

Gynaecomastia

This is enlargement of the male breast tissue. *Gynae* means 'woman' and *mastos* means 'breast' in Greek. It can be defined as the presence of >2 cm of palpable, firm, subareolar gland and ductal breast tissue.

In General

- Gynaecomastia is common and is thought to be present in at least a third of men in the course of their lifetime.
- The presence of gynaecomastia not causing any problems is reported as 60-90% of young babies, 50-60% of teenagers, and 70% in men aged 50-69.
- Breast cancer is only detected in 1% of cases of male breast enlargement.

What causes gynaecomastia?

Gynaecomastia can have several causes.

It may occur at any time and there are a number of causes, some physiological and others due to illness or medication.

Hormone imbalance

Gynaecomastia can be caused by an imbalance between the sex hormones testosterone and oestrogen. Oestrogen causes breast tissue to grow. While all men produce some oestrogen, they usually have much higher levels of testosterone, which stops the oestrogen from causing breast tissue to grow.

If the balance of hormones in the body changes, this can cause a man's breasts to grow. Sometimes, the cause of this imbalance is unknown.

Obesity

Some growth in breast tissue is not due to extra body fat from being overweight, so losing weight or doing more exercise may not improve the condition. However, a common reason for gynaecomastia is that being very overweight (obese) can increase levels of oestrogen, which can cause breast tissue to grow.

Newborn baby boys

Gynaecomastia can affect newborn baby boys, because oestrogen passes through the placenta from the mother to the baby. This is temporary and will disappear a few weeks after the baby is born.

Puberty

During puberty, boys' hormone levels vary. If the level of testosterone drops, oestrogen can cause breast tissue to grow. Many teenage boys have some degree of breast enlargement. Gynaecomastia at puberty usually clears up as boys get older and their hormone levels become more stable.

Older age

As men get older, they produce less testosterone. Older men also tend to have more body fat, and this can cause more oestrogen to be produced. These changes in hormone levels can lead to excess breast tissue growth.

MAIN causes

Gynaecomastia can be caused by:

- Medication accounts for up to 25% of all cases in adult men. It is very important to discuss this in the clinic if you are on any of the medications below.
 - Anti-stomach ulcer drugs or medication for heart disease
 - Phenytoin, Clomifene.
 - Digoxin.
 - Metronidazole, ketoconazole, spironolactone, chemotherapy,
 - gonadotrophin-releasing hormone (GNRH) agonists such as leuprolide and goserelin.
 - Antipsychotics, tricyclic antidepressants, metoclopramide, verapamil.
 - Others - eg, amiodarone, isoniazid, methyldopa, diazepam, calcium-channel blockers, angiotensin-converting enzyme (ACE) inhibitors, alcohol, amfetamines, growth hormone, isoniazid, theophylline, heroin.
- Illegal drugs – such as **cannabis** or **anabolic steroids**. These type of steroids are used in the gym to enhance muscle
- Drinking too much alcohol which can lead to poor functioning of the liver and liver cirrhosis. This in turn can produce gynaecomastia.

- A health abnormality – such as kidney failure or liver disease or high levels of thyroid hormone production (hyper thyroidism)
- Klinefelter’s syndrome (a rare genetic disorder)
- **Lumps or infection in the testicles.** It is very important to self examine to exclude any testicular lumps.
- **Other causes:**
 - Long-term diabetes
 - Chronic illness.
 - Spinal cord injury.
- **Idiopathic.** No Known cause to the breast enlargement.
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During your consultation

Thorough history

- General background to your condition
- Commonly, gynaecomastia is asymptomatic.
- Onset and duration of breast enlargement.
- Tenderness.
- Medication history.
- Any use of drugs
- Past medical history
- Family history.

Examination

- A Full examination and palpation of the breast tissue. If unclear about this onset or cause an Ultrasound scan maybe necessary.
- Size and asymmetry.
- Any evidence of liver disease, renal impairment or thyroid disease.

