

Precocious (Early) Puberty

Puberty is the period of time during which a child's body changes from that of a child to that of an adult. The time at which these changes start is different for boys and girls and varies from child to child. It usually takes about 4 - 5 years for a child to go through the pubertal process. During this time, people gain the ability for sexual reproduction. The time of puberty is influenced by nutrition (weight gain) and health. Children often follow the same pattern as their parents.

Hormones are the chemicals made by the body to cause the changes of puberty. The primary hormone in girls is estrogen made by the ovaries, and in boys is testosterone made by the testicles. There are hormones in the brain (gonadotropins named LH and FSH), which stimulate the ovaries or testicles to start making estrogen or testosterone.

Normal Puberty

In girls, puberty occurs between the ages of 8 years and 13 years. The first sign of puberty is usually breast growth followed by pubic hair growth. Sometimes pubic hair growth starts first. Body odor or acne can also be among the first things observed. Girls also begin a time of very rapid growth in height. Menstruation, or periods, usually comes after breast growth and pubic hair growth, and toward the end of puberty. At the end of puberty, a child is done growing. Once menstruation starts, a girl has about 2 inches of growth remaining.

In boys, puberty occurs between the ages of 9 years and 14 years. The first sign of puberty in boys, is enlargement of the testicles. This is often not noticed by the boy or parent right away, but is a very helpful indicator to the doctor regarding whether puberty has started. Pubic hair growth follows shortly after the testicles start to grow, and sometimes occurs first. Acne and body odor appear early in the pubertal time period. Facial hair and voice changes occur later in puberty. Boys have their most rapid height growth at the end of puberty, after which they are finished growing.

Precocious (Early) Puberty

Sometimes puberty occurs too soon. If puberty occurs before the age of 8 years in girls or before the age of 9 years in boys, the child needs to be evaluated by his or her physician and possibly referred to an endocrinologist. Pubic hair growth or breast development alone may be normal in girls after age 6 years. However, it is important for a physician to check the girl's growth and rate of body changes to determine whether she has early yet normal puberty, or precocious puberty. In girls, precocious puberty is usually idiopathic, which means the reason for it is unknown. It occurs like normal puberty, except that it is much earlier and progresses more rapidly. Precocious puberty can also be caused by: a brain tumor, other brain abnormalities, ovarian tumors, adrenal tumors or abnormal function, or autonomous ovarian function.

In boys, precocious puberty is more rare. When it occurs it is more likely to be caused by a tumor producing hormone, or by autonomous function of the testicles. It can also be idiopathic as described for girls.

Precocious puberty in girls and boys is treated with hormones, or agents that regulate hormones, to stop the puberty until a more appropriate time. Treatment is very successful in most cases. If it is not treated, children will have shorter adult height than expected. Treatment allows children to delay the physical and emotional changes of puberty and to have time to gain full adult height.