

Pubertal Gynecomastia: A Guide for Families

What is gynecomastia?

Gynecomastia is the medical term for the presence of breast tissue in boys and men. Many boys have the appearance of a small amount of breast tissue in early puberty. Occasionally, the amount of tissue can appear excessive and may cause some pain or tenderness.

What causes gynecomastia?

Gynecomastia is caused by a relative imbalance of estrogen (female hormones) to testosterone (male hormones). Although estrogen is considered to be a female hormone, it is essential in men for healthy bone development. Testosterone is normally changed into estrogen in women and, to a lesser degree, in men. During certain times of life, specifically early to mid-puberty, as well as old age, this change to estrogen is somewhat greater, and an imbalance between testosterone and estrogen develops. When the very small amount of breast tissue normally present in boys is exposed to a rising level of estrogen, typical during early puberty, breast enlargement may occur. As male hormones can be changed into female hormones in fat tissue, gynecomastia is often seen more frequently in boys who are overweight. In addition, as fatty tissue can accumulate in the chest or breast area in boys who have obesity, these 2 tissues can look the same, especially when the boy is examined in the sitting position.

Certain rare medical conditions can occasionally cause gynecomastia. Disorders of the adrenal or pituitary gland, as well as tumors of the testes or adrenal gland, can lead to overproduction of estrogen and breast development. *Klinefelter syndrome* is a genetic disorder that affects testicular function and may be suspected if the testes do not enlarge as the boy progresses through puberty or if gynecomastia develops.

Certain prescription medications, as well as over-the-counter supplements and drugs of abuse, may cause gynecomastia. Among the prescribed medications, the most common include anti-ulcer medications, as well as medications prescribed by psychiatrists. Over-the-counter supplements and topical treatments, especially those containing lavender, tea-tree oil, or other oils that may have estrogen-like actions, can also cause breast development. Finally, use of alcohol; drugs of abuse,

including marijuana, heroin, and amphetamines; and anabolic steroids can occasionally cause gynecomastia.

What testing can be done?

When your son is evaluated for the presence of breast tissue, in addition to a complete physical examination, the doctor may order laboratory tests to assess the testosterone and estrogen levels, and the pituitary hormones which regulate them, in your son's bloodstream. However, in most cases, these tests are normal for a boy's stage of puberty and are not helpful.

How is gynecomastia treated?

When the amount of breast tissue is not too large, pubertal gynecomastia will often resolve on its own. If the amount of breast tissue (or breast and fat tissue together) is so large that a boy is very embarrassed about his appearance (for example, he insists on wearing more than one loose shirt), cosmetic surgery may be the only recourse. Another strategy, which is sometimes helpful, is a special elastic, or compression, tank top that keeps the breasts from sagging and improves the appearance of the chest (these may be ordered online). Finally, while there have been several trials of medication to decrease estrogen production or to block its effect on breast tissue, there are currently no approved medications for this. Such medications are sometimes effective, mainly when there is more actual breast tissue than fat and if the breast tissue has not been present for several years.

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