Investigations

THE BEST IS TO SEE YOUR GP FIRST AND SEE IF YOU NEED ANY BLOOD TESTS OR ON ULTRASOUND SCAN TO DIAGNOSE A CAUSE OF THE BREAST ENLARGEMENT

These may be performed on a clinical basis, ie according to the history and examination. For example, if you are on gynaecomastia-inducing medication then these tests may not be necessary.

Blood tests that may be necessary.

Blood tests are not indicated in those with fatty breast enlargement, the very young or due to older age, an identified drug cause, or a clinically apparent cancer.

Blood tests that can be carried out:

- Renal function.
- Liver function
- Thyroid function
- Male and female Hormone profile

IMAGING

THIS IS IMPORTANT IF ONLY ONE BREAST IS ENLARGED.

- Ultrasound Scan of breasts in all cases of suspicious or unilateral breast enlargement. Also if there is clinical doubt about whether there is gynaecomastia or fatty enlargement.
- Ultrasound Scan of testes if there is any abnormality on examination,

Discussion about the Management of your

gynaecomastia

- Intervention choice will depend on the aim, be it alleviation of tenderness, cosmetic appearance, anxiety regarding cause, or treatment of underlying disease.
- Treat the underlying cause if found - eg, removal of the medication causing gynaecomastia. Gynaecomastia associated with obesity may respond to weight loss although breast tissue usually remains.
- If no underlying cause is discovered then surgical removal of breast tissue is the only effective therapy.

SURGERY FOR GYNAECOMASTIA

Liposuction

If your gynecomastia consists primarily of excess fatty tissue, I will use liposuction to remove the excess fat. Through a tiny incision, a fine hollow tube called a cannula is inserted to vacuum the fat layer that lies beneath the skin. The cannula is pushed and pulled through the fat layer, breaking up the fat cells and suctioning them out. The suction action is provided by a vacuum pump.

Excess Breast Tissue

If there is excessive breast tissue that is also causing enlargement of your breast then this will have to be removed as well. The incision is in the lower half of the areolar (brown area) and is usually well hidden. In this case you will need drains after the procedure.

Liposuction is usually also performed to contour the breast and the area towards the arm pits.



Incision made just below the areolar to remove the breast tissue, arrows showing lines of liposuction.

Breast Tissue excision and Skin excess excision

This rarely has to be performed but leaves much larger scars on the chest wall. This type of surgery is confined to the gynaecomastia type 3+ and type 4 (see earlier) as the breast has dropped and there is an excess of skin as well as breast tissue and fat. In this circumstance, liposuction, removal of breast tissue and skin will all have to occur.

POST OPERATIVE

The operation takes about an hour each side. You will go to recovery and then the ward. You will have a compression garment on by the time you get to recovery. Expect a one night stay and the removal of the drains the next day if they have not drained a lot of fluid. If they do, you may have to go home with them.

It is best to try and find a garment like the picture which compresses the upper and lower chest. This garment must be worn for the first 2-

3 weeks day and night and then for the next 4 weeks at night. This helps contour the chest and reduces the swelling.



RECOVERY

- 1) 1 night stay in hospital
- 2) May go home with drains
- 3) Simple pain relief such as paracetamol with some codeine
- 4) Compression garment for 6 weeks.
- 5) Wound review at hospital in 2 weeks
- 6) See me in clinic at 6-8 weeks.
- 7) Return to work / driving at one week
- 8) Return to heavy lifting needs about 3 weeks.
- 9) True results especially of liposuction seen at 5-6 months.

RISKS OF GYNAECOMASTIA SURGERY

Every surgical procedure involves a certain amount of risk and it is important that you understand these risks and the possible

complications associated with them. In addition, every procedure has limitations. An individual's choice to undergo a surgical procedure is based on the comparison of the risk to potential benefit. Although the majority of patients do not experience these complications, you should discuss each of them with me to make sure you understand all possible consequences of gynaecomastia surgery

Allergic Reactions:

In rare cases, local allergies to tape, suture material, glues. Serious systemic reactions including shock (anaphylaxis) may occur to antibiotics so please let me know about these allergies.

