



Early Brain & Cognitive Development: The Importance of Nutrition

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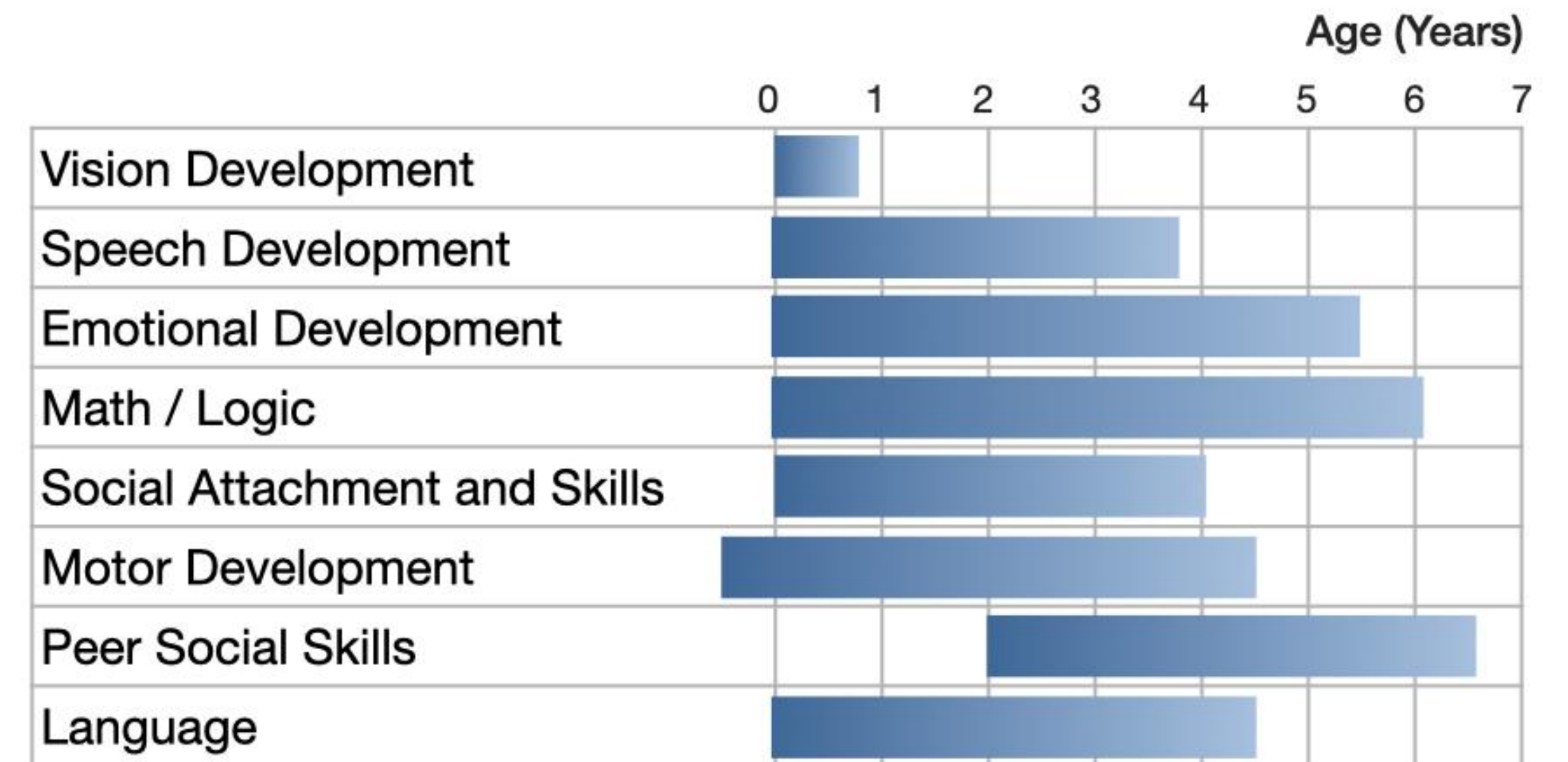
Sean Deoni has the following disclosures:
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Speakers Bureau: Mead Johnson Nutrition, Wyeth
Scientific Advisor: Voxel Healthcare & Level42 AI
CEO Spinn Neuroscience





