

# The Story of **AUTISM**

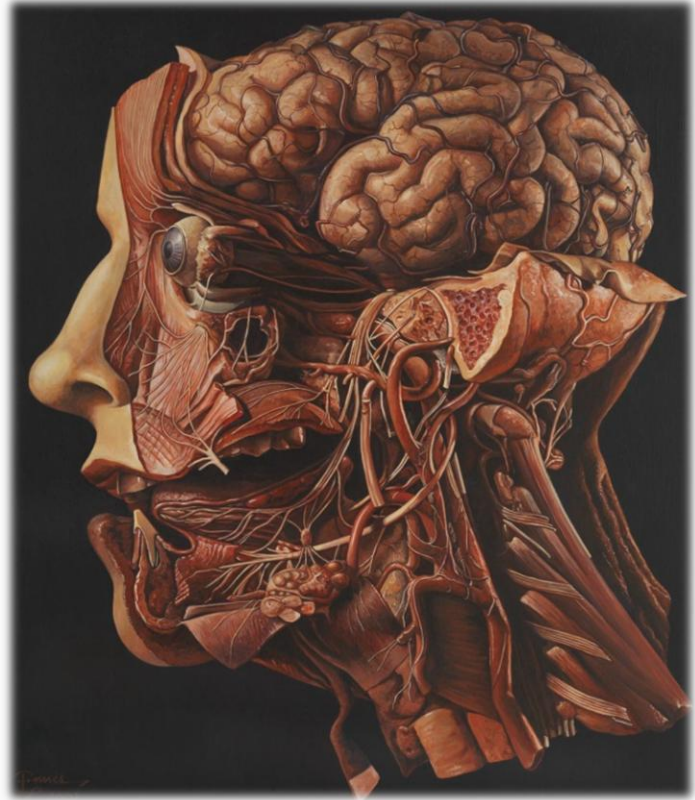
**PART I:**

**A SIMPLE  
GLITCH  
FLIPS THE  
SWITCH**



# THE STORY OF AUTISM: A Simple Glitch...

**The brain is the most complex organ in the human body. It makes us who we are.**



# THE STORY OF AUTISM: A Simple Glitch...

For most of us, how we turn out is pretty much determined in the first 3 years of life, when key neural connections are made.

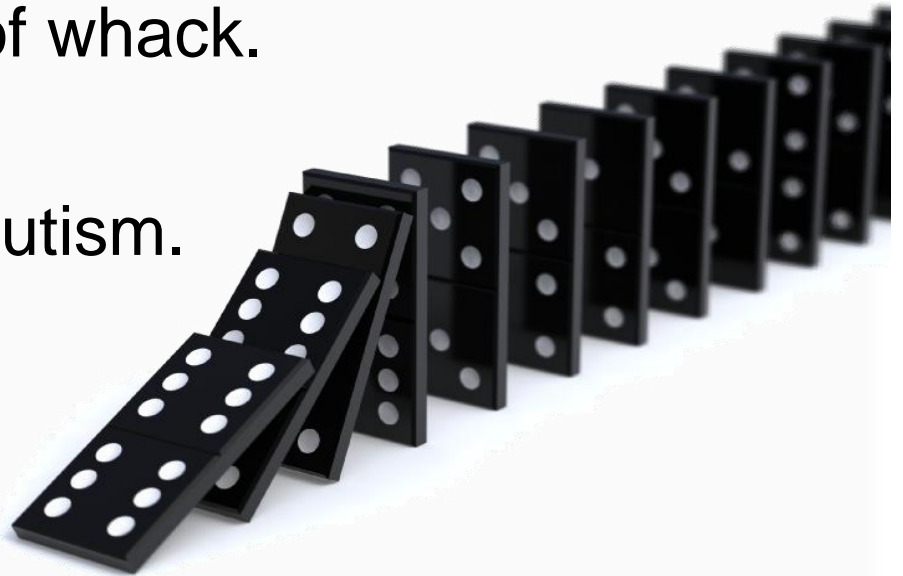


However, sometimes there is a glitch...

