

Delayed 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.

Delayed puberty

If a girl has no signs of puberty by age 13 years (that is, no breasts and no pubic hair), she needs to be evaluated by her physician and possibly referred to an endocrinologist. If a boy has no signs of puberty by age 14 (that is, no pubic hair and no increase in size of the testicles), he needs to be evaluated by his physician. Sometimes delayed puberty is normal and sometimes there is an underlying reason which needs to be corrected. The reasons for delayed puberty range from poor weight gain or excessive exercise to abnormal hormone function. Sometimes the brain does not produce the gonadotropins to stimulate puberty. Sometimes the ovaries or testicles do not produce the sex hormones (estrogen or testosterone) to cause the bodily changes. The endocrinologist may measure the hormone levels in the blood and may do an x-ray of the hand to determine how mature the bones are. Some genetic problems can cause delayed puberty. This can be determined by a blood test to look at the chromosomes (genes). The endocrinologist may also do an ultrasound of either the testes or ovaries, or an MRI scan of the brain.