



## Premature Adrenarche

### What is adrenarche?

Adrenarche is part of puberty. Specifically, it is the development underarm and pubic hair, acne, oily skin and hair, and body odor. It is caused by hormones called androgens which are made by the adrenal glands.

Adrenarche usually happens around the time of puberty when there is a growth spurt, breast growth, and eventually periods start. This process usually occurs over 2 to 3 years.

Adrenarche can start as early as age 8 and on average begins to occur by age 10. However, adrenarche may occur slightly before or slightly after the other signs of puberty.

### What is premature (early) adrenarche?

Premature adrenarche is the growth of pubic or underarm hair, body odor or acne before the age of 8. If there are no other pubertal changes (specifically no breast growth, a growth spurt or menstrual bleeding), the pubic/underarm hair is considered a normal variation in development.

However, healthcare providers monitor children with premature adrenarche to make sure that they do not also develop precocious (early) puberty, which can be treated.

### Can premature adrenarche be harmful?

Generally, premature adrenarche is **not** harmful.

Premature adrenarche does not require medical treatment. Children with premature adrenarche may need help with treating acne or removing unwanted hair.

### How will a healthcare provider evaluate my child for premature adrenarche?

- Your provider will ask when puberty changes were first noticed, puberty timing in family members and if the child was potentially exposed to something with hormones in it.
- Physical exam, including checking for breast development, signs of pubic hair growth, external genitalia, and a skin exam.
- Review of growth charts to look for the start of a growth spurt.
- Bone age x-ray of the hand.
- Lab tests including hormone levels may be ordered at the initial evaluation or at a follow-up visit.

### When would a healthcare provider want to do further evaluation?

- If there are other signs of puberty prior to age 8
- Pubic hair is growing rapidly
- Advanced bone age
- Severe acne
- Enlargement of the clitoris

### What follow-up is needed?

Your child should have close follow-up with their primary care provider, pediatric endocrinologist or gynecologist every 4-6 months until reaching the normal age for puberty onset.

Children with premature adrenarche are at increased risk in the future for conditions such as polycystic ovary syndrome (PCOS) and diabetes, especially if they are also overweight. Healthcare providers may screen more closely for these conditions as the child gets older.