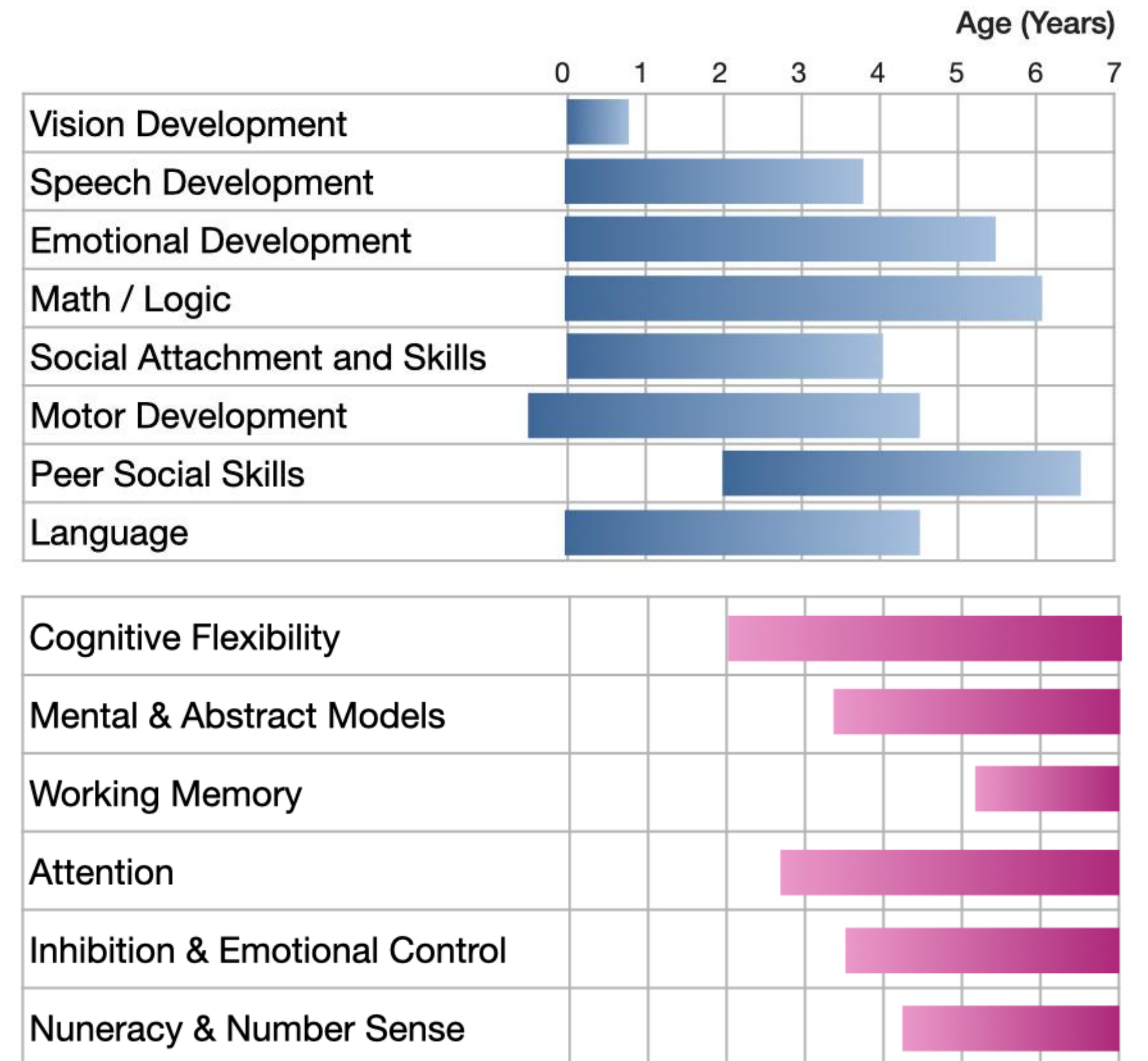


Timeline of Early Cognitive Development



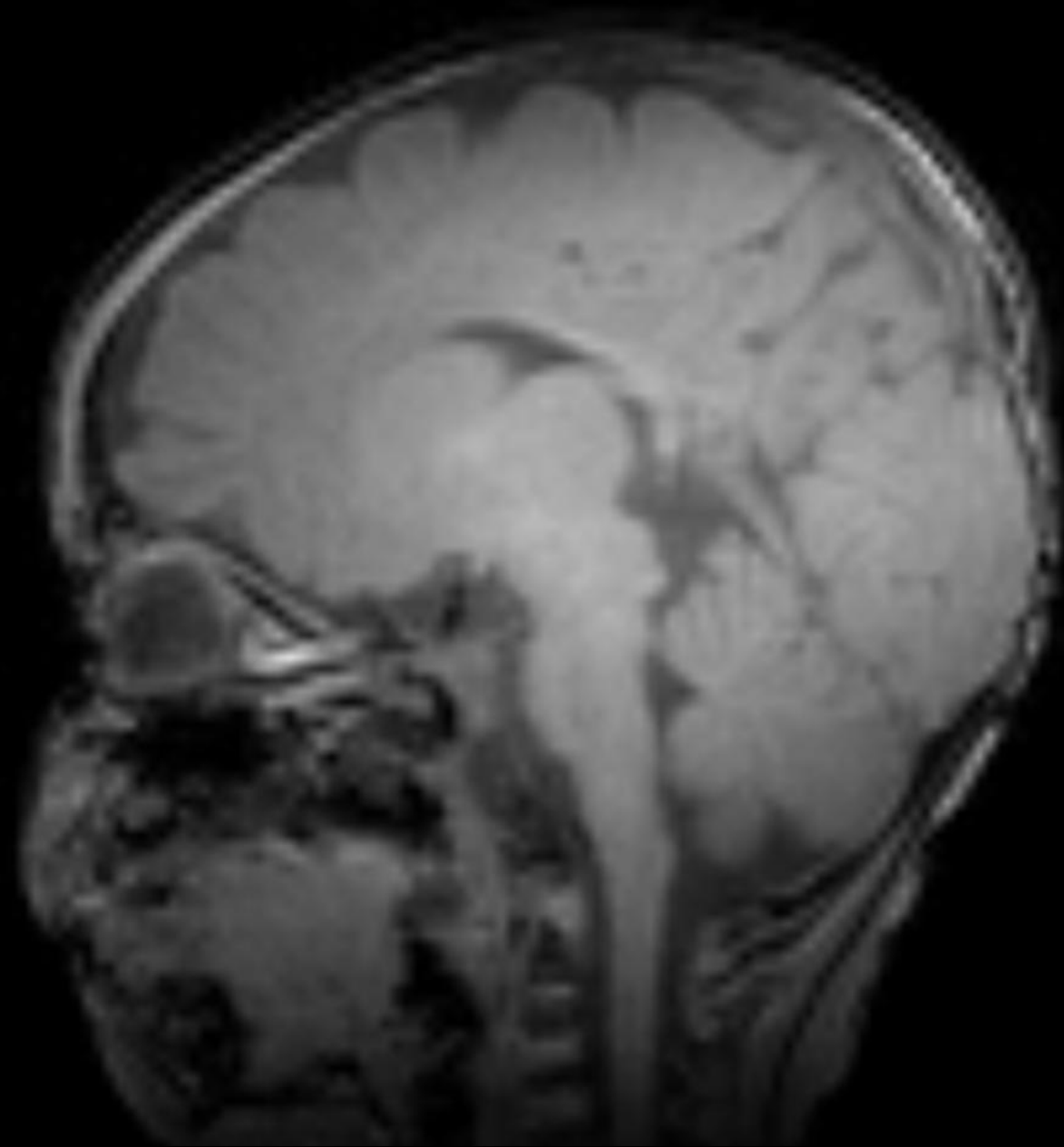


Timeline of Early Cognitive Development









3 Months of Age