# THE STORY OF AUTISM: A Simple Glitch...

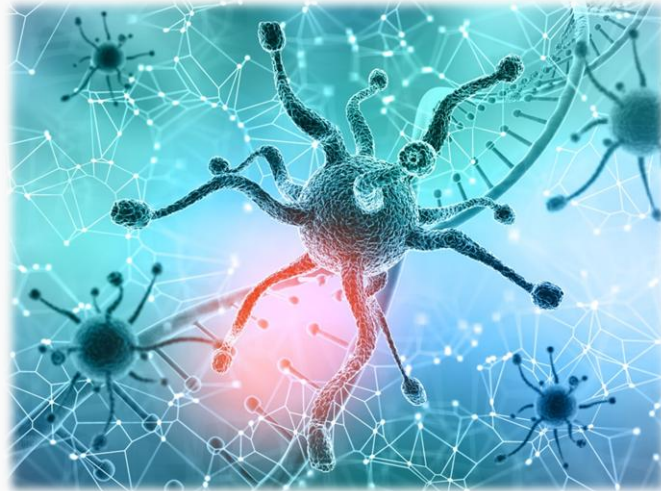
And, if that simple glitch is not corrected soon enough, it can have a domino effect, toppling other important neurological building blocks and throwing the entire brain wiring process out of whack.

This is what happens in autism.



# THE STORY OF AUTISM: A Simple Glitch...

**How the brain is wired determines how a baby – and later a child and adult – will perceive the world.** How they perceive and interpret the world will then either modify or reinforce the existing connections in their brain.



# THE STORY OF AUTISM: A Simple Glitch...

**So the first connections are the most important ones.** If you get them wrong, anything you do afterwards is only going to make the problem worse.



# THE STORY OF AUTISM: A Simple Glitch...

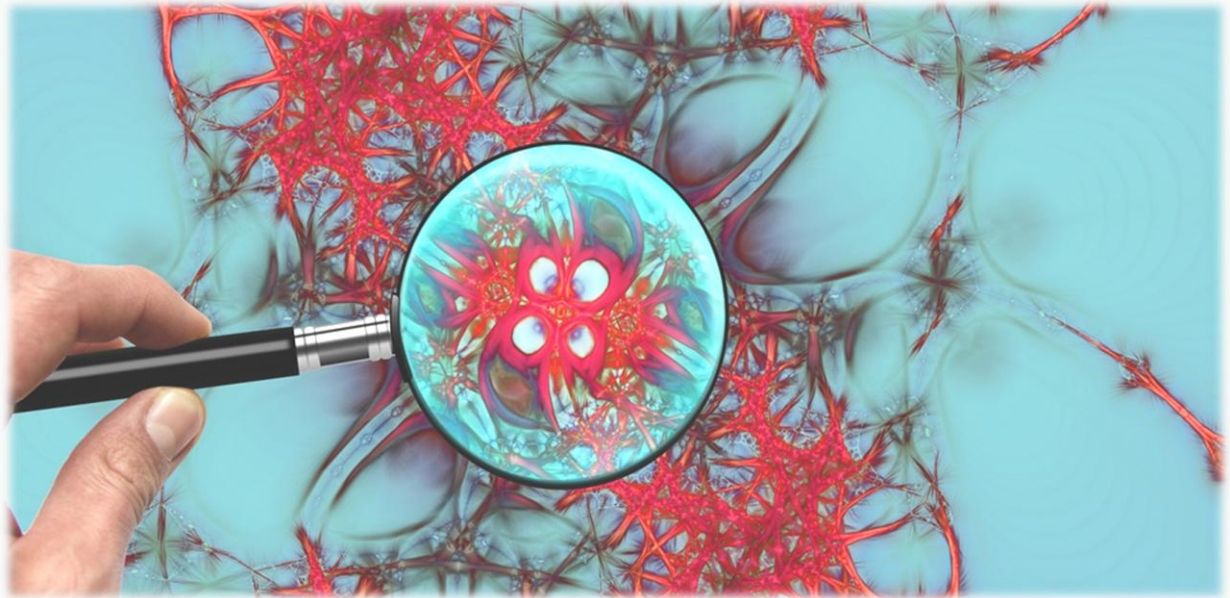
If we are going to tell the story of autism, we have to start at the very beginning, before things veer off course. **Because it is very important to understand how serious one simple thing can be.**



# THE STORY OF AUTISM: A Simple Glitch...

And perhaps, because of its very simplicity – given the complexity of its outcome – why it has been so difficult to pinpoint.

