



# British Society for Paediatric Endocrinology and Diabetes

## **BREAST ENLARGEMENT IN BOYS AT PUBERTY (pubertal gynaecomastia)**

Some breast enlargement is remarkably common in boys in early puberty, indeed it can be considered normal as nearly half of all boys are affected. Nonetheless, it is often a cause of unnecessary distress.

### **Cause**

The key event at puberty is the secretion of sex hormones. Hormones are chemicals secreted into the blood by endocrine glands. The main sex hormone in boys is testosterone, secreted by the testes, and in girls is oestrogen, secreted by the ovaries. However, both hormones are in fact secreted in both sexes. There is some production of oestrogen from the testes and some production of testosterone from the ovaries. It is the balance between these two hormones that determines the pattern of development as male or female. In boys there is also another potential source of oestrogen because testosterone can be converted to oestrogen in fatty tissue. Breast tissue is sensitive to oestrogen in boys as it is in girls and exposure even to the small amounts of oestrogen secreted in boys can cause some breast development.

### **Symptoms**

Most commonly, soon after the boy starts to show signs of puberty, small, firm plaques of breast tissue develop right under the nipples. These can be quite tender. In some boys there is also fatty development around the nipple, this is more likely to occur and more prominent in boys who are overweight. Although such breast development is completely harmless, it may be a matter of real concern. Boys are naturally sensitive about their male development at this age and some who find they have breast development suffer agonies of worry without mentioning their concern to anyone. In some boys one breast is more affected than the other and sometimes the development can be entirely one sided; this has no special significance. If the breast development becomes at all obvious most boys find it embarrassing and take to wearing loose clothes and avoiding exposure in showers and swimming pools. Obviously this can greatly inhibit their activities.

### **Outlook**

Fortunately, pubertal breast development nearly always settles on its own and gradually goes away as puberty progresses. It usually improves within one year and is seldom a concern after two years. Puberty progresses normally in all other respects. Very rarely, the problem is more severe and persistent. There are several extremely unusual disorders in which breast development can occur in boys of this age. It can also occasionally run through several generations in some families. Underlying disorders can generally be excluded by physical examination and a blood test. If the breast development is particularly troublesome, therefore, it is worth consulting a doctor with experience in these matters.

### **Treatment**

When there is fatty breast development it is obviously helpful to lose some weight. Boys should also be allowed some privacy if they wish. Most schools are helpful about this. Many different medications which affect hormone release or action have been tried but none are both effective and safe. The only really effective treatment is plastic surgery. Total removal of the breast tissue requires quite a long operation and is inevitably sore afterwards but it usually gives an excellent result with only slight, and often nearly invisible, scarring along the border of the nipple. Liposuction has been tried but is less effective. Fortunately, only very few boys require such radical treatment. In the very great majority all that is needed is explanation and reassurance possibly backed up with some weight loss.