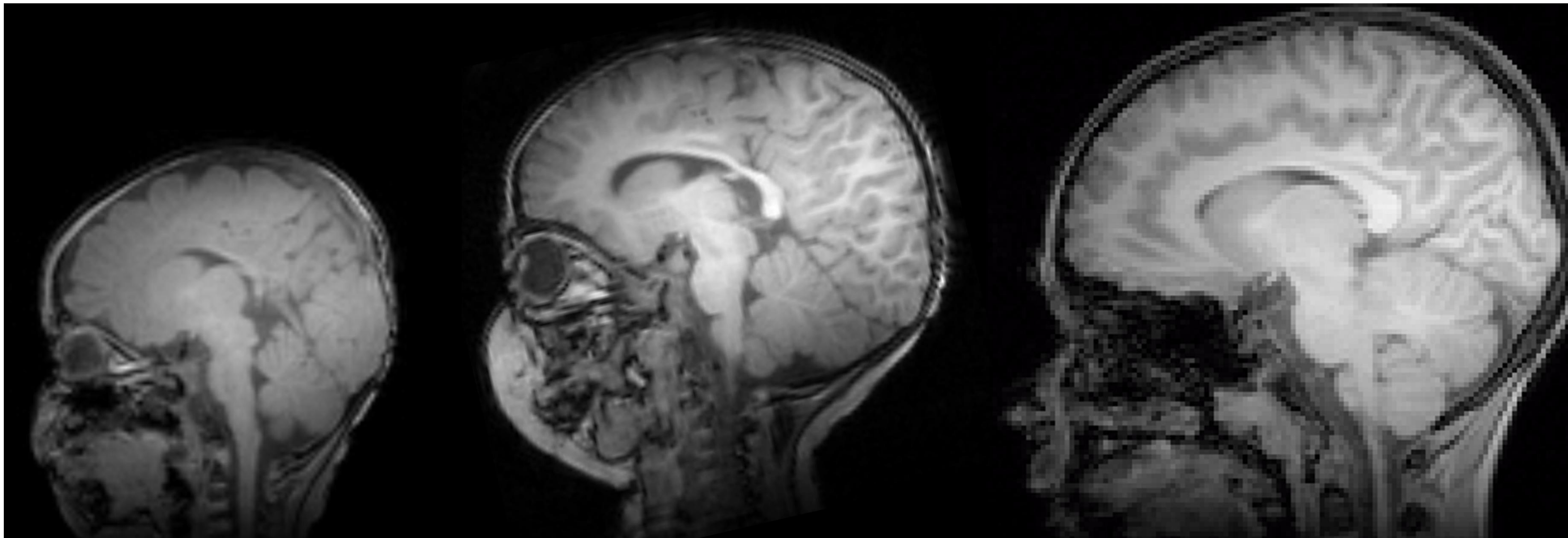


1 Year of Age



2 Years of Age

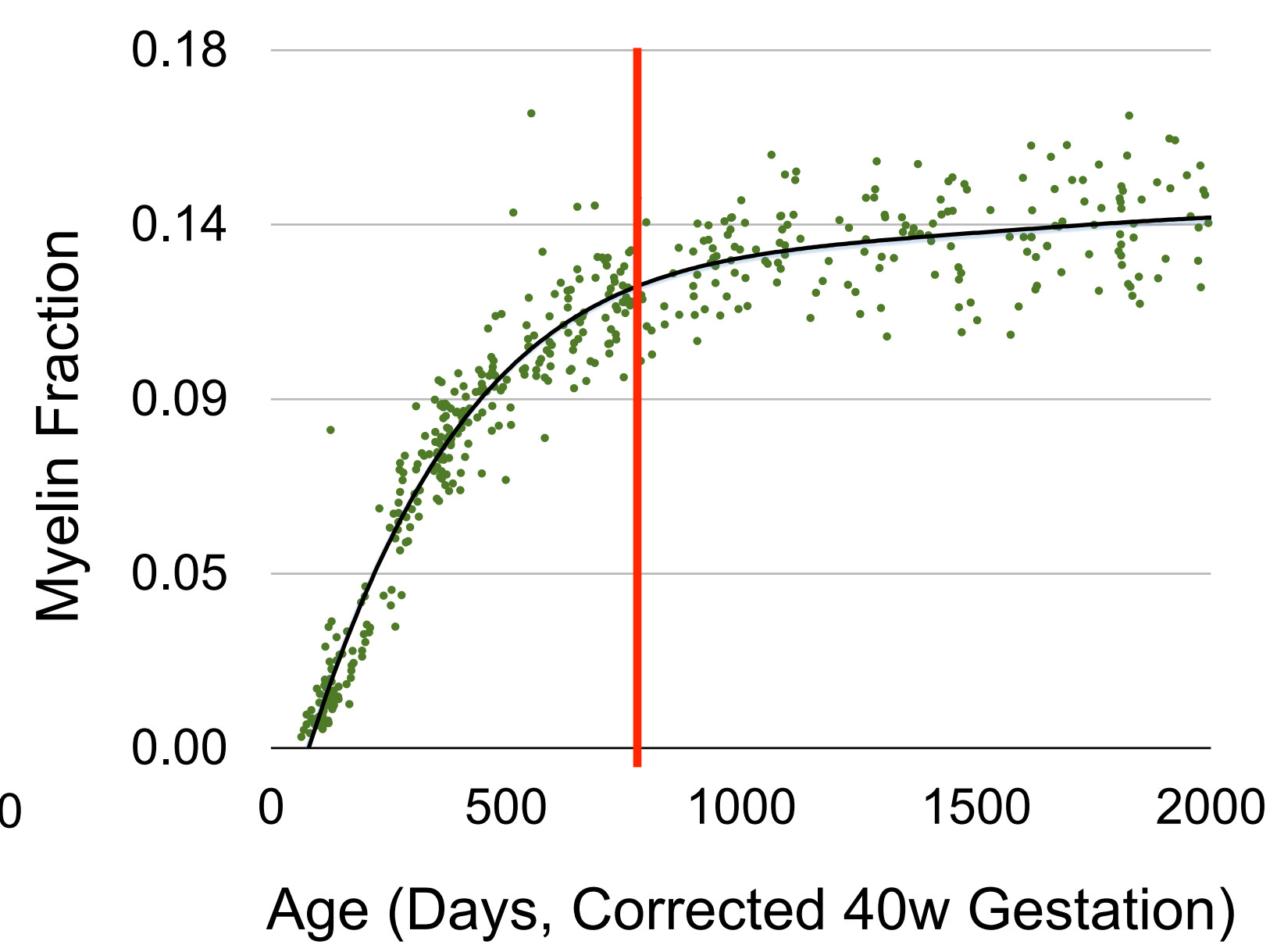
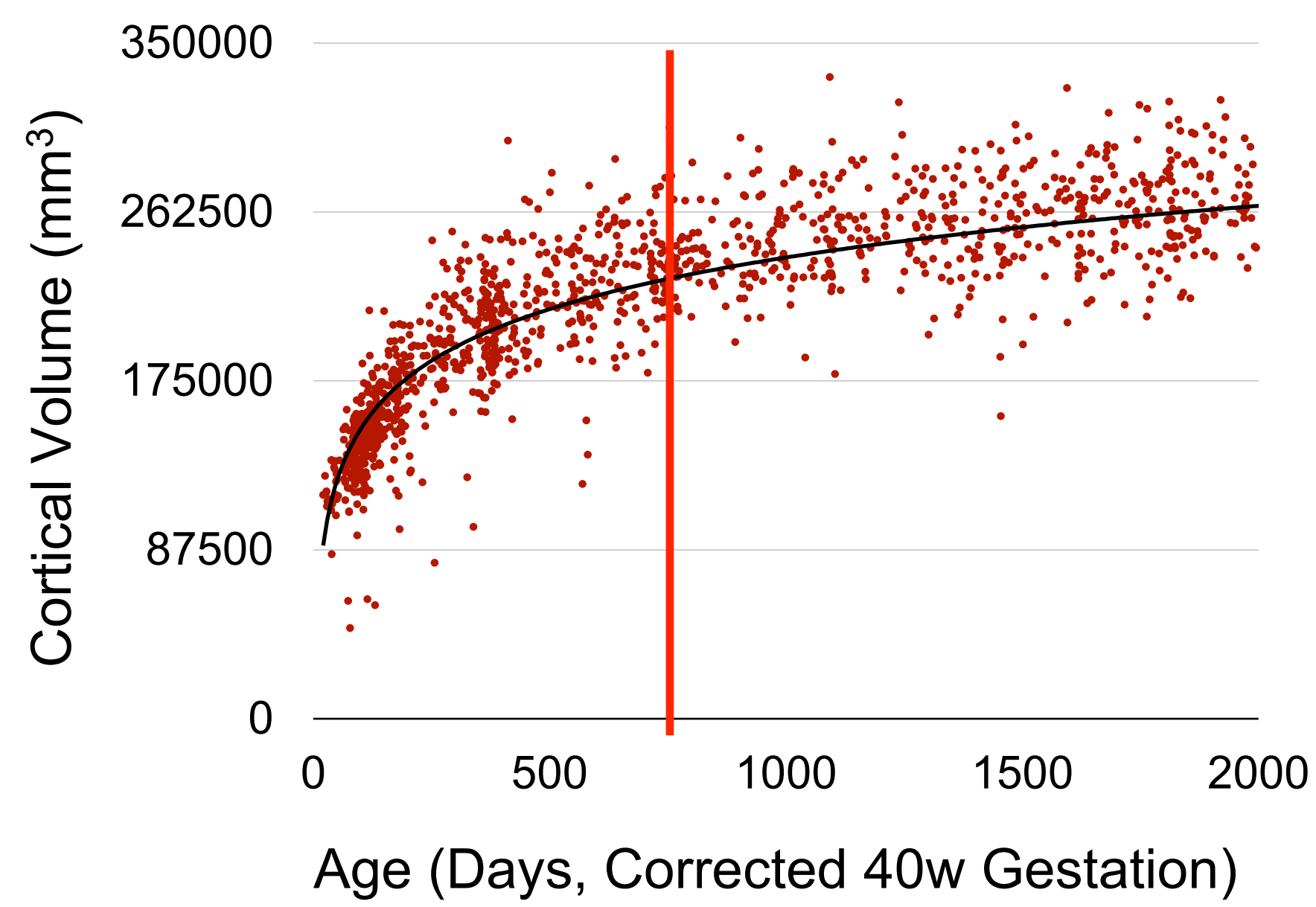
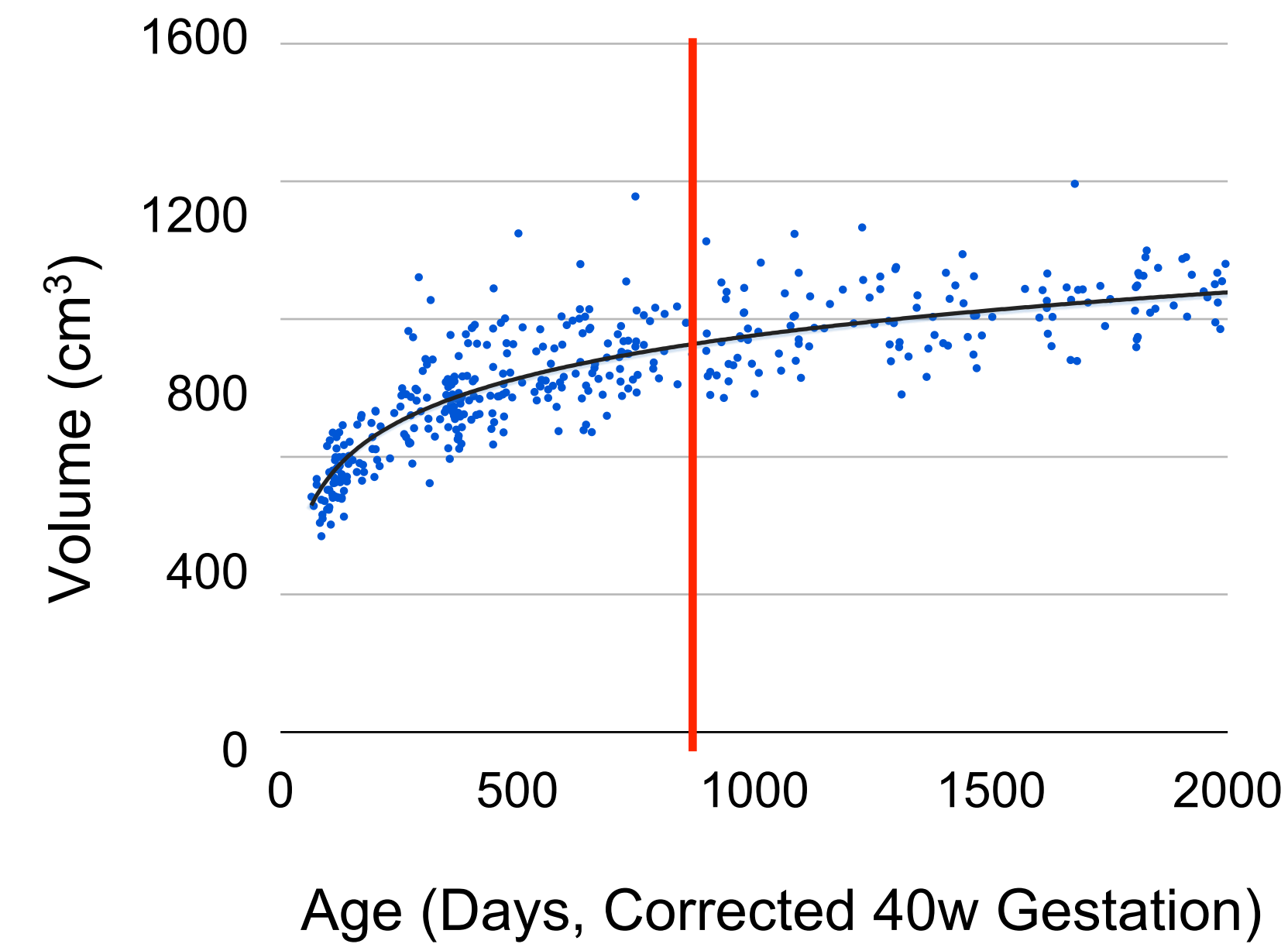