Up until now.





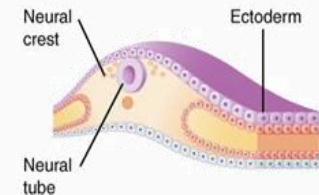
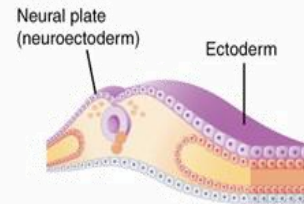
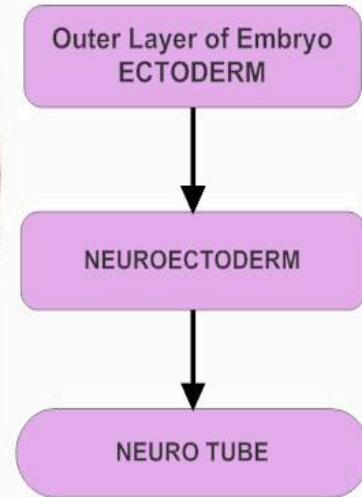
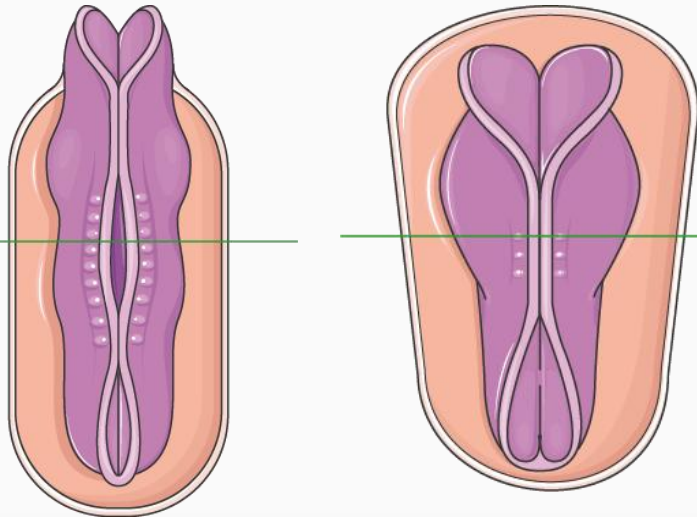
# THE STORY OF AUTISM: A Simple Glitch...

The development of the human brain begins in the first few weeks after conception. The first key event is the formation of the **neural tube**. About 2 weeks after conception, the neural plate, a layer of specialized cells in the embryo, begins to slowly fold over onto itself, eventually forming a tube-shaped structure.



# THE STORY OF AUTISM: A Simple Glitch...

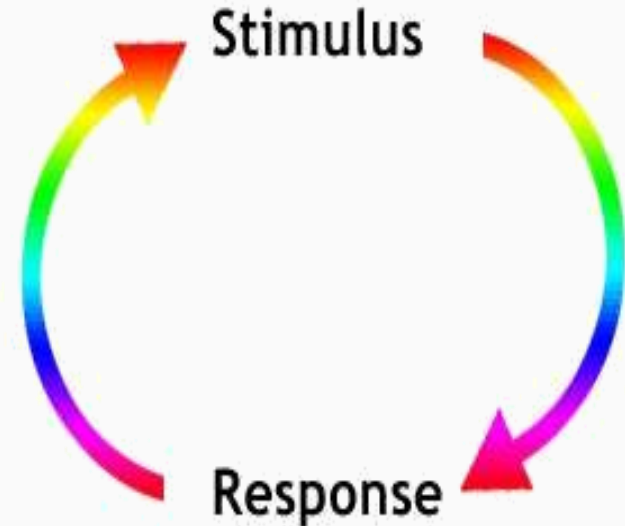
The neural tube gradually closes as the edges of the plate fuse together, becoming the **brain** and **spinal cord**.



# THE STORY OF AUTISM: A Simple Glitch...

Connection to the spinal cord enables fetal movement and the first **primitive reflexes** begin to form.

