Anesthesia and developing brain...what is the risk?

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Almost half a million babies are born prematurely (<37 weeks gestation) each year in the United States. Preterm infants are subjected to hospitalization, and surgery is often required to sustain life. Anesthesia for obstetric and pediatric surgery cannot be avoided, as pregnant mothers and newly born infants with life-threatening conditions may require surgery or prolonged stay in the intensive care unit. Although, brain development begins during the last trimester of intrauterine life, the human brain is not fully developed at birth and it continues to grow over the first couple of years of postnatal life. The delayed effects of anesthetics are not well known, because potential interventions cannot be studied directly in humans. Given current findings, the Federal Drug Agency (FDA) has provided preliminary recommendations stating that, if possible, anesthesia should be postponed until the child is at least 6 months of age. Consequently, there exists a need for ongoing research to further elucidate safer anesthetic agents and techniques. Herewith, I would like to bring up topics of concern when children are exposed to anesthetics, when they are considered vulnerable to toxic effects of anesthesia.

Biography
Shridevi Pandya Shah, MD is a board certified Anesthesiologist with subspecialty expertise in Pediatric Anesthesiology in practice for more than 15 years. She has had many presentations at both national anesthesia and pediatric anesthesia professional meetings. She is currently an Assistant Professor at Rutgers, NJMS and has made contributions related to pediatric anesthesia in several professional journals.

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