

LAY ABSTRACT

TITLE: Childhood Household Dysfunction and Low Household Income Associate with Increased Risk of Cirrhosis in Adults

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Very bad or harmful experiences as a child may impact someone as an adult. These experiences are often called traumas, traumatic events, or adverse childhood experiences (ACEs). The ACEs survey is one way to measure how many traumas someone may have had early in their life specifically related to abuse or family dysfunction in childhood. Researchers can add up the number of these experiences to create a total ACEs score. Researchers can then use these scores to see if childhood traumas may have impacted someone as an adult. In this study, the research team looked at ACEs score and liver disease (cirrhosis). They wanted to see if what researchers found in 1998 about the connection of ACEs and cirrhosis is still true – does a higher total ACEs score increase the odds of cirrhosis? In other words, is someone more likely to get cirrhosis as an adult if they had more traumas as a child?

Cirrhosis is a significant risk factor for liver cancer. Not all people with cirrhosis will develop liver cancer, but it is a strong predictor of the disease. The STRIVE research

team is the only CEECR cohort planning to compare people with and without cirrhosis to learn more about cancer risks.

In this study, the team compared adults 40-75 years old with and without cirrhosis. Annual household income, race and gender, and other medical history were considered for the two groups to see what impacted the potential connection between ACE score and liver disease. They did not see the same relationship as the 1998 researchers between total ACEs and cirrhosis. Total ACEs score on its own was not linked to cirrhosis overall. However, the team found that adults with at least one ACE related to household dysfunction (HD) were more likely to have cirrhosis. They also found that people with a household income under \$50,000 and a history of four or more ACEs were more than two times as likely to have cirrhosis.

The authors think that how someone may cope with different traumas could explain why total ACEs score was not significant for cirrhosis, but HD was. Those with childhood trauma related to family or household dysfunction may be more likely to have unhealthy coping mechanisms that can contribute to liver disease as adults. HD may also impact the way one's body expresses different genes, which could also potentially contribute to liver disease. In this study, childhood trauma was found to be related to cirrhosis in people with low incomes as adults. There may be an income level as an adult where one can cope better and have better healthcare despite a history of childhood trauma. More research is needed to understand how traumatic events can impact our bodies and change our risk for diseases like cirrhosis.