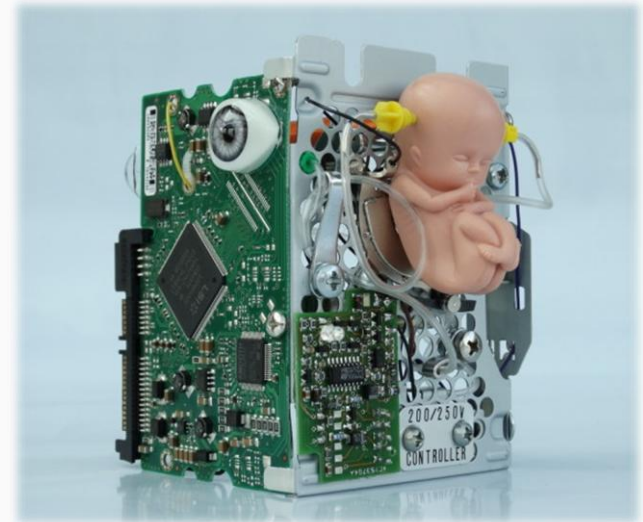
Simply stated, a reflex is a neurological arc that has a specific stimulus and a predictable response.



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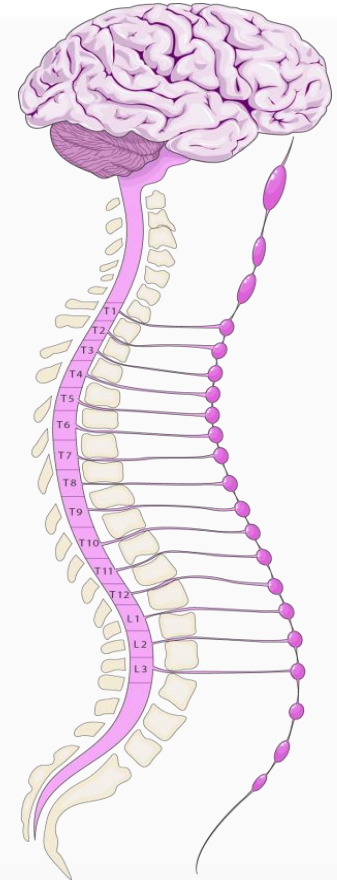
**Primitive reflexes lay the foundation for our sensory, neural and motor development.**

**They activate the senses** and begin the process of organizing them in relationship to the rest of the body and surrounding environment.



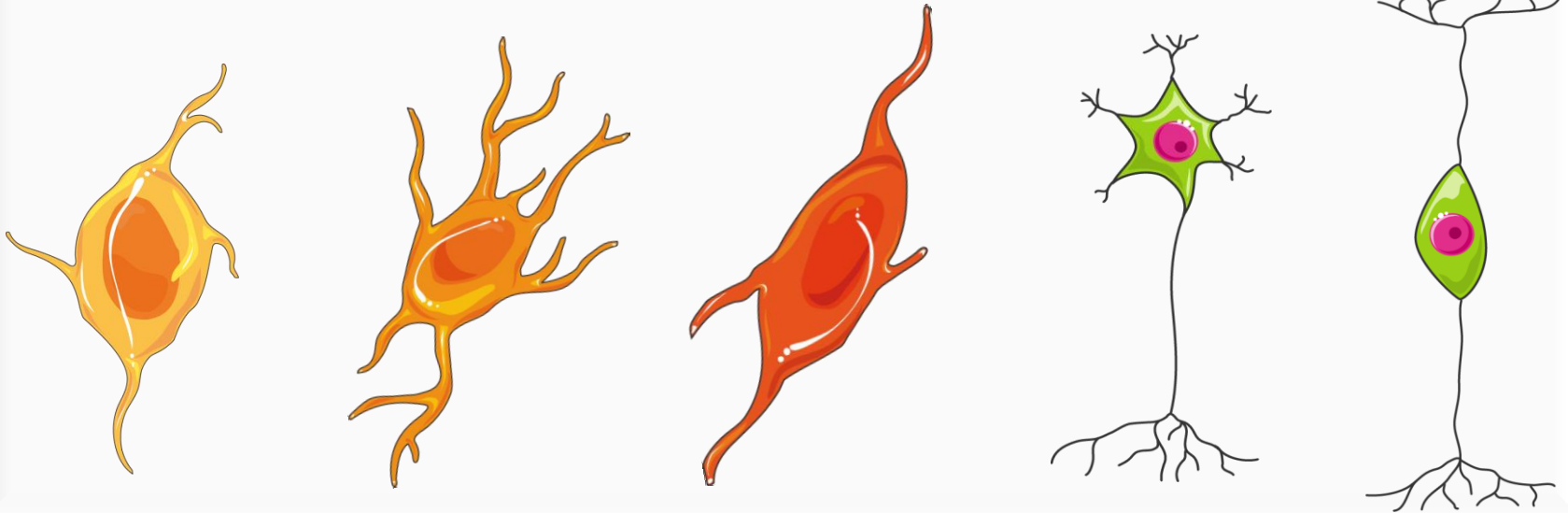
# THE STORY OF AUTISM: A Simple Glitch...

