

Research Spotlight



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Imagine treating autism spectrum disorder without need for drugs or intensive behavioral therapy, but with safe and simple infrared light applied to the forehead for just 10 minutes daily. This groundbreaking case series reveals how transcranial photobiomodulation could transform autism treatment.

Shining Light on Autism: A New Brain Treatment Shows Promise

Imagine treating autism spectrum disorder not with pills or intensive therapy, but with safe light therapy applied to the forehead for just 10 minutes daily. This groundbreaking study reveals how transcranial photobiomodulation could transform autism treatment.

Researchers tested this non-invasive approach on eight individuals with autism, ages 6 to 38, using near-infrared light targeting the right prefrontal cortex. The results were striking: seven participants showed measurable improvements in core autism symptoms, particularly in attention, imagination, and communication skills.

But the benefits extended far beyond behavioral changes. Participants demonstrated improved focus and reduced impulsivity on cognitive tests. Parents reported better emotional regulation, enhanced sleep quality, and remarkably, improvements in gastrointestinal issues—a common but often overlooked autism symptom.

The treatment works by energizing brain cells at the cellular level, potentially enhancing mitochondrial function and reducing neuroinflammation—two key biological dysfunctions in autism. Unlike medications with significant side effects, the only reported adverse effects were brief nightmares in two participants.

Perhaps most compelling were the real-world observations: one child sat at the family dinner table for the first time, another learned to ride a bicycle, and therapists noticed improvements without knowing about the light treatment.

While this small study requires larger controlled trials for confirmation, it opens an exciting frontier in autism treatment. The prospect of a safe, home-based therapy that addresses autism's underlying biology rather than just managing symptoms represents a paradigm shift that could benefit millions worldwide.

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Reference:

Sarah D. Diaz, Gabriela Guimarães, Nicole J. Moore, Nisarg V. Shah, Laura E. Quiñones-Camacho, Douglas W. Barrett, F. Gonzalez-Lima. Transcranial Photobiomodulation for autism spectrum disorder: Prospective open-label case series across age groups, *Psychiatry Research Case Reports*, Volume 5, Issue 1, 2026, 100315.

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