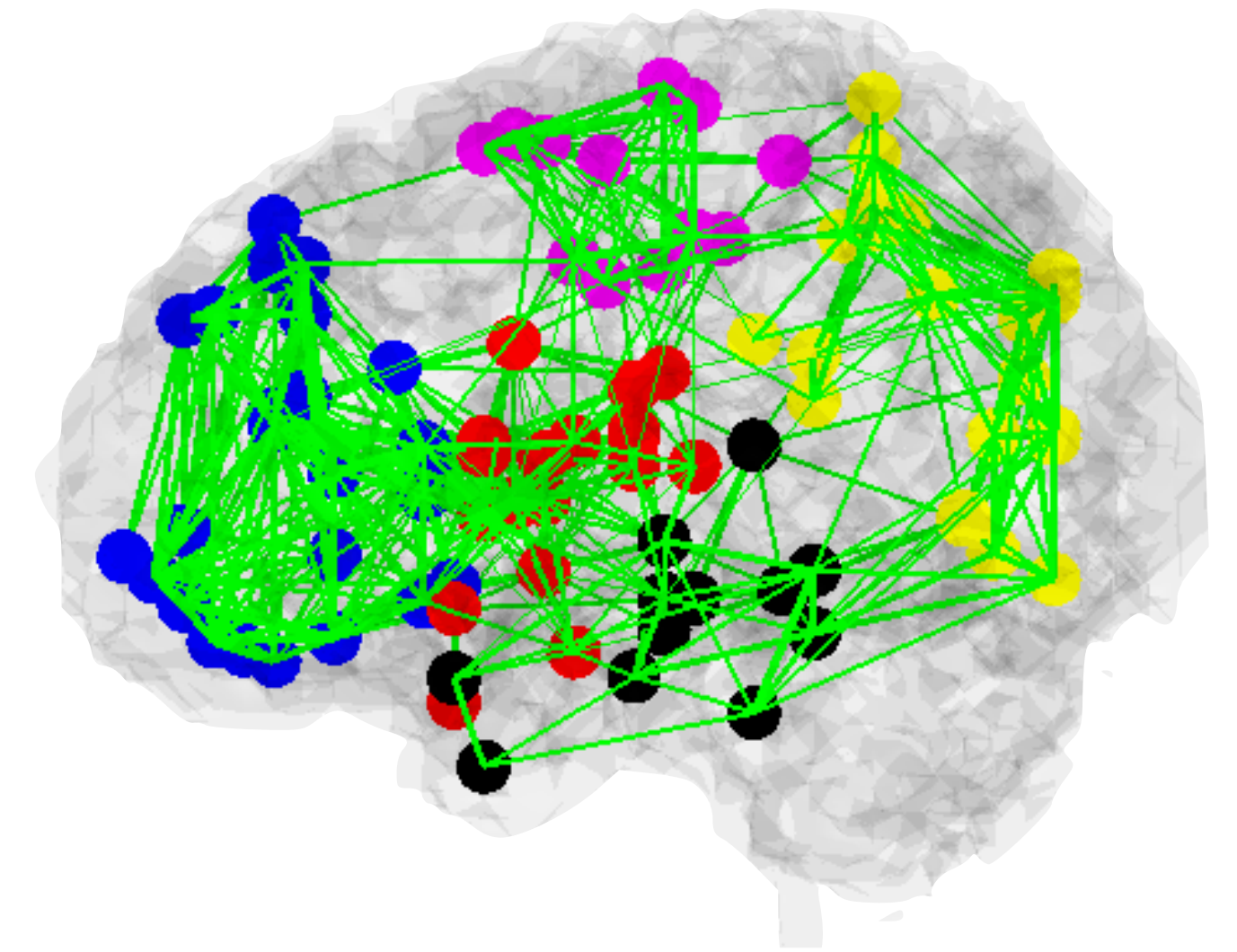
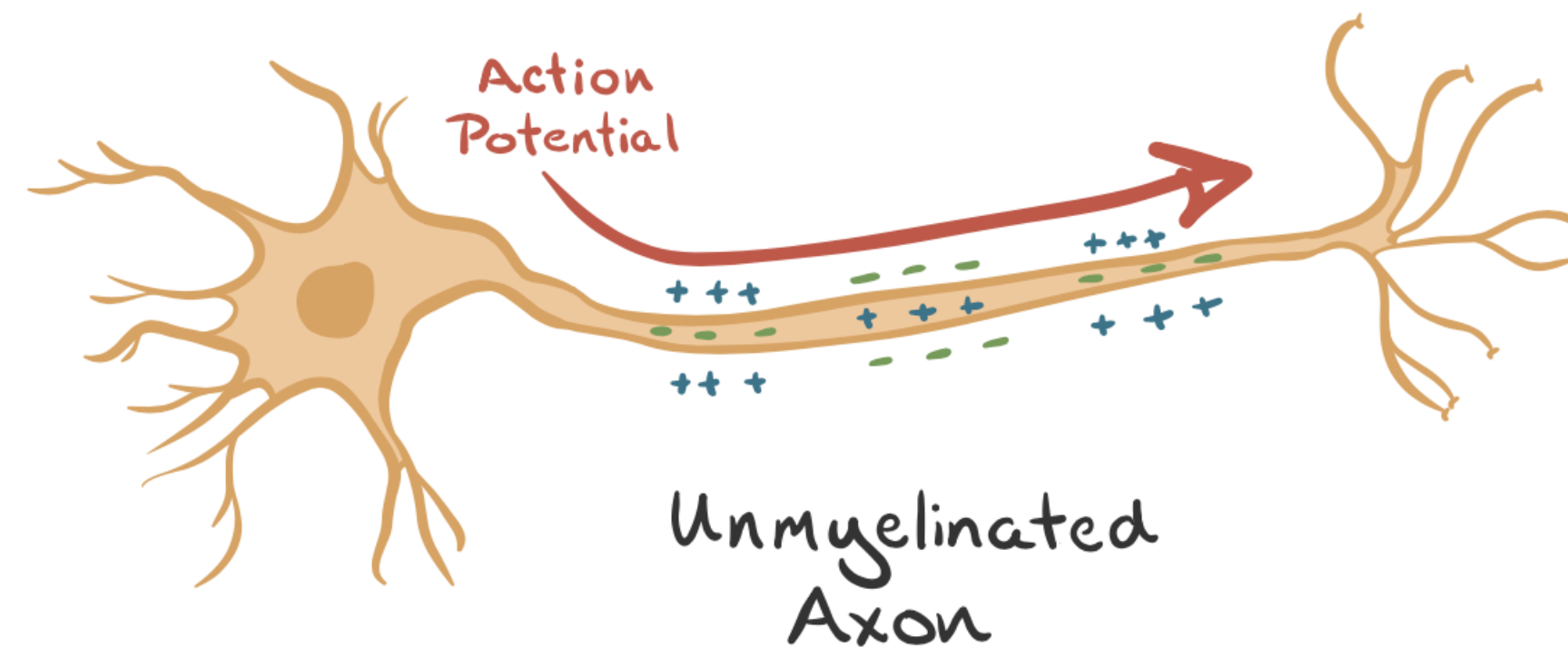
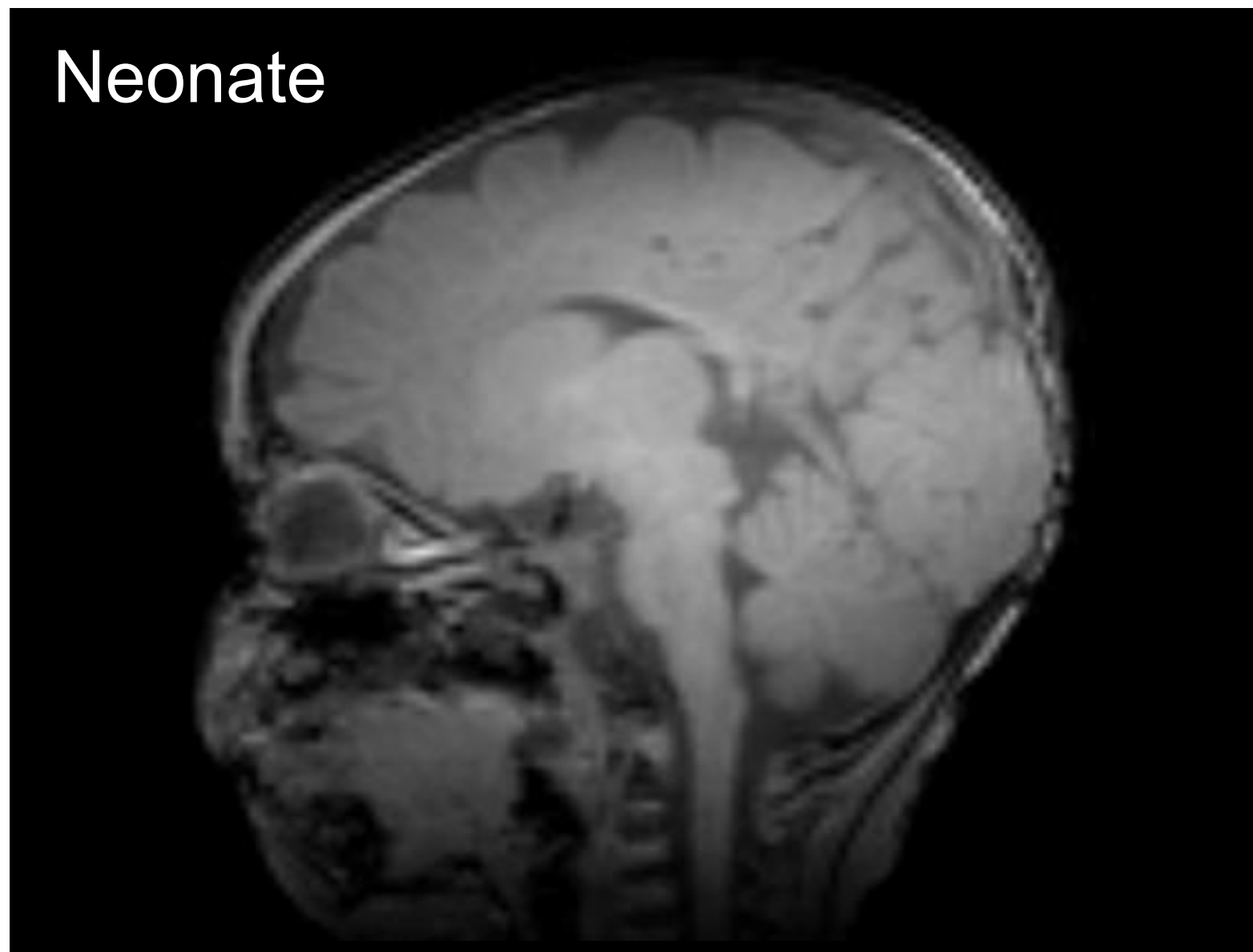
Total Brain Volume