Sensory information activates genes for protein synthesis, allowing neurons to form, grow and connect. These connections are the building blocks of the brain and central nervous system.



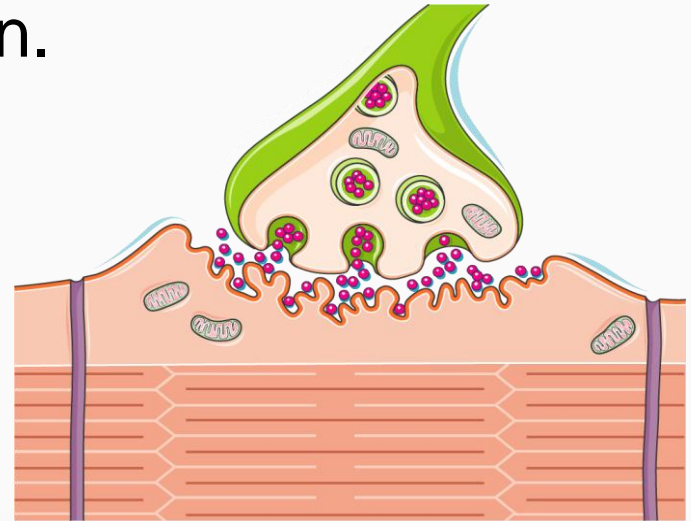
# THE STORY OF AUTISM: A Simple Glitch...

Sensory motor input from primary reflexes transform stem cells into fledgling neuroblasts into full fledged, active neurons. But, before these neurons can be functional, they must connect with other neurons.



# THE STORY OF AUTISM: A Simple Glitch...

Neurons connect with other neurons at specialized connection points called **synapses**. Typically, these connections are programmed into our DNA, so that certain connections are made at certain specific times, resulting in a typical brain.



# THE STORY OF AUTISM: A Simple Glitch...

Up until the moment of birth, unless mom has been ill or under a great deal of stress, or her unborn baby has a congenital disorder, the structure of the autistic brain should look normal.

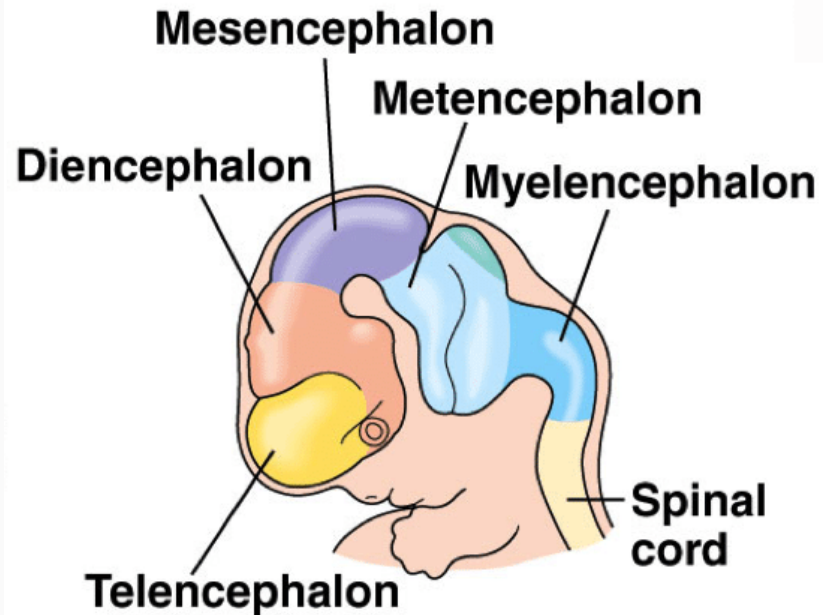
Of course, the brain at birth is far from a finished product.





