

Autism Spectrum Disorder and Other Motor-cognitive Impairment: Hypoxic versus Non-Hypoxic

Therapeutic hypothermia may impair brain development, with imaging revealing damage linked to autism, cognitive, and motor deficits in children.

SANTA BARBARA , CA, UNITED STATES, January 21, 2025 /EINPresswire.com/ -- “Our findings

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Hypoxic-ischemic encephalopathy brain damage that is confirmed with diffusion-weighted imaging in the gray-white matter regions is a factor in causing autism spectrum disorder and other disorders.”

Greg Vigna, MD, JD

demonstrate that, despite the manifest successes of therapeutic hypothermia, brain development is impaired in these children,” states Dr. Ela Chakkarapani, Pediatrics and Neonatology.

[Dr. Greg Vigna](#), Board Certified Physical Medicine and Rehabilitation, national birth injury attorney, says, “Children who required therapeutic cooling may be spared the diagnosis of cerebral palsy, but are at risk for autism spectrum disorder or reduced cognitive and motor abilities. Now, with diffusion-weighted imaging, there can be objective testing to identify brain damage that accounts for the other clinical presentations of hypoxic-ischemic

encephalopathy in those who don’t meet the clinical diagnosis of cerebral palsy that may include autism spectrum disorder.”

What did Dr. Chakkarapani report in the article “Disrupted brain connectivity in children treated with therapeutic hypothermia for neonatal encephalopathy,” published in *NeuroImage: Clinical* 30 (2021) 102582?:

“We acquired diffusion-weighted imaging data from school-age children without cerebral palsy treated with therapeutic hypothermia for neonatal encephalopathy at birth, and a matched control group.

Network-based statistic analysis implicated brain regions involved in visuospatial processing and attention, aligning with previous behavioral findings. These included the precuneus, thalamus, left superior parietal gyrus, and left inferior temporal gyrus.

Our findings demonstrate that, despite the manifest successes of therapeutic hypothermia, brain development is impaired in these children.”

Read Dr. Chakkarapani’s article:

<https://www.sciencedirect.com/science/article/pii/S2213158221000267>

Dr. Vigna adds, “It has been known that low Apgars are associated with autism spectrum disorder and cerebral palsy, and there is a growing body of literature that is identifying abnormalities on diffusion-weighted imaging in the gray-white matter boundary in children with autism spectrum disorder. The gray-white matter boundary is another watershed area of the brain that is vulnerable in hypoxic-ischemic encephalopathy.”

Dr. Vigna concludes, “Hypoxic-ischemic encephalopathy brain damage that is confirmed with diffusion-weighted imaging in the gray-white matter regions is a substantial factor in causing autism spectrum disorder, and other cognitive, motor, and visual-spatial disorders. There is a path to compensation for those injured during difficult deliveries caused by the negligence of medical professionals who do not meet the clinical diagnosis of cerebral palsy but have other diagnoses that include autism spectrum disorder.”

Read about Apgar score and risk of autism: <https://link.springer.com/article/10.1007/s10654-018-0445-1>

Read about “Atypical measures of diffusion at the gray-white matter boundary in autism spectrum disorder in adulthood”: <https://onlinelibrary.wiley.com/doi/full/10.1002/hbm.25237>

Read “[The Mother’s Guide to Birth Injury](#)” written by Dr. Vigna.

Dr. Vigna is a California and Washington DC lawyer who focuses on neurological injuries and birth injuries caused by medical negligence. [Ben Martin Law Group](#) is a national pharmaceutical injury law firm and birth injury lawyer in Dallas, Texas. The attorneys are product liability and medical malpractice attorneys, and they represent neurological injuries across the country.

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