Cortical Volume

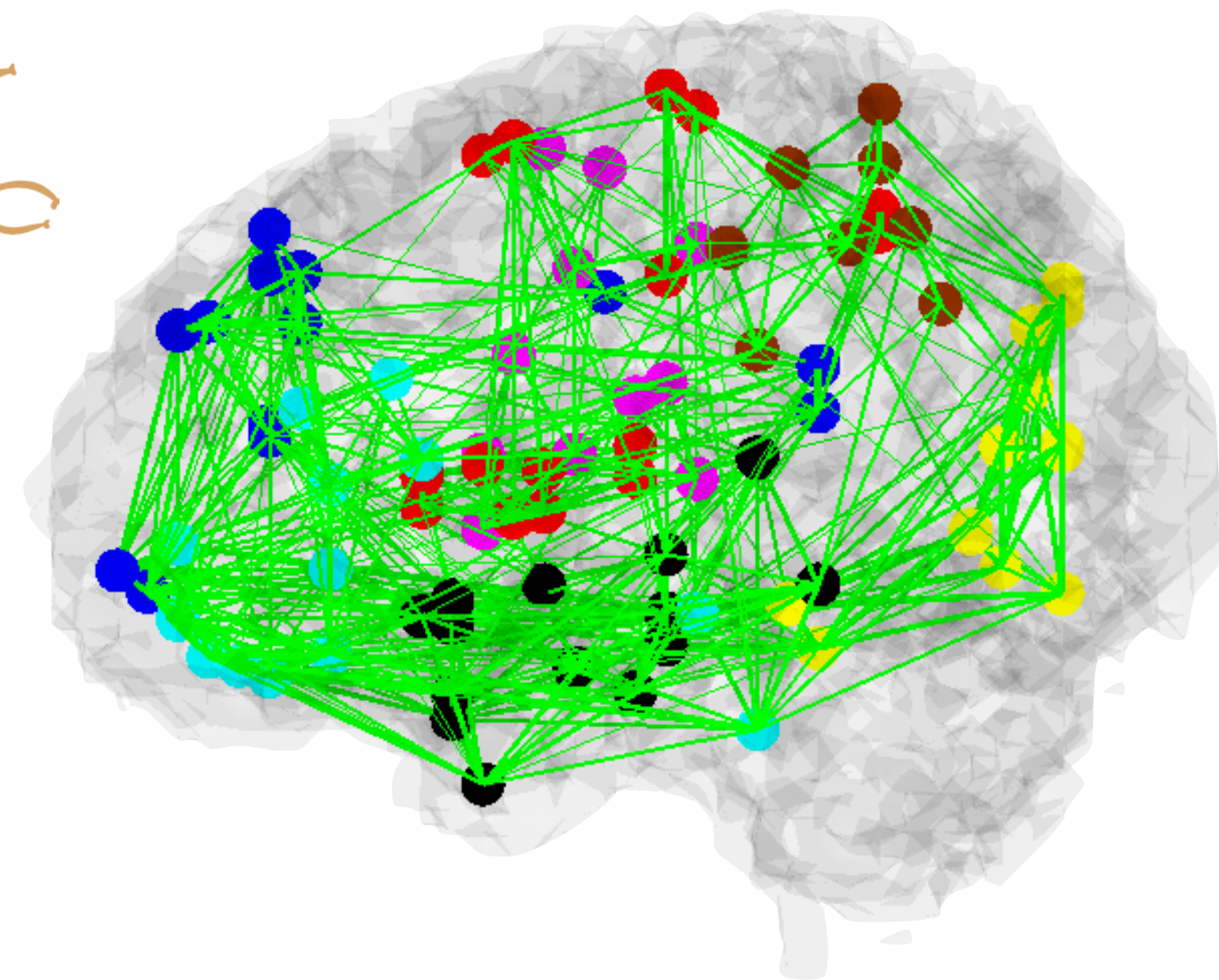
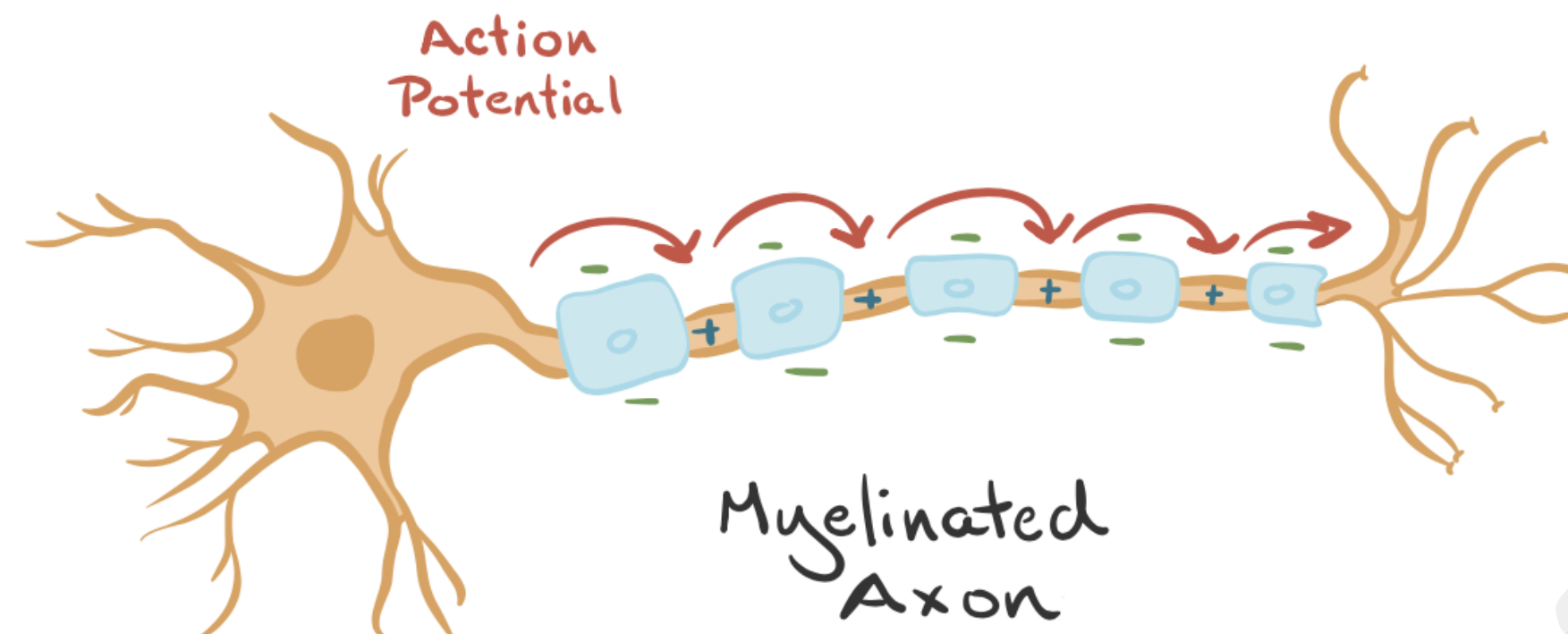
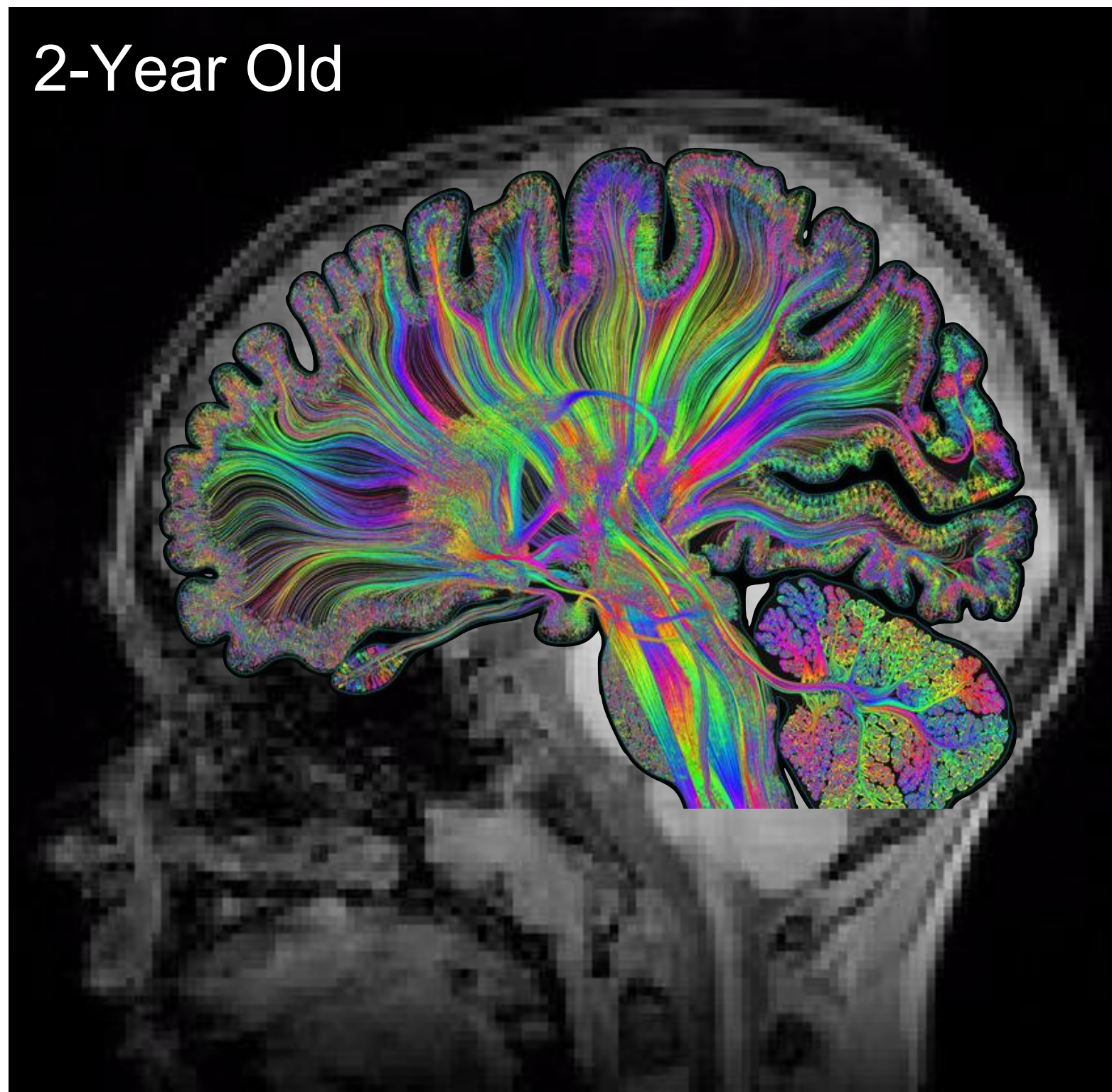
Myelination



