



# Gynaecomastia

## What is gynaecomastia or 'man boobs'?

Gynaecomastia (often referred to as 'man boobs') is the enlargement of male breast tissue. The condition appears as a rubbery or firm mass that starts from underneath the nipples and then spreads outwards over the breast area. The tissue is enlargement of glandular tissue and is not fat tissue. In about half of cases, enlargement is found in both breasts; in the remainder it only affects one breast.

Gynaecomastia can happen in males of any age or weight. Obese men can appear to have man boobs as they have fat tissue all over the body including the breasts, but this is not true gynaecomastia.

## How common is it?

Gynaecomastia is very common in boys going through puberty, happening in more than half of all normal adolescent males, and usually resolves completely<sup>1</sup>. In older men, enlargement of the breast tissue happens in one to two thirds of men<sup>2</sup>.

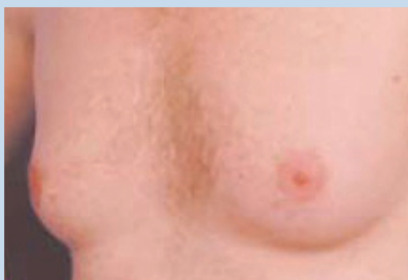


Photo courtesy of Mr G Southwick, Melbourne Institute of Plastic Surgery.

## What are the main causes of gynaecomastia?

Gynaecomastia commonly appears during infancy, puberty and older age. All men have the male sex hormone testosterone as well as low levels of the female hormone oestrogen which controls breast tissue growth. When the testosterone to oestrogen ratio changes (that is, there is an imbalance in the levels of these two hormones favouring relatively higher amounts of oestrogen), breast tissue can grow. Some men with gynaecomastia have elevated oestrogen levels.

Sixty to 90 per cent of newborn male babies have enlarged breast tissue because of transfer of oestrogen from the mother during pregnancy. As these high levels of oestrogen disappear after birth, this type of gynaecomastia is temporary.

Gynaecomastia is common during mid to late puberty as more oestrogen than testosterone is produced by the maturing testis before testosterone production by the testes 'kicks in' and reaches adult levels. Gynaecomastia appearing during puberty often goes away, and less than one in 20 affected adolescent boys have gynaecomastia that continues into adulthood.

In older men, the gradual decrease in testosterone production (and therefore increase in oestrogen relative to testosterone) seen with ageing can lead to gynaecomastia.

As well as the natural hormone changes that happen in with puberty and ageing, gynaecomastia can also be caused by genetic problems, chronic diseases (especially kidney and liver) or various drugs. Men who take anabolic steroids to enhance sporting performance or to help with body building often develop gynaecomastia. Very rarely gynaecomastia can also be caused by oestrogen secreting tumours of the testis and the adrenal glands. Another possible cause is exposure over time to oestrogens that may be present in the environment.

## How is it diagnosed?

A doctor can examine the enlarged breast tissue to check whether it is gynaecomastia or excess fat. In true gynaecomastia, a rubbery or firm mound of tissue the same shape as the nipple can be felt. This is different from the situation where breast enlargement is due to fatty tissue, when no round shaped disc of tissue is found.

Once a diagnosis of gynaecomastia is confirmed, it is important for the doctor to then review all medications the man may be taking that could be linked with the condition.

Whether further testing is needed depends upon the setting. No further testing may

be needed if the underlying cause is clear and/or no action is required, e.g. in a pubertal boy with a family history of gynaecomastia, or in a man with renal failure, or in an asymptomatic older man whose breast enlargement has been present for a long time. On the other hand, a short history of rapidly enlarging and/or tender breast swelling in an otherwise healthy man requires testing of sex hormones and blood marker of testicular cancer because of this rare but serious possibility.

If there are irregularities or lumps within the breast, mammography and/or breast ultrasound may also be helpful. Biopsy of a suspicious lesion may be needed to exclude the rare but very serious diagnosis of cancer.

## What genetic problems can cause gynaecomastia?

Klinefelters syndrome affects one in every 650 males and is the main genetic cause of gynaecomastia. Men with Klinefelter's syndrome have an extra X chromosome and do not produce enough testosterone for the body to function normally. Male physical and reproductive development is affected and men with Klinefelter's have small testes, are usually infertile and often develop gynaecomastia.

Men with Klinefelter's syndrome have an imbalance in their oestrogen to testosterone ratio because they have low testosterone levels. Testosterone replacement therapy increases the amount of testosterone in the body, corrects the imbalance in hormones and the degree of gynaecomastia can be reduced but often persists and may need surgical intervention.

## How can drugs cause gynaecomastia?

Medications that can promote breast growth in men include certain antidepressants, drugs used for high blood pressure and tuberculosis, as well as some chemotherapy drugs. Antibiotics, anti-ulcer and cardiovascular medications have sometimes been found to affect the balance of hormones in the body.

