CONDITION

Gynecomastia

Learn how gynecomastia and fatty breast enlargement affect males, including symptoms, possible causes, medical evaluation, treatment, and warning signs.

WHAT IT IS
Growth of glandular breast tissue in males

BODY SYSTEM
Hormone and reproductive system

MAIN SYMPTOMS
Breast enlargement, firm tissue beneath nipple, tenderness, uneven breast size

WHAT CAUSES IT
Hormone imbalance, medicines, illness, sometimes unknown

HOW IT IS DIAGNOSED
Physical examination, imaging, sometimes biopsy

MAIN TREATMENT
Observation, treating causes, medicine or surgery

CAN IT BE CURED?
Sometimes - temporary cases may resolve

IS IT AN EMERGENCY?
Sometimes - severe chest pressure or difficulty breathing

LONG-TERM OUTLOOK
Usually benign but sometimes persistent

Overview

Breast enlargement in males can have several causes. The most common is gynecomastia , which is growth of glandular breast tissue. It happens when the effects of estrogen, a hormone that stimulates breast tissue, are greater than the effects of testosterone at the breast.

Gynecomastia is different from pseudogynecomastia , also called lipomastia. Pseudogynecomastia is enlargement caused mainly by fatty tissue rather than growth of breast glands. A person can have both conditions at the same time.

Gynecomastia may affect one breast or both. It can develop in newborns because of hormone exposure before birth, during puberty as hormone levels change, or later in life as testosterone levels decline or health conditions and medicines become more common. Puberty-related gynecomastia often improves with time.

Breast enlargement is usually benign, meaning it is not cancer. However, a new or unexplained breast change may need examination because medicines, hormone conditions, liver or kidney disease, testicular problems, and other illnesses can sometimes contribute. Male breast cancer is uncommon, but it can also cause a breast lump and must be considered when features are unusual.

A clinician can often distinguish glandular tissue from fat through a medical history and physical examination. Blood tests or imaging may be needed when the cause is unclear or the examination is not typical of gynecomastia.

Symptoms

Gynecomastia usually feels like a firm or rubbery area directly under the nipple and the darker skin around it, called the areola. The tissue may feel like a disk or small mound. It can be evenly spread or more noticeable on one side.

Possible symptoms include:

Pseudogynecomastia usually feels softer and more widespread because it is caused mainly by fat. It may not have a distinct, firm area beneath the nipple.

A hard lump that is off to one side of the nipple is less typical of gynecomastia. Other changes that need prompt medical assessment include nipple discharge, especially if bloody; pulling in of the nipple; dimpling or ulceration of the skin; or a lump in the armpit.

Pain from gynecomastia is generally located in the breast tissue. Sudden chest pressure, trouble breathing, fainting, or pain spreading to the arm, back, neck, or jaw is not typical of gynecomastia and requires emergency care.

- Enlargement of one or both breasts
- A firm or rubbery area centered beneath the nipple
- Breast or nipple tenderness, especially when growth is recent
- Sensitivity when clothing rubs against the chest
- Uneven breast size
- Emotional distress or self-consciousness about chest appearance

Causes and risk factors

Breast tissue responds to the balance and activity of several hormones. Gynecomastia can

develop when estrogen activity increases, testosterone activity falls, or breast tissue becomes more responsive to estrogen. Hormone test results can still be within standard ranges because local hormone effects in breast tissue also matter.

Normal stages of life are common settings for gynecomastia. Temporary enlargement may occur in newborns. During puberty, changing hormone levels can cause tender breast tissue, which often settles without treatment. In older adults, lower testosterone production and a higher proportion of body fat may shift the hormone balance.

Medicines and other substances can contribute. Examples include some treatments for prostate conditions, certain medicines that affect hormone production or action, spironolactone, some psychiatric medicines, and certain HIV treatments. Anabolic steroids or testosterone used without medical supervision can also cause breast enlargement. When outside testosterone is stopped or converted to estrogen in the body, hormone changes may stimulate breast tissue.

