

Abuse accelerates puberty in children

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Credit: AI-generated image ([disclaimer](#))

While it has long been known that maltreatment can affect a child's psychological development, new Penn State research indicates that the stress of abuse can impact the physical growth and maturation of adolescents as well.

Jennie Noll, director of the Child Maltreatment Solutions Network and professor of human development and family studies, and Idan Shalev,

assistant professor of biobehavioral health, found that young girls who are exposed to childhood [sexual abuse](#) are likely to physically mature and hit puberty at rates 8 to twelve months earlier than their non-abused peers. Their results were published recently in the *Journal of Adolescent Health*.

"Though a year's difference may seem trivial in the grand scheme of a life, this accelerated maturation has been linked to concerning consequences, including behavioral and mental health problems and reproductive cancers," said Noll.

The body is timed so that physical and developmental changes occur in tandem, assuring that as a child physically changes, they have adequate psychological growth to cope with mature contexts. "High-stress situations, such as [childhood sexual abuse](#), can lead to increased [stress hormones](#) that jump-start puberty ahead of its standard biological timeline," Noll explained. "When physical maturation surpasses psychosocial growth in this way, the mismatch in timing is known as maladaptation."

In the past, there have been studies loosely linking sexual abuse to maladaptation and accelerated maturation, but the longitudinal work completed by Noll and her team has been the most conclusive and in-depth to date, beginning in 1987 and following subjects throughout each stage of puberty.

Controlling for race, ethnicity, family makeup, obesity, socioeconomic status and nonsexual traumatic experiences, the researchers compared the pubescent trajectories of 84 females with a sexual abuse history and 89 of their non-abused counterparts. Working closely with nurses and Child Protective Services, the subjects were tracked from pre-puberty to full maturity based on a system known as Tanner staging.

Tanner staging is a numeric index of ratings that corresponds with the physical progression of puberty. The study's researchers focused on breast and pubic hair development as two separate mile markers for pubescent change. Subjects were placed somewhere from one (prepubescent) to five (full maturity) on the Tanner index and their Tanner number and age were mapped out and recorded over time.

"We found that young women with sexual abuse histories were far more likely to transition into higher puberty stages an entire year before their non-abused counterparts when it came to pubic hair growth, and a full 8 months earlier in regards to breast development," Noll stated. "Due to increased exposure to estrogens over a longer period of time, premature physical development such as this has been linked to breast and ovarian cancers. Additionally, early puberty is seen as a potential contributor to increased rates of depression, substance abuse, sexual risk taking and teenage pregnancy."

The researchers believe they were able to accurately rule out other variables that may have aided in accelerated puberty, pinpointing [child sexual abuse](#) and the stress hormones associated with it as a cause for early maturation in [young girls](#). Their findings add to the body of work highlighting the role of stress in [puberty](#), and it is the hope that the research will lead to increased preventative care and psychosocial aid to young women facing the effects of early maturation.

More information: Megan K. Maas et al. A Person-Centered Approach to Online Sexual Experiences of Female Adolescents: The Role of Maltreatment, *Journal of Adolescent Health* (2017). [DOI: 10.1016/j.jadohealth.2016.10.062](https://doi.org/10.1016/j.jadohealth.2016.10.062)

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