Drug abuse, especially the use of anabolic steroids, but also marijuana, opioids and excessive alcohol that has led to chronic liver disease can cause gynaecomastia.

Drugs that block the effects of testosterone are used in the treatment of prostate cancer and can lead to gynaecomastia.

Rarely, the partners of women using topical oestrogen cream or gel for hormone replacement therapy may absorb sufficient oestrogen through regular, prolonged contact to cause gynaecomastia.

### What are the psychological effects of gynaecomastia for men?

For many men with gynaecomastia, summer can be a season for social exclusion and embarrassment. Despite the condition being considered non life-threatening, gynaecomastia can significantly alter quality of life for those affected. For example, men may avoid swimming or taking their shirts off and activities where their breasts can be seen to avoid embarrassment.

Research on men with the condition has found that gynaecomastia can have major emotional effects. Few men openly discuss their concerns with their local doctor or family member and as a result, become distressed and anxious about their body image. The condition can be particularly embarrassing for adolescent boys.

Raising awareness of gynaecomastia in men, however, may help more boys and men be properly diagnosed and reassure them that they are not alone in experiencing the condition. This may also encourage further research into treatments and understanding that it is part of the normal process of puberty in adolescents and ageing in older men.

### Is there a link between gynaecomastia and breast cancer?

Breast cancer is very uncommon in men, with 95 men in Australia diagnosed in 2001, and accounts for less than one per cent of all breast cancers<sup>3</sup>. It typically has different characteristics to gynaecomastia. The breast tissue in

gynaecomastia is soft, elastic, or firm but not hard, happens underneath the nipple and in half the cases affects both breasts. Breast cancer usually appears as a hard or firm lump, commonly located outside of the nipple area but can sometimes appear underneath the nipple, and is most often only in one breast. Some men with breast cancer may also experience skin dimpling and retracted nipples.

Men with gynaecomastia have been shown to be at more than twice the risk of breast cancer, as breast cancer is linked with conditions that increase the amounts of oestrogen in the body.

### Can gynaecomastia be painful?

The growth of breast tissue can be accompanied by pain and tenderness. This should always be checked by a doctor. Gynaecomastia can appear as a small lump and becomes tender as the mass becomes larger.

### What are the treatment options for gynaecomastia?

Treatments for gynaecomastia often depend on several factors including the underlying cause, whether the condition is expected to continue, and cosmetic concerns. Watching for further development is usually the preferred choice as in the majority of cases the condition goes away over time.

If a specific cause is found and treated during the initial growth phase, the breast enlargement may be stopped and reversed. If gynaecomastia has been caused by drug use, the enlarged breast tissue will usually reduce within one month of stopping the drug.

### Drug treatments

Several drugs have been tested to treat gynaecomastia in patients who show no hormonal problem, although the success rates vary markedly in these mostly uncontrolled studies. Tamoxifen, an oral medication used in the treatment of breast cancer, is not approved for the treatment

of gynaecomastia but was reported to be helpful in reducing the condition. However, it has been used in some patients with no obvious benefits and there are side-effects of this treatment including the potential for deep vein thrombosis. The use of anti-oestrogens to block oestrogen action, stimulate testosterone secretion and alter the oestrogen-testosterone balance can also help reduce gynaecomastia in some men.

### Surgery

Surgery can also be useful in the management of some men with long standing gynaecomastia or when drug treatments have not been successful. Suction liposculpture works well for many cases and the cosmetic results can be good especially if performed by a surgeon with experience in this operation. However some men have found the results of the surgery to be less than satisfactory due to scarring with irregular contours, a sunken appearance or asymmetry of the nipple areas.

<sup>1</sup> Narula HS, Carlson HE. Gynaecomastia. *Endocrinol Metab Clin North Am.* 2007; 36:497-519

<sup>2</sup> Braunstein GD. Gynecomastia. *N Engl J Med* 2007. 357; 1229-37

<sup>3</sup> National Breast Cancer Centre  
[www.breasthealth.com.au/men/](http://www.breasthealth.com.au/men/)

## About the Author

### Dr Carolyn Allan

MBBS (Hons) DRCOG (UK) FRACP  
Prince Henry's Institute

### Dr Graeme Southwick OAM

MBBS FRACS FACS  
Melbourne Institute of Plastic Surgery

Date: MAY 2008

© Andrology Australia 2008

Andrology Australia is an initiative funded by the Australian Government Department of Health and Ageing.

The information in this fact sheet has been provided for educational purposes only. It is not intended to take the place of a clinical diagnosis or proper medical advice from a fully qualified health professional. Andrology Australia urges readers to seek the services of a qualified medical practitioner for any personal health concerns.