Not every medicine associated with gynecomastia causes it in every person. Evidence is also stronger for some medicines than for others. A clinician or pharmacist can review whether the timing of a breast change fits a medicine's known effects. Prescription medicines should not be stopped without professional advice.

Health conditions that may contribute include:

Higher body weight can cause fatty breast enlargement. Body fat can also increase the conversion of certain hormones into estrogen, so gynecomastia and pseudogynecomastia may occur together.

In some people, no specific cause is found after an appropriate evaluation. This is called idiopathic gynecomastia.

- Low testosterone, known as hypogonadism
- An overactive thyroid, called hyperthyroidism
- Chronic liver disease
- Chronic kidney disease
- Poor nutrition followed by nutritional recovery
- Conditions affecting the testicles
- Rare hormone-producing tumors
- Genetic conditions such as Klinefelter syndrome

Diagnosis

Diagnosis begins with a discussion of when the enlargement started, whether it is changing, and whether it is painful. The clinician may ask about puberty, sexual function, fertility, weight changes, other illnesses, alcohol use, supplements, nonprescription products, anabolic steroids, and current or recent medicines.

The physical examination usually includes both breasts and the lymph nodes in the armpits and around the collarbone. The clinician looks at the location, texture, and mobility of the tissue and checks for nipple or skin changes. The abdomen, thyroid, and testicles may also be examined when the history suggests a hormone-related or general medical cause.

Typical gynecomastia is centered beneath the nipple and feels mobile, firm, or rubbery. Cancer is more likely to form a hard, irregular mass that is not centered beneath the nipple, although an examination alone cannot settle every case.

Laboratory testing depends on age, medical history, examination findings, and how quickly the enlargement developed. Tests may assess testosterone and estrogen levels and hormones that control the testicles. Other tests may check thyroid, liver, or kidney function. A test for human chorionic gonadotropin, or hCG, may be used when a hormone-producing tumor is a concern. Not everyone needs the same set of tests.

Imaging is not always necessary when the history and examination clearly show gynecomastia or fatty enlargement. Mammography, ultrasound, or both may be used when a lump is unexplained or has suspicious features. Testicular ultrasound may be appropriate if there is a testicular lump or certain hormone test results are abnormal.

A biopsy removes a small sample of tissue for examination under a microscope. It is generally reserved for a mass that remains uncertain or may be cancerous.

Treatment and management

Treatment depends on the cause, duration, symptoms, examination findings, and the person's preferences. Reassurance and observation may be appropriate when the enlargement is mild, has a typical benign examination, and is linked to puberty or another temporary hormone change.

If a medicine may be contributing, the prescribing clinician can review its benefits, risks, and possible alternatives. Stopping or changing treatment without guidance may be harmful. Breast tissue may shrink after a contributing medicine is changed, but long-standing tissue may not fully go away.

Treatment of an underlying condition can help prevent further growth. This might involve care

for thyroid disease, low testosterone, liver or kidney disease, or a testicular problem. Testosterone treatment is intended for people with confirmed testosterone deficiency. It is not a routine treatment for gynecomastia when testosterone levels are normal and can sometimes worsen enlargement.

Weight loss may reduce fatty breast enlargement and improve overall chest shape when excess body fat is present. It does not reliably remove established glandular tissue. Exercise can strengthen the chest muscles but cannot directly dissolve breast gland tissue.

Medication aimed at breast tissue may be considered in selected cases, particularly when gynecomastia is recent and painful. Tamoxifen, a medicine that blocks estrogen effects in breast tissue, has the most clinical evidence among commonly discussed options. Its use for gynecomastia may be off-label, meaning it is not specifically approved for this purpose in some countries. It has potential side effects and interactions, so a clinician must weigh its risks and possible benefits.

Other hormone-modifying medicines, including aromatase inhibitors, have not shown consistent benefit for routine gynecomastia treatment. Supplements marketed for "hormone balance" or breast reduction may not be proven safe or effective and can contain undeclared ingredients.

Surgery may be an option when enlargement is persistent, causes significant discomfort or distress, or