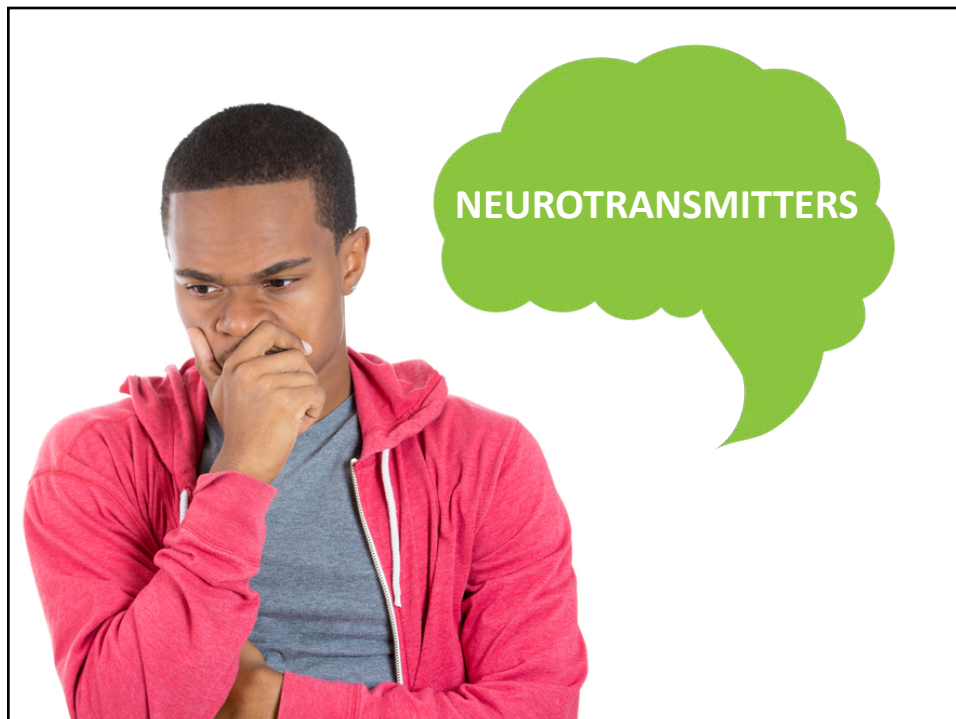
- A. Grey Matter
- B. White Matter
- C. Both
- D. Neither



Why might prematurity be a risk factor for ASD?

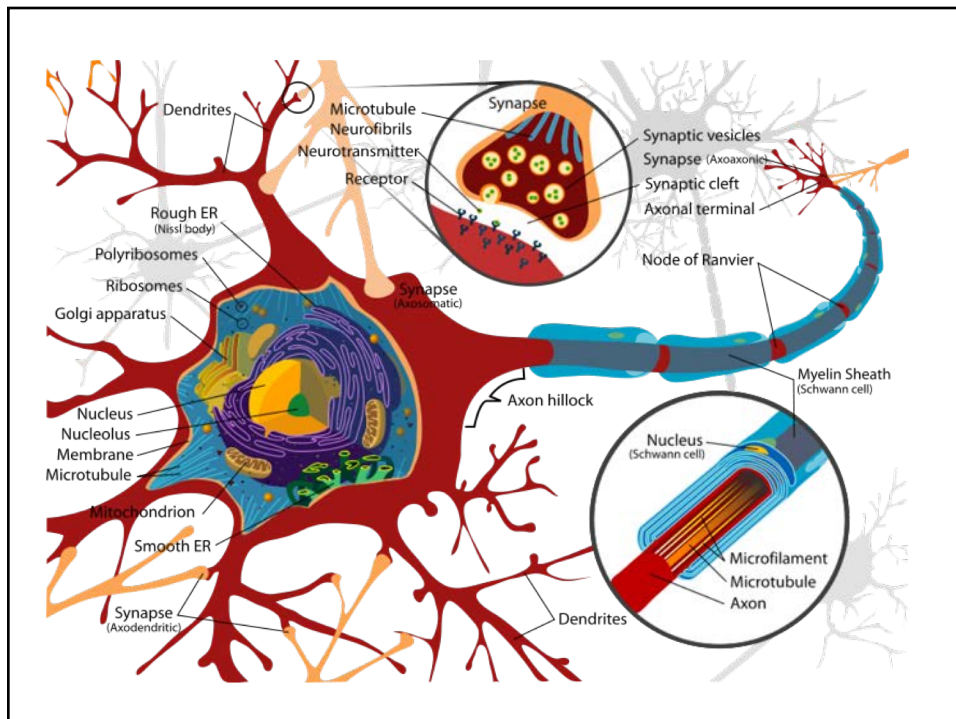
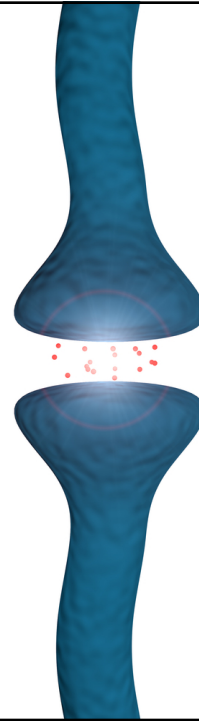


