

What causes SIDS? Study suggests genetics may be at play in sudden infant death syndrome

January 25 2023, by Adrianna Rodriguez



Credit: Pixabay/CC0 Public Domain

The cause of sudden infant death syndrome, or SIDS, continues to be a medical mystery but a new study suggests genetics may play a role.

Over the course of 39 years, researchers found siblings of infants who died of SIDS had a four-fold higher risk of dying suddenly compared to the general population, according to the report published in *JAMA Network Open*.

The large study reinforces previous research that shows SIDS may be more of a medical problem than previously thought, said Dr. Richard Goldstein, director of the Robert's Program on Sudden Unexpected Death in Pediatrics at Boston Children's Hospital.

"The general bias is that this is a sleep accident and the challenge for people looking at the science here is to advocate on behalf of the families and look harder," he said.

Other findings from the SIDS study

The study identified 2,384 siblings of 1,540 infants who died from SIDS among 2.6 million births in Denmark between January 1978 and December 2016. Researchers found:

- After one year, eight siblings died of SIDS at a median age of 2.5 months.
- Most cases of SIDS occurred within the first six months of life.
- Boys represented 61% of the SIDS cases.
- Siblings of infants who died from SIDS were more likely to live in households with low income.
- They were also more likely to have mothers with only an elementary school education compared to the [general population](#).

What is SIDS, or sudden infant death syndrome?

SIDS is the unexplained death of a seemingly healthy baby less than a year old, according to the Mayo Clinic. Death typically occurs during sleep and is sometimes known as crib death.

Boston Children's Hospital says SIDS is part of a larger category of unexpected infant deaths called [sudden unexpected death](#) in infancy, or SUDI, which includes babies whose deaths are later explained.

What causes SIDS?

SIDS is the leading cause of natural death during the first year of life, responsible for about 3,400 unexpected deaths in the U.S. each year, according to the Centers for Disease Control and Prevention.

But its causes are still unknown. The Mayo Clinic says it could be from a combination of factors:

Physical factors

- Brains defects: The part of the brain that controls breathing and waking up hasn't matured enough.
- Low birth weight: Premature birth increases the likelihood the baby's brain hasn't matured completely, including parts that control breathing and [heart rate](#).
- Respiratory infection, like a cold, may contribute to breathing problems.

Sleep environmental factors

- Sleeping on the stomach or side may make breathing more

difficult.

- Sleeping on a soft surface, like a fluffy comforter that can block an infant's airway.
- Sharing a bed: The risk of SIDS increases if the baby sleeps in the same bed with parents, siblings or pets.
- Overheating: Being too warm while sleeping can increase an infant's risk of SIDS.

Is SIDS genetic?

The Denmark study isn't the first to find a genetic association with SIDS. However, some [health experts](#) argue not enough funding has supported research into the topic as providers rely on safe sleeping techniques to prevent SIDS.

In the 1990s, [public health officials](#) began promoting the "Back to Sleep" initiative—now called Safe to Sleep—to teach caretakers about reducing the risk of SIDS by putting infants to sleep on their backs.

While CDC data shows rates have declined, a study found non-SIDS postneonatal mortality has followed a similar trajectory, suggesting other factors may be at play. And about one-third of SIDS cases still occur in babies who were sleeping on their backs, Goldstein said.

Health experts say new evidence continues to reinforce genetics may play a role in SIDS and it's important to invest in more research as data shows SIDS is the 12th most underfunded pediatric condition by the National Institutes of Health, according to a 2021 study published in *JAMA Pediatrics*.

"We think there are mechanisms at play that we're on the trail of," Goldstein said.

Is SIDS preventable?

There's no guaranteed way to prevent SIDS, but providers recommend safe sleeping techniques like:

- Put baby to sleep on back
- Keep the crib as bare as possible
- Don't overheat baby with additional covers, and don't cover the baby's head
- Have baby sleep in the same room, but not the same bed

Health experts also recommend immunizing the infant against preventable diseases.

(c)2023 USA Today

Distributed by Tribune Content Agency, LLC.

Citation: What causes SIDS? Study suggests genetics may be at play in sudden infant death syndrome (2023, January 25) retrieved 12 May 2024 from <https://medicalxpress.com/news/2023-01-sids-genetics-play-sudden-infant.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.