



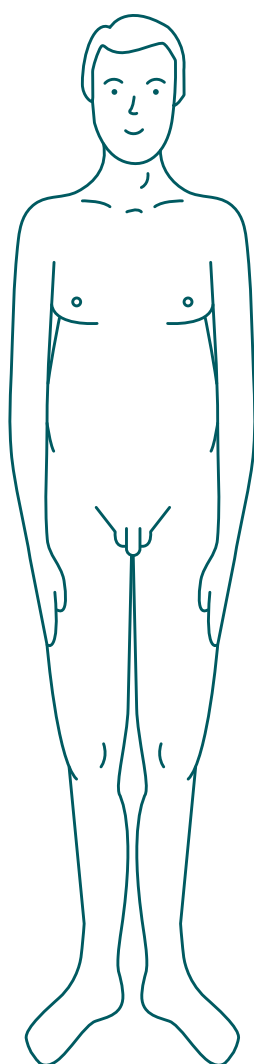
Gynecomastia

What is gynecomastia or 'man boobs'?

Gynecomastia (often referred to as 'man boobs') is the enlargement of male breast gland tissue. It is benign, meaning that it is not cancerous.

Gynecomastia can develop in males of any age or weight, but often arises around puberty as breast development is affected by hormonal changes. An accumulation of excess fat, and not breast gland tissue, is sometimes seen in obese men – this is not true gynecomastia and is sometimes called *pseudogynecomastia*.

Gynecomastia can appear as a rubbery or firm mass that starts from underneath the nipple and then spreads outwards over the breast area. It usually affects both breasts but often in different amounts so there is asymmetry, or it may only affect one breast. Sometimes the growing tissue can be painful or tender, and if this occurs then you should be examined by a doctor. Gynecomastia can also result in significant psychological and social stress, leading to anxiety and embarrassment.



How common is gynecomastia?

Gynecomastia is very common. During puberty more than half of all healthy males will develop gynecomastia, with the enlarged breast tissue usually reducing in size with time. During older age about one-third of men will develop gynecomastia.

What causes gynecomastia?

There are many possible causes of gynecomastia, and these can be grouped into physiological (the body's normal functioning), pharmacological (medication or drug related), and pathological (disease) causes.

Physiological gynecomastia is caused by the normal hormone changes that occur during different stages of life. These changes result in an increase in the ratio of normal oestrogen hormones (present in all healthy males) to testosterone hormones, with oestrogen encouraging breast tissue growth.

- During infancy male babies can develop physiological gynecomastia due to the transfer of oestrogen from the mother. This transfer stops after birth, so the gynecomastia is temporary.
- During puberty the maturing testes produce more oestrogen than testosterone, which can result in gynecomastia. Usually this type of gynecomastia goes away spontaneously, but sometimes it can persist longer term.
- During older age there is a gradual reduction in testosterone production, resulting in an increased oestrogen to testosterone ratio, which can encourage the growth of breast tissue.

Pharmacological gynecomastia is caused by medications or drugs that affect the ratio of oestrogen and testosterone through multiple different ways. Some of these medications include anabolic steroids, heart medications, or drugs of abuse such as marijuana or alcohol. While stopping the offending drug will usually result in the gynecomastia going away, a doctor should always be consulted before stopping any medicines.

Pathological gynecomastia is caused by multiple different diseases or conditions that affect the ratio of oestrogen to testosterone. These conditions are quite rare but may include genetic problems, chronic diseases (especially kidney and liver disease), and tumours in the testis or adrenal gland.

What genetic problems cause gynecomastia?

Genetic causes of gynecomastia are overall quite rare, however the commonest genetic cause is a condition known as Klinefelter syndrome, which affects about one in every 550 males. Affected males have an extra X chromosome, which results in the testicles not producing enough testosterone for the male body to develop and function normally. Treatment with testosterone brings the abnormal oestrogen to testosterone ratio back to normal. Testosterone will prevent gynecomastia from occurring, and if already present then it may reduce it. Sometimes plastic surgery may be required to remove any residual excessive breast tissue.

How can medicines or drugs cause gynecomastia?

Many different medications or drugs can lead to gynecomastia by causing an abnormal oestrogen to testosterone ratio. These can include medications for depression, heart problems, high blood pressure, and stomach ulcers. Some antibiotics, chemotherapy drugs, and prostate cancer drugs can also result in gynecomastia. Drugs of abuse (e.g. marijuana, opioids, excessive alcohol) may also cause excessive breast growth.

How is gynecomastia diagnosed?

Gynecomastia is diagnosed by a doctor taking your history (asking questions) and performing a physical examination. The history may involve your doctor asking questions about your breast tissue development, your medical and drug history, and what health conditions run in your family. The examination may include evaluating your breast tissue, abdomen, and genitalia. Breasts affected by gynecomastia usually have a rubbery or firm mound of tissue beneath or around the nipple.

Determining the cause of gynecomastia may sometimes require investigations such as blood tests, imaging, and tissue samples. Blood tests may include oestrogen and testosterone hormone levels, testicular cancer markers and tests for abnormal kidney or liver function. Imaging can include testicular ultrasound to look for testicular lumps, or breast imaging (e.g. mammogram, ultrasound, or MRI) to look for breast lumps. If abnormal lumps in the testicles or breasts are found then a tissue sample (biopsy) may be recommended.

Is there a link between gynecomastia and breast cancer?

Breast cancer is very uncommon in men, with around 100 Australian men diagnosed each year (less than 1% of all breast cancers). Breast cancer presents differently to gynecomastia, usually being hard and irregular (rather than soft), usually in one breast (rather than usually in both breasts), and may also have nipple deformity or discharge, or lumps in the armpit.

There is a link between breast cancer and gynecomastia in that both are associated with high oestrogen levels. Overall, men with gynecomastia have around twice the chance of getting breast cancer, however it is still very uncommon. Men with Klinefelter syndrome have an even higher risk of breast cancer than other men, however it is still rare.

What are the psychological effects of gynecomastia?

Gynecomastia can be difficult to deal with as it often causes significant psychological and social problems. Males may feel embarrassed or anxious about their chest, and may avoid activities that involve taking their shirt off, or avoid wearing certain clothes that accentuate it.

Increasing the awareness of gynecomastia is important as it is a common and normal part of puberty and aging, and increasing awareness will help support the many males who experience psychological or emotional distress due to it.

How is gynecomastia treated?

Gynecomastia can be treated by conservative measures (observation), medications, or surgery. Which treatment is appropriate depends on the underlying cause of the gynecomastia, whether the changes are expected to resolve, and what cosmetic concerns are present.

Conservative treatment includes observation and careful watching. This is appropriate for many patients as most gynecomastia goes away with time. If a specific cause of the gynecomastia is identified and treated in the early stages phase of development, then the breast enlargement may be stopped and reversed.

Medications may be used to treat gynecomastia in males who have no underlying hormonal problems, although the success rates are variable. These medications aim to return the oestrogen to testosterone ratio to normal, and can include medications that suppress oestrogen such as Tamoxifen (also used in the treatment of breast cancer).

Surgery may be used in cases of long-standing gynecomastia or when medications have not been effective. The excess breast tissue is removed either by excising it through an incision below the nipple, or by liposuction of the area, with both methods often used together. Compression garments are commonly used after the operation to help stop any fluid collection and reduce any stretched 'excess' skin. Severely stretched skin may also need to be removed.

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