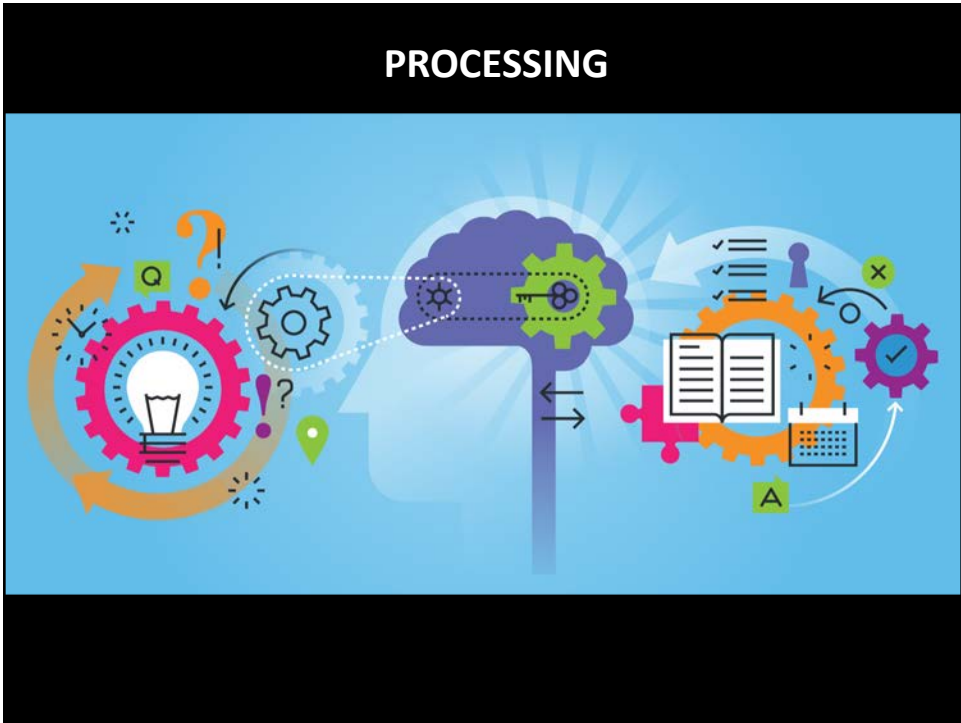
<https://www.nichd.nih.gov/newsroom/resources/spotlight/051013-let-baby-set-date>




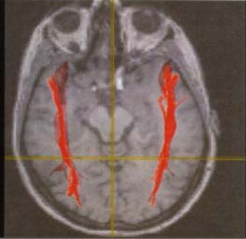
Which one of these is not a neurotransmitter...

- A. Dopamine
- B. Serotonin
- C. Norepinephrine
- D. Coffee

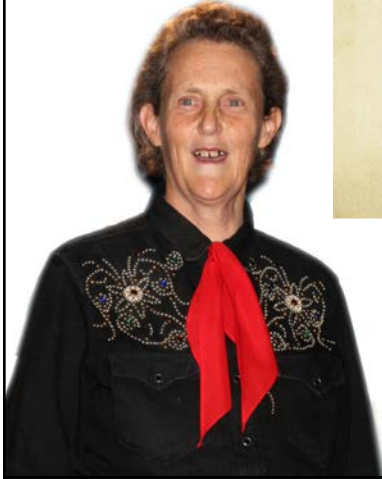




Brain Scans

Control	T. Grandin
	

Humphreys, Minshew, Behrmann, and Cibu, 2006



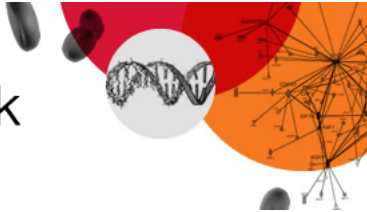
A portrait of T. Grandin, a woman with short brown hair, wearing a black shirt with a red scarf and decorative patterns on the shoulders.




Strategies

- Be gently insistent to get the child to a different tract (physical prompts)
- Use repetition
- Give the child time to process and respond
- Use multiple senses and body movements for learning
- Be flexible - use the strategies that work for and connect to the child





 **The JAMA Network**

Original Investigation 6
March 25, 2019

**Effect of Wearable Digital Intervention
for Improving Socialization in Children
With Autism Spectrum Disorder**
A Randomized Clinical Trial

JAMA Pediatr. 2019 Mar 25. doi: 10.1001/jamapediatrics.2019.0285. [Epub ahead
of print] **Effect of Wearable Digital Intervention for Improving Socialization in
Children With Autism Spectrum Disorder: A Randomized Clinical Trial.** Voss C1,
Schwartz J2, Daniels J2, Kline A2,

<https://jamanetwork.com/journals/jamapediatrics/fullarticle/2728462>

