

Autism: Groundbreaking research

evaluates the use of cord blood as treatment for autism

Autism is a complex developmental disorder affecting social, language, and behavioral skills.¹ Sutter Neuroscience Institute and CBR® (Cord Blood Registry®) have established a first-of-its-kind FDA-regulated clinical trial to evaluate if cord blood stem cells can help improve symptoms of autism.

To date, autism has no cure and an increasing number of known cases

Diagnosis of autism is up 23% since 2006 and 78% since 2002²

In the U.S.,

1 in 88

children are diagnosed with autism*



About **5x** more boys than girls are affected³

Autism is reported to occur in **all** racial, ethnic, and socioeconomic groups⁴

The exact cause of autism is unknown

20-25%

of children with autism also have a known genetic syndrome⁵

75-80%

of children with autism have NO known factors or causes of the condition⁵



Genetic factors



Environmental factors

Some possible causes of autism may be:

Symptoms usually appear in children before age

3



Immune system dysfunction



A combination of these or other factors



Some researchers believe that faulty or inadequate connections in the brain may play a role⁶

Average medical expenditures⁷



In addition to medical costs, families could spend

\$40,000 to \$60,000 on

intensive behavioral interventions for children with autism per child per year

Average annual medical spend on a child without autism

\$1,200

Average annual medical spend on a child diagnosed with autism

\$4,920 to \$7,440

Autism receives less than 5% of research funding compared to other, less prevalent childhood diseases⁷

Research funding in millions Number of children affected out of 100,000

Autism

\$79 M X 1,136

Juvenile Diabetes

\$156 M X 200

Muscular Dystrophy

\$162 M X 1

Leukemia

\$277 M X 83

Pediatric AIDS

\$394 M X 333

Cord blood stem cells offer a seed of hope

CBR is helping through:

Research



CBR is the **first and only** newborn stem cell bank to help establish an FDA-regulated cord blood stem cell clinical trial for the treatment of autism.

This research was prompted by evidence that suggests that some children with autism have dysfunctional immune responses that may affect normal development of the nervous system.⁸

Research shows that a newborn's umbilical cord blood stem cells have the ability to regulate the immune system and enhance the body's own repair mechanisms.⁹⁻¹⁰



Therefore, infusion of **a child's own newborn stem cells** may stimulate repair of the nervous system, potentially helping to improve language and some behaviors.

Awareness

Working with patient advocacy groups to educate the autism community about the trial.

 **Sutter Neuroscience Institute**
A Sutter Health Affiliate
With You. For Life.

Sutter Health strives to provide access to primary care physicians and specialty services in each of its communities and has a network of more than 1,000 physicians locally and more than 3,500 throughout the Sutter Health System.

 **Cbr** cord blood registry *Healthy Futures Born Here™*

CBR (Cord Blood Registry) is the world's largest and most experienced newborn stem cell bank. CBR is the exclusive family bank research partner in several FDA-regulated clinical trials. Researchers choose to work with CBR as a way of ensuring consistent quality and because of the company's large client population.

*Includes all types of autism in autism spectrum disorder (ASD).

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