

Children who experience violence early in life develop faster

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A study in *Biological Psychiatry* has shown that exposure to violence early in life—such as physical, emotional, or sexual abuse—is associated with faster biological aging, including pubertal development and a

cellular metric of biological aging called epigenetic age. In contrast, children exposed to forms of early life adversity involving deprivation—such as neglect and food insecurity—showed signs of delayed pubertal development compared with their peers.

"[The findings] demonstrate that different types of early-[life](#) adversity can have different consequences for children's development," said senior author Katie McLaughlin, Ph.D., who completed the study at University of Washington. Poor physical and [mental health outcomes](#) associated with early life adversity have been attributed to accelerated development. However, the new findings show that violence- and deprivation-related adversity have different effects on [development](#), indicating that the specific type of adversity should be considered to better understand how an experience will affect a child later in life.

In children who experienced early life violence, accelerated epigenetic aging was associated with increased symptoms of depression. According to the authors, this means that faster biological aging may be one way that early life [adversity](#) "gets under the skin" to contribute to later health problems.

The 247 children and adolescents involved in the study were 8-16 years old. "These findings indicate that accelerated aging following exposure to violence early in life can already be detected in children as young as 8 years old," said Dr. McLaughlin.

"With each new study, it seems that our appreciation grows of the enormous and persisting impact of early life exposure to violence. This new knowledge calls for increased societal investment in reducing the exposure of children to violence and for biomedical and psychological research to reduce the impact of these experiences throughout the lives of these vulnerable individuals," said John Krystal, MD, Editor of *Biological Psychiatry*.

Although researchers don't know if accelerated epigenetic aging is permanent or if it can be reversed, the association between the aging metrics and symptoms of depression in this study may offer a way for doctors to identify [children](#) who need help. "Accelerated epigenetic age and pubertal stage could be used to identify youth who are developing faster than expected given their chronological age and who might benefit from intervention. Pubertal stage is an especially useful marker because it is easy and inexpensive to assess by healthcare providers, and could be used to identify youth who may need more intensive health services," said Dr. McLaughlin.

More information: Jennifer A. Sumner et al, Early Experiences of Threat, but Not Deprivation, Are Associated With Accelerated Biological Aging in Children and Adolescents, *Biological Psychiatry* (2018). [DOI: 10.1016/j.biopsych.2018.09.008](https://doi.org/10.1016/j.biopsych.2018.09.008)

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