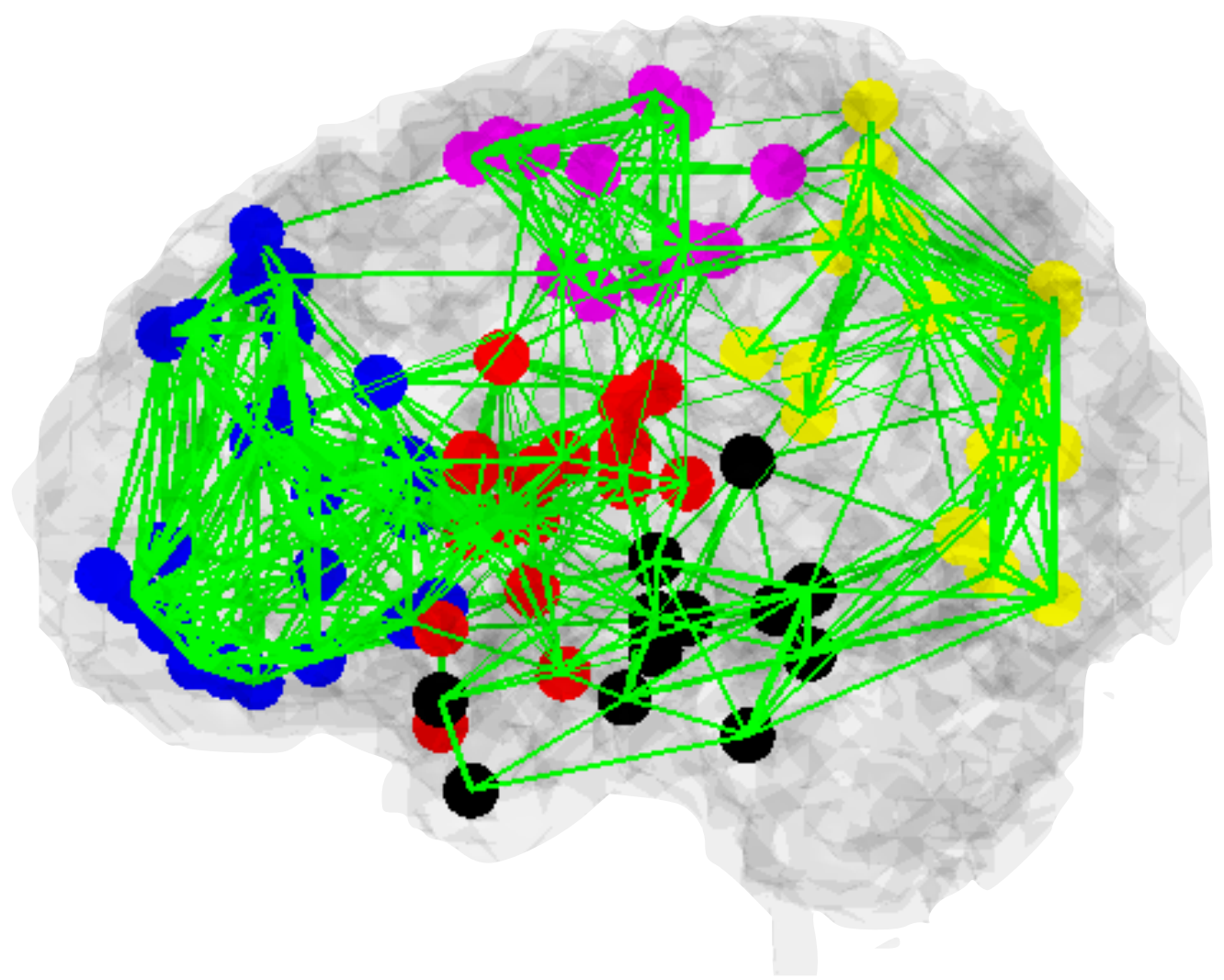
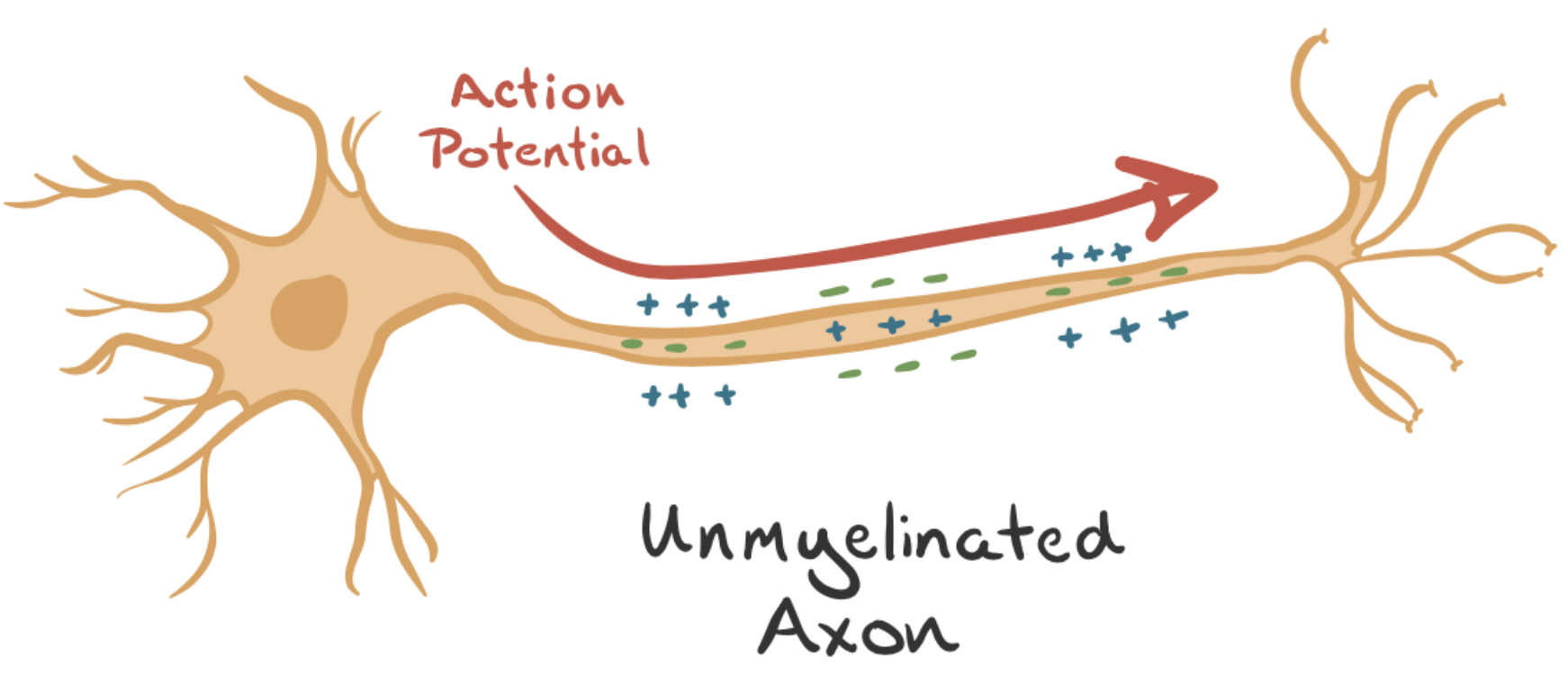
Neonate