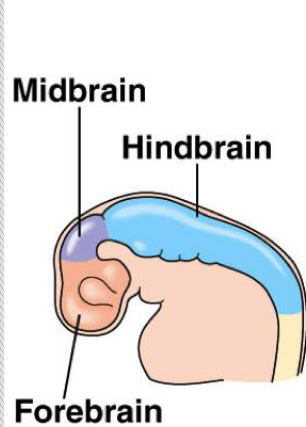
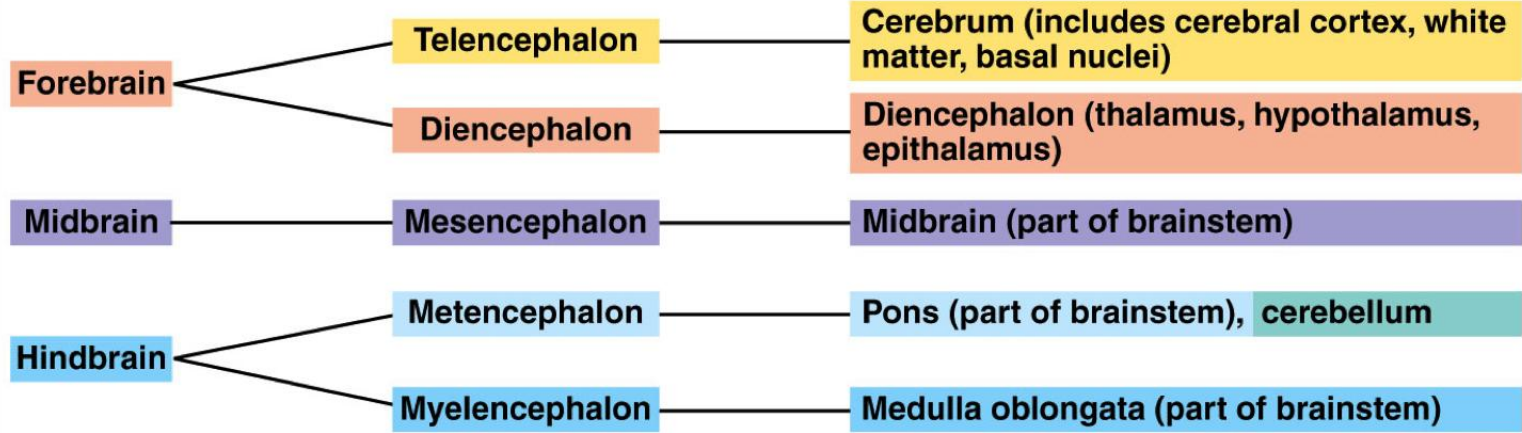
# THE STORY OF AUTISM: A Simple Glitch...

Of course, the brain at birth is far from a finished product. The embryonic neural tube develops specialized areas that become the earliest brain structures.

