

Study yields facts about premature brains

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U.S. medical researchers have determined a different approach is needed to protect the brains of premature infants.

Washington University School of Medicine neuroscientists in St. Louis studied how premature infants' brains respond to injury and discovered vulnerabilities similar to those in a mature brain but also at least one significant difference.

In an animal model of brain injury, researchers showed for the first time that parts of the developing brain are vulnerable to damage from glutamate, a nervous system messenger compound.

The scientists also found damage in the developing brain that could not be linked to glutamate, suggesting different treatments are needed to prevent brain injury in premature infants.

More than 2 percent of babies are born before the completion of their eighth month of gestation and up to half of these infants suffer brain injury. Unlike adults, premature infants receive the most damage in the brain's white matter, the portions of the brain that connect different regions.

The research is reported in the *Journal of Neuroscience*.

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