

# New study finds childhood abuse linked to higher risk for high cholesterol as an adult

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A new study found risk factors for heart disease and stroke were higher among adults who said they experienced childhood abuse and varied by race and gender. However, those who described their family life as well-managed and had family members involved in their lives during childhood were less likely to have increased cardiovascular risk factors as adults, according to new research published today in the *Journal of the American Heart Association*.

Although cardiovascular disease, which includes heart disease and stroke, is more common among older people, the risks often begin much earlier in life. Previous research confirms physical and [psychological abuse](#) and other [adverse experiences](#) in childhood increase the risk of developing obesity, Type 2 diabetes, high blood pressure and [high cholesterol](#), which, in turn, increase the risk for cardiovascular diseases, as detailed in the [2018 American Heart Association Scientific Statement: Childhood and Adolescent Adversity and Cardiometabolic Outcomes](#).

Conversely, healthy childhood experiences—nurturing, loving relationships in a well-managed household, including having [family members](#) who are involved and engaged in the child's life—may increase the likelihood of heart-healthy behaviors that may decrease the cardiovascular disease risks. In this study, researchers explored whether nurturing relationships and well-managed households may offset the likelihood of higher [cardiovascular risk factors](#).

"Our findings demonstrate how the negative and positive experiences we have in childhood can have long-term cardiovascular consequences in adulthood and define key heart disease risk disparities by race and sex," said study lead author Liliana Aguayo, Ph.D., M.P.H., social epidemiologist and research assistant professor at Emory University's Rollins School of Public Health in Atlanta.

Researchers examined information from the Coronary Artery Risk Development in Young Adults (CARDIA) Study, an ongoing, long-term study among 5,115 Black and white adults enrolled from 1985-1986 to 2015-2016. Study enrollment occurred in four U.S. cities: Birmingham, Alabama; Chicago; Minneapolis; and Oakland, California. More than half of the study participants were women, and nearly half were Black adults. At the start of the study, participants were 25 years old, on average. All participants received initial clinical examinations and eight

additional examinations every few years to assess cardiovascular risks over 30 years.

At ages 33 to 45, participants completed a survey of questions to assess areas of their [family life](#) during childhood. For this analysis, three areas were examined:

- Abuse: how often a parent or adult in their home pushed, grabbed, shoved or hit them so hard that they were injured; and how often a parent or adult in their home swore at them, insulted them or made them feel threatened.
- Nurturing: how often a parent or adult made them feel loved, supported or cared for; and how often a parent or adult in the family expressed gestures of warmth and affection.
- Household organization: did they feel the household was well-managed, and did their family know where they were and what they were doing most of the time. (No definitions or criteria were provided for the term "well-managed;" study participants were instructed to determine if the term described their childhood family experience.)

Participants were categorized based on their responses to the survey questions:

- Roughly 30% of participants reported experiencing "occasional/frequent abuse," which included those who responded, "occasionally or moderate amount of time" or "most or all of the time" to questions related to abuse.
- About 20% of participants reported they experienced abuse "some or little of the time," which was categorized as "low abuse."
- About half of the participants reported no childhood abuse and described their family life during childhood as nurturing and well-

managed.

Among the adults who reported experiencing abuse during childhood, the risk of Type 2 diabetes and high cholesterol—but not obesity and [high blood pressure](#)—was higher, compared to the adults who reported no abuse in childhood. The increase in risk, however, appeared to vary depending on gender and race.

Researchers noted:

- The risk of high cholesterol was 26% higher among white women and 35% higher among white men who reported low levels of abuse in childhood, compared to same sex and race adults who reported no abuse in childhood.
- The risk of Type 2 diabetes was 81% higher among white men who reported occasional/frequent abuse during childhood, compared to adults who reported no abuse in childhood.
- Black men and white women who said they experienced abuse and grew up in a dysfunctional household were more than 3.5 times as likely to develop high cholesterol as those who reported no abuse during childhood. In contrast, among people who reported growing up in a well-managed household, the risk of high cholesterol decreased by more than 34%.
- An unexpected finding: The risk for cardiovascular disease risk factors was not higher among Black women who reported experiencing abuse in childhood.

Several limitations may have affected the study's results. This study was a retrospective analysis of data collected in the CARDIA study in 2015-2016; no new surveys were conducted with the CARDIA study participants. The questionnaires about childhood family experiences were completed when the participants were adults, relying on memories, which may include some inaccuracies or incomplete recollections. In

addition, participants' BMI ([body mass index](#)), which is a measurement of weight according to height, was recorded only in adulthood, with no data on BMI during childhood for comparison.

"Further research is needed to better understand the potential mechanisms linking [childhood abuse](#) and family environment to higher [heart disease risk factors](#), as well as the impact of structural racism and social determinants of health, which likely influenced the differences we found by race and sex," Aguayo said. "This information is critical to strengthening [cardiovascular disease](#) prevention interventions and policies, particularly those that focus on people who experienced [abuse](#) or other trauma during [childhood](#)."

**More information:** *Journal of the American Heart Association* (2022). [www.ahajournals.org/doi/10.1161/JAHA.121.023244](http://www.ahajournals.org/doi/10.1161/JAHA.121.023244)

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