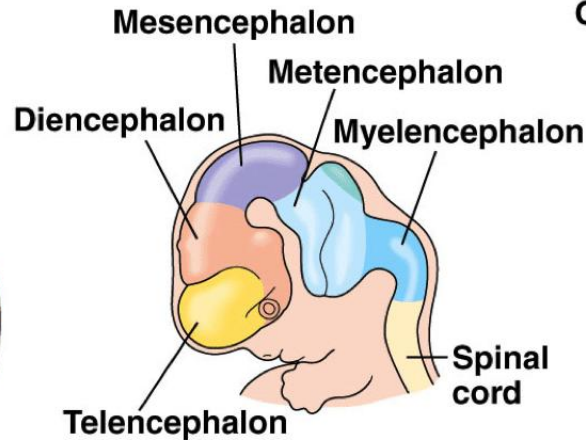


## Embryonic brain regions

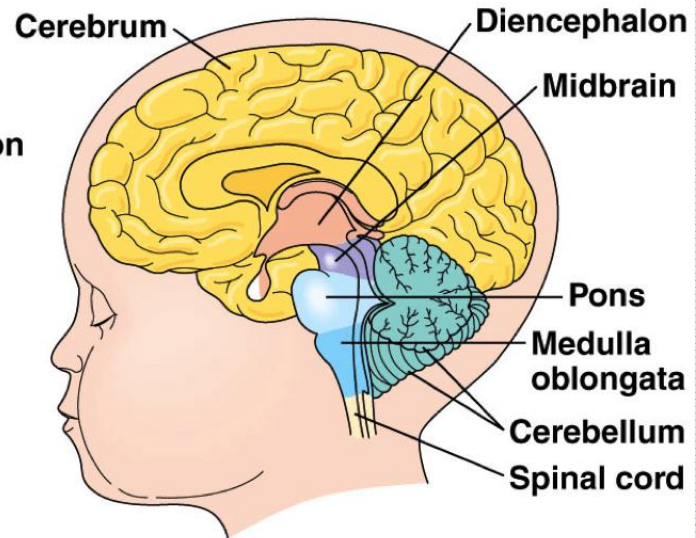
## Brain structures in child and adult



Embryo at 1 month



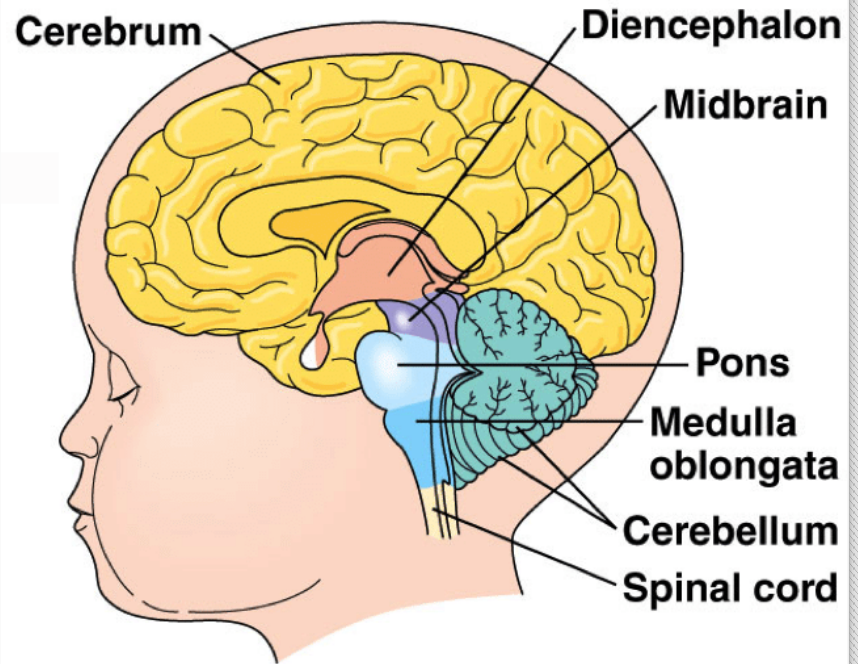
Embryo at 5 weeks



Child

# THE STORY OF AUTISM: A Simple Glitch...

What is important to note is that the **blue region**, the **brainstem** and the **green region**, the **cerebellum**, are the first areas to form in a newborn's brain.



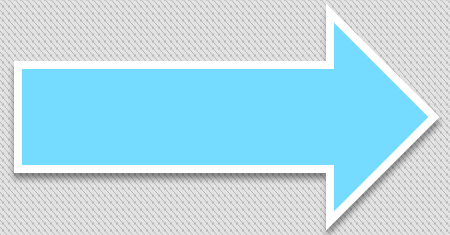
# THE STORY OF AUTISM: A Simple Glitch...

All the **KEY** lower brain sensory-motor processing centers develop out of these early structures.

All the **primitive reflexes** also form here, and it is here, in the areas that become **the brainstem and the cerebellum**, that the autism glitch gets switched on or off.



GO ON TO THE NEXT PRESENTATION



The Story of  
**AUTISM**

**PART 2:**

**PRIMITIVE  
REFLEXES  
RECODE WIRING**

