



PRECOCIOUS PUBERTY IN CHILDREN WHO HAVE SPINA BIFIDA WITH HYDROCEPHALUS

“Puberty” refers to normal body changes that lead to maturity and the ability to have children. Normal puberty begins between ages 8 and 12 in girls and between 9 and 14 in boys.

“Precocious puberty” means that these changes start much earlier than expected. Children with Spina Bifida and hydrocephalus (too much water on the brain) — especially girls — are more likely to start puberty early than others.

Hormones made in the brain control the timing and sequence of puberty. These hormones stimulate other parts of the body to make sex hormones. The sex hormones, especially estrogen in girls and testosterone in boys, cause sexual maturation.

Stages of puberty

The physical changes seen in puberty are labeled by what is called “Tanner staging.” Stage 1 is child-like (before puberty) and stage 5 is full maturity. The usual sequence in girls is:

1. Breasts start to develop.
2. Hips widen and there is a growth spurt that usually lasts about four years.
3. Pubic hair grows (three-to-six months after breasts develop).
4. Other body hair grows.
5. First period usually starts two to two-and-a-half years after breast development is noticed. Body odor may also change.

The average age that breasts start to develop in girls is 9 to 10. Puberty usually starts earlier in African-American girls than in Caucasian girls. Some experts found that breast development in African-American girls started a year before it did in Caucasian girls. Breasts typically take at least three years to mature fully.

If major breast development starts before age 8, it is considered early. (Sometimes girls will have some breast development, with no other signs of puberty. This isolated change is usually normal.)

The usual sequence in boys is:

1. The testicles grow larger.
2. He has a growth spurt.
3. The penis grows larger.
4. Pubic hair grows.
5. Other body hair grows.

If boys show major development before age 9, it is considered early.

Early puberty

Early puberty can cause problems. First, once the growth spurt starts, bones become more adult-like. After that time, the bones stop growing and can't grow any more. So, most kids who start puberty too early will be shorter than they otherwise would have been.

Another major problem with early puberty is that body changes happen much earlier than in other children of the same age. This makes a child appear different. Children with early puberty might be teased. This is common for girls who develop breasts early. Girls might receive sexual advances for which they are not mentally and emotionally ready. Boys might become more aggressive than their peers.

Children with early puberty might feel alone and rejected. Adults might expect them to act older than they are. This can be hard for children because they can't live up to how others think they should act. For children with Spina Bifida, early puberty and all of the problems that go with it can make daily life even harder.

Spina Bifida and early puberty

No one knows for sure why children with Spina Bifida and hydrocephalus are more likely to have early puberty. Most think that hydrocephalus changes the time when the brain sends "puberty hormones" into the bloodstream. Your child should be seen by a health care provider if he or she:

- starts puberty early;
- has an unusual sequence of the steps outlined above; or
- has very fast sexual development.

Your child would probably be sent to an endocrinologist, a doctor who specializes in hormones. If no other problems are found, the most common treatment is to delay puberty. This is done by injecting a drug that stops it temporarily. The most common drug is called leuprolide (Lupron). It is injected once a month and is given for a few years. The drug normally stops puberty after three to six months and might even reverse some changes. Most people think that delaying puberty helps kids grow taller than they would have been otherwise. More important, the delay should allow children (and parents) to adjust to their growing bodies and feelings, and help them have a healthy sexual identity.

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Questions?

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