

Premature Thelarche: A Guide for Families

What is premature thelarche?

Thelarche is a medical term referring to the appearance of breast development in girls, which usually occurs after age 8 years and is accompanied by other signs of puberty, including a growth spurt. *Premature thelarche* describes girls who develop a small amount of breast tissue (typically 1" or less across), typically before the age of 3 years. The breasts do not get larger and the girl does not have a growth spurt. A girl who has started puberty will show an increase in the size of her breasts within 4 to 6 months, but a girl with premature thelarche can go a year or more with little or no change in the size of the breasts (sometimes, they will get smaller). Usually, both breasts are enlarged, but, sometimes, premature thelarche only affects one side. Premature thelarche differs from *true precocious puberty*, in which the typical signs of puberty develop at an inappropriately early age.

What causes premature thelarche?

We do not know what causes this early breast development. Because some girls with this condition will show tiny cysts in their ovaries on ultrasound, one possibility is that one of these cysts may produce a tiny amount of estrogen and then disappear, but the effect of the estrogen on breast tissue may persist for a long time.

How is premature thelarche diagnosed?

At such an early age, true precocious puberty is rare, so any girl with nonprogressive breast development who is growing at a normal rate on the growth chart is very likely to have premature thelarche. Thus, many doctors will order no tests but will follow up with the girl in 4 to 6 months. Some doctors order blood tests, the most useful ones being a pituitary hormone called *luteinizing hormone*, which should be low, and the major estrogen hormone, called *estradiol*, which will be normal

to slightly increased. Some doctors will also order a bone age x-ray, but it is rare for the bone age to be significantly advanced, as is seen in true precocious puberty.

For girls who start developing breasts between the ages of 6 and 8 years, premature thelarche may still be the correct diagnosis, but true precocious puberty is more likely. Careful monitoring to see if there are changes in the amount of breast tissue over time, additional tests, and treatment are more likely to be needed.

How is premature thelarche treated?

Because this condition does not progress and there are no complications, no medications are necessary. In most girls who have breast development before age 3 years, observation and patience are recommended. Follow-up studies have shown that it is uncommon for a girl with premature thelarche before age 3 years to develop true precocious puberty at a later age, and these girls usually have their first period at a normal age. There appear to be no long-term health problems for girls with premature thelarche.

*Pediatric Endocrine Society/American Academy of Pediatrics
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