Asymmetry:

Symmetrical body appearance may not result from gynaecomastia. Factors such as skin tone, fatty deposits, rib prominence, and muscle tone may contribute to normal asymmetry in body features. Most patients have differences between the right and left side of their body before any surgery is performed.

Bleeding:

It is possible, though unusual, to experience a bleeding episode after surgery. Should post-operative bleeding occur, it may require emergency treatment to drain accumulated blood. Do not take any aspirin or anti-inflammatory medications for ten days before surgery, as this may increase the risk of bleeding. Non-prescription "herbs" and dietary supplements can increase the risk of surgical bleeding. These are especially garlic, Ginseng, Cod liver oil. Hematoma can occur following surgery. Drains will be put in but if there is excess drainage of blood it is necessary to return to theatre. The haematoma rate for gynaecomastia is about 10%

Breast disease in male patients:

Breast disease and breast cancer can occur independently of gynaecomastia surgery. All the breast tissue removed will go to histology.

Change in Nipple and Skin Sensation:

You may experience a diminished (or loss) of sensitivity of the nipples and the skin of your breast. Permanent loss of nipple sensation can occur after gynaecomastia in one or both nipples. Changes in

sensation may affect sexual response. In rare circumstances the nipple may be lost entirely.

Delayed Healing:

Wound disruption or delayed wound healing is possible. Some areas of the breast skin or nipple region may not heal normally and may take a long time to heal. This may require frequent dressing changes. Smokers have a much greater risk of skin loss and wound healing complications.

Fat Necrosis:

Fatty tissue found deep to the skin might die. This may produce areas of firmness within the skin. This will tend to disappear over 3-4 weeks with regular massage to the area. There is the possibility of contour irregularities in the skin that may result from fat necrosis.

Infection:

Infection is unusual after surgery. Should an infection occur, additional treatment including antibiotics may be required.

Scarring:

All surgery leaves scars, some more visible than others. Although good wound healing after a surgical procedure is expected, abnormal scars may occur within the skin and deeper tissues. Scars may be unattractive and of different color than the surrounding skin tone. Scar appearance may also vary within the same scar. Scars may be asymmetrical (appear different on the right and left side of the body).

Seroma:

Fluid accumulations infrequently occur in between the skin and the underlying tissues. Should this problem occur, it may require additional procedures for drainage of fluid.

Skin Contour Irregularities:

Contour and shape irregularities may occur after gynaecomastia. Especially with liposuction. Visible and palpable wrinkling may occur. That can reduce over time. One breast may be smaller than the

other. Nipple position and shape may not be identical one side to the next. Nipple retraction may occur after gynaecomastia surgery.

Skin Discoloration/Swelling:

Some bruising and swelling normally occurs following this surgery and with the liposuction. Although uncommon, swelling and skin discoloration may persist for long periods of time and use of the compression garment will help with the swelling. True results of the liposuction can take up to 6 months to see.

Skin Sensitivity:

Itching, tenderness, or exaggerated responses to hot or cold temperatures may occur after surgery for a short period.

Long-term Results:

Subsequent alterations in the breast shape may occur as the result of aging, sun exposure, weight loss, weight gain or other circumstances not related to your surgery. Breast sagginess may normally occur. If you have a particular sag to the breast to start this may remain.

Pain:

You will experience pain after your surgery. This should be controlled with simple paracetamol and maybe some codeine.

Preparation for Surgery

Smokers will be asked to stop smoking 3 weeks prior to surgery. Also do NOT use nicotine patches as these can cause a delay in healing. Aspirin and some anti-inflammatory drugs used for the treatment of arthritis can cause increased bleeding, so you should avoid taking these medications for 2 weeks before surgery.

Prognosis

- Gynaecomastia is mostly a benign condition.
- Complete resolution can occur if the underlying cause is identified and treatment initiated before fibrosis of breast tissue occurs.
- Gynaecomastia can be physically embarrassing and psychologically distressing for patients and this should not be underestimated.