

Puberty: Early and Delayed

What is puberty?

Puberty is when a child starts to mature into an adult. Hormones (estrogen and testosterone) cause the body to change during puberty. Normal puberty starts in the brain. The brain tells the ovaries (in girls) and testicles (in boys) to make estrogen and testosterone. The adrenal glands sit on top of the kidneys. They make testosterone-like hormones.

When does puberty normally start?

For girls, breasts normally start to grow between eight and 13 years of age. Body odor, a growth spurt, pubic and underarm hair are other signs of puberty in girls. A girl's first menstrual period usually happens about 2.5 years after the breasts start to grow. On average, girls have their first period at 12 or 13 years of age.

For boys, the testicles start to grow between nine and 14 years of age. Body odor, a growth spurt, pubic and underarm hair, voice changes, and facial hair follow.

When should puberty cause concerns?

Girls should see the doctor if they have:

- Signs of puberty before eight years of age
- No signs of puberty by 13 years of age
- No menstrual period by 15 years of age
- Puberty that starts but then stops

Boys should see the doctor if they have:

- Signs of puberty before nine years of age
- No signs of puberty by 14 years of age
- Puberty that starts but then stops

What causes early puberty?

Early puberty (also called precocious puberty) is usually just normal puberty that starts too early. This is more common in girls. In boys, early puberty is more likely to be caused by a health problem.

If a child gets body odor, pubic hair, or underarm hair, without growth of the breasts (girls) or testicles (boys), it is usually because the adrenal glands release hormones too early. This is called premature adrenarche. It is common, especially in girls. These hormones do not cause early menstruation in girls.

Rarely, early puberty happens when the ovaries, testicles, or adrenal glands make extra hormones.

Because normal puberty starts in the brain, problems in the brain can sometimes cause early puberty.

How is early puberty treated?

It depends on the cause. Premature adrenarche and normal puberty that starts too early often don't need treatment.

Medication might be needed if puberty starts at a very young age, to allow time for your child to grow if he or she might be very short as an adult. They may also be needed if menstrual periods might start at a very early age.

What causes delayed puberty?

Most children with delayed puberty, especially boys, are "late bloomers" and otherwise healthy. This is called constitutional delay



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of growth and puberty. Usually, at least one parent was also a late bloomer.

Some health problems and being underweight can cause delayed puberty. Less commonly, a problem with hormones causes it.

How is delayed puberty treated?

It depends on the cause. Children with constitutional delay of growth and puberty don't need treatment. They will eventually catch up to other children their age.

Medicine might be needed if puberty is very delayed or there is a hormone problem. If your child has a health problem or is underweight, treating the condition that is causing delayed puberty can help.

Where can I get more information?

Your doctor

AAFP's Patient Information Resource

<https://familydoctor.org/boys-and-puberty/> and
<https://familydoctor.org/girls-and-puberty/>

Hormone Health Network

<http://www.hormone.org/diseases-and-conditions/children-and-teen-health>

National Institutes of Health

<https://medlineplus.gov/puberty.html>

Pediatric Endocrine Society

https://pedsendo.org/patients_families/Educational_Materials/index.cfm

Notes:

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This handout is provided to you by your family doctor and the American Academy of Family Physicians. Other health-related information is available from the AAFP online at <http://familydoctor.org>.

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