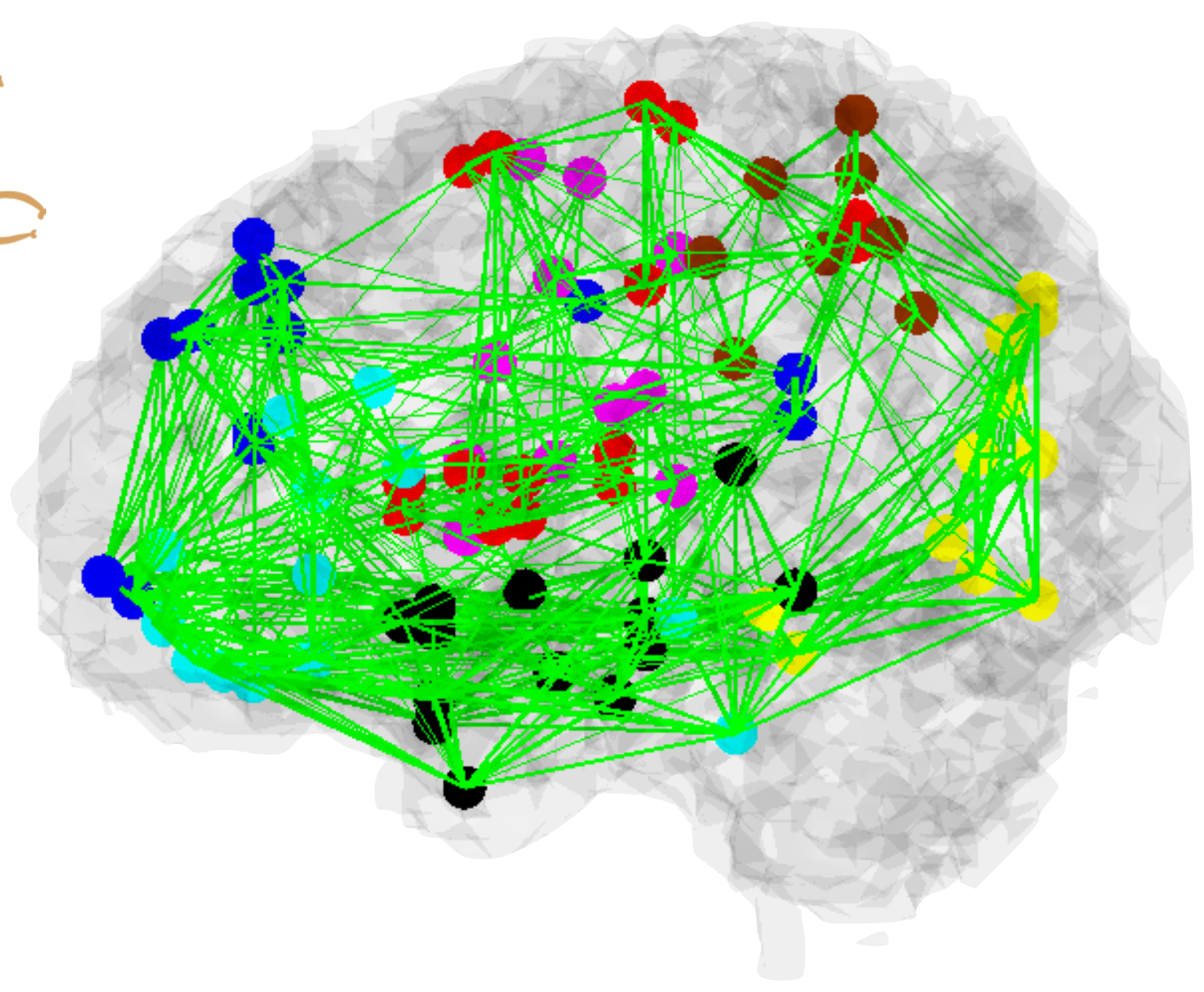
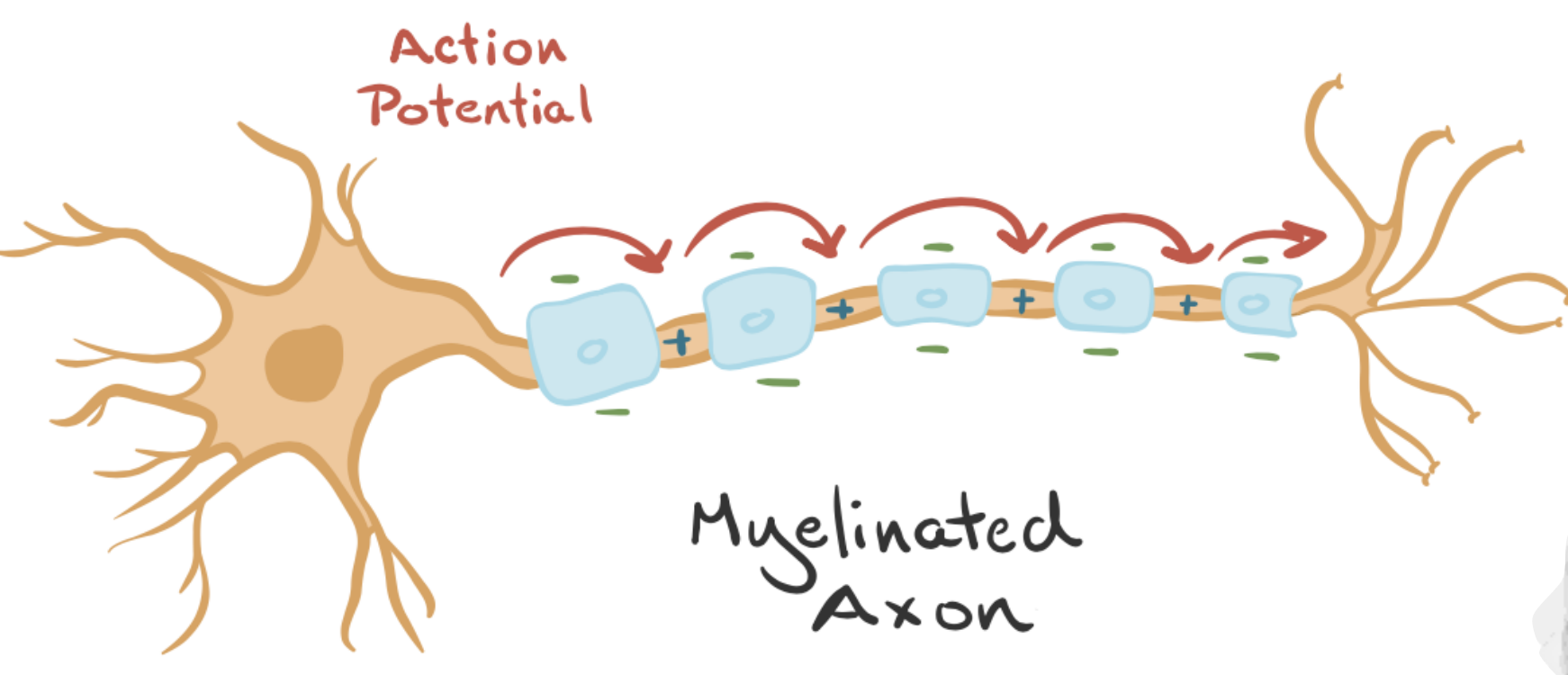
2-Year Old



Myelin protects the axon, speeds information transfer, and facilitates brain connectivity & function

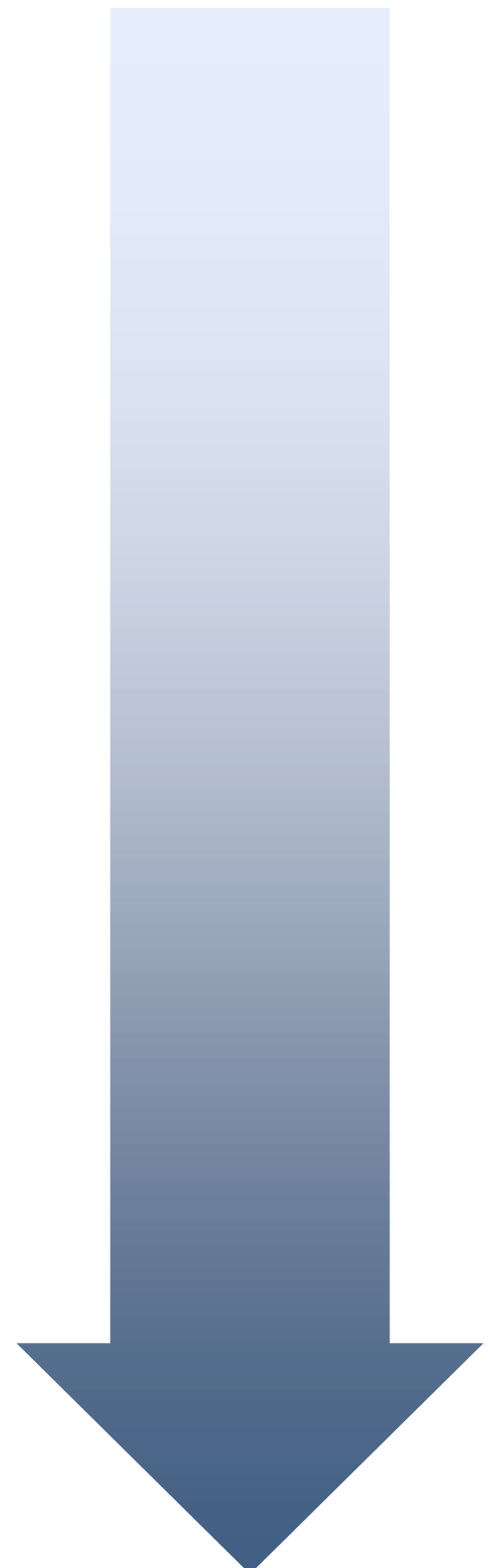


Simplistic behaviors and primary cognitive abilities



Myelin protects the axon, speeds information transfer, and facilitates brain connectivity & function

Complex behaviors and coordinated cognitive skills

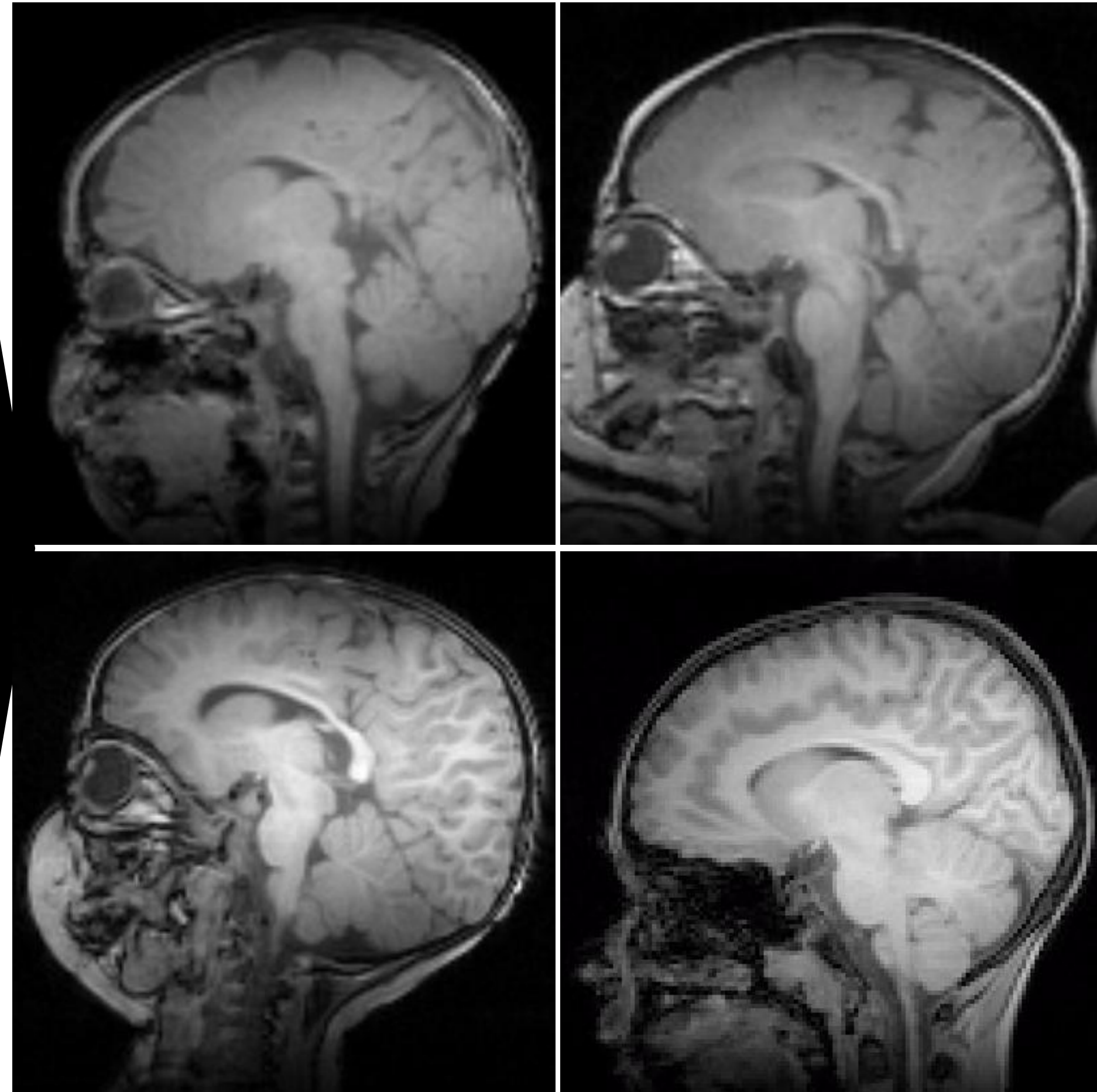




Child's Environment



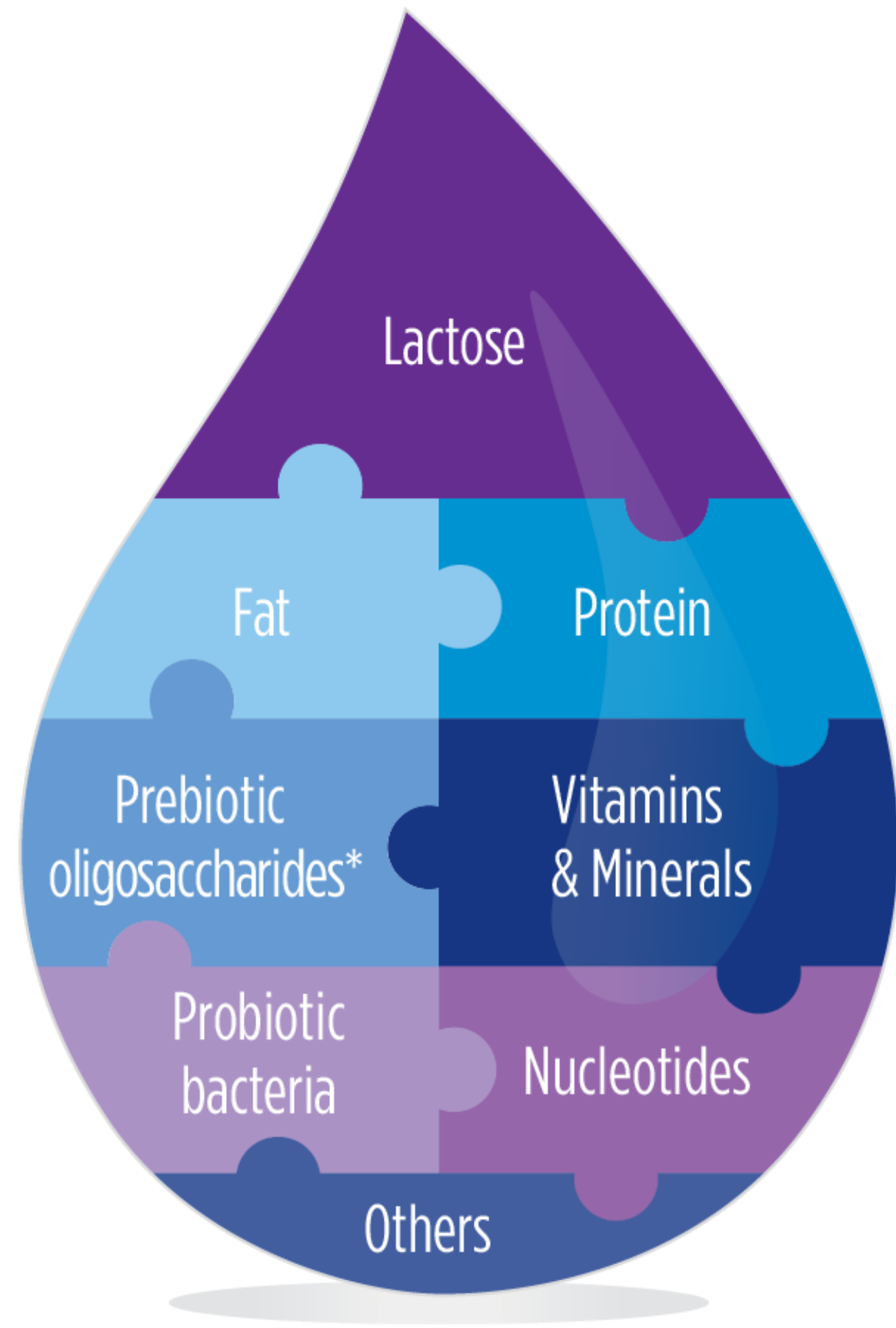
Patterns of Brain Development



Cognitive Outcomes



Early Infant Nutrition



Patterns of Brain Development



Cognitive Outcomes



RESONANCE: A Study of Child Development

Community sample of pre and post-natal cohorts ($n \sim 2000$) initiated between 2009 and 2012 with broad inclusion and a unified framework of measures and assessments.

Longitudinal study design with regular repeated study visits biannually throughout early childhood and yearly throughout later childhood and adolescence.

Rich data collection including medical and family history information, home environment, physical activity, and sociodemographic characteristics, biosamples, physical growth measures, psychometric assessments, and neuroimaging.

Neuroimaging



Behaviour & Cognition



Biological Specimens



Body Composition



Medical & Family History



Nutrition Intake

| Nutrition Facts | |
|------------------------|---------------------|
| Serving Size 172 g | |
| Amount Per Serving | |
| Calories 200 | Calories from Fat 8 |
| % Daily Value* | |
| Total Fat 1g | 1% |
| Saturated Fat 0g | 1% |
| Trans Fat | |
| Cholesterol 0mg | 0% |
| Sodium 7mg | 0% |
| Total Carbohydrate 36g | 12% |
| Dietary Fiber 11g | 45% |
| Sugars 6g | |
| Protein 13g | |
| Vitamin A 1% | Vitamin C 1% |
| Calcium 4% | Iron 24% |

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

nutritiondata.com

