

# Impacts of family structure on puberty onset in girls

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Girls who do not live with both parents from birth to age two may be at higher risk of starting puberty at a younger age than girls living with both parents, research published in the open access journal *BMC Pediatrics* suggests. The authors suggest that their findings support the hypothesis that stress in early life may influence puberty onset. The risk of early

puberty onset could potentially be mitigated by interventions aiming to improve child wellbeing, according to the authors.

A team of researchers from Kaiser Permanente Northern California Division of Research, U.S., found that [girls](#) who did not live with both [parents](#) from birth to age two were 38% more likely to begin their period before the age of 12 compared with girls who lived with both parents. Girls who did not live with both parents between the ages of two and six were 18% more likely than girls whose parents lived together to begin their period before the age of 12.

Ai Kubo, the corresponding author said: "Stress experienced before age two may have a stronger influence on puberty onset than stress experienced by older children. Early puberty is associated with an increased risk of mental and emotional problems during adolescence. In addition, girls who begin puberty early are at [increased risk](#) for various conditions such as heart disease and breast and uterine cancer. For the purpose of this study, we investigated living with one or two parents as a way to assess the potential stress a young girl may experience. Our research could be used to guide healthcare interventions to identify and support girls who may be at higher risk of early puberty."

The authors also found that girls who did not live with both parents from birth to age two were 29% more likely to begin developing breasts earlier and 21% more likely to start the growth of pubic hair earlier, compared to girls who lived with both parents. Girls who did not live with both parents between the ages of two and six were 13% more likely to start developing breasts and 15% more likely to start developing pubic hair earlier than girls who lived with both parents.

To examine [family structure](#) and puberty onset in girls the authors used electronic health record data of girls born between 2003 and 2010 within the Kaiser Permanente Northern California healthcare system. Out of

the 26,044 girls included in the study, 2,034 (8%) lived with one parent before the age of two and 2,186 (8%) lived with one parent between the ages of two and six.

The authors observed that the risk of earlier puberty onset varied by racial and ethnic background. Among all the Black, White and Latinx girls included in the study, approximately 30%, 5.6% and 9.6% lived in a household with only one parent before age two. Black, White and Latinx girls who lived with one parent before the age of two were 60%, 24% and 30% more likely to start developing breasts earlier compared to girls of similar ethnicity who lived with both parents. Girls who were Black or White who lived with one parent between the ages of two and six were 44% and 21% more likely to begin breast development early, compared to girls who lived with both parents. Latinx girls raised by a single parent between ages two and six were no more likely to begin breast development early than girls who lived with two parents. Girls' BMI did not significantly influence the association between living in a single parent household and earlier puberty onset, according to the authors. However, other factors such as socioeconomic status, perceived stress, or adverse childhood events may further explain the differences.

The authors suggest that infant attachment insecurity—the lack of a positive bond that develops between infant and caregiver—may be one mechanism by which girls living in single-parent households before age two are experiencing earlier pubertal onset.

Ai Kubo said: "Previous research has shown that infants living in single-parent households are more likely to display attachment insecurity compared with infants living in dual-parent households and girls with insecure infant attachment were more likely to experience early onset puberty. They were also likely to end puberty earlier."

The authors caution that as data was taken from electronic health records

detailed information on family structure, reasons for having only one parent in the household—such as divorce, [single parent](#) by choice, or incarceration—nutrition intake, physical activity, and the age of the mother's first period was not available. While the authors controlled for neighborhood-level household income at birth, later changes in address and therefore changes in neighborhood quality that could have occurred during the girl's childhood were not considered. Future research, including other factors such as household income or neighbourhood that may be independent sources of childhood stress, should study the potential mechanisms underlying the association between family structure and earlier age of [puberty](#) onset.

**More information:** "Early life household intactness and timing of pubertal onset in girls: a prospective cohort study" *BMC Pediatrics*, [DOI: 10.1186/s12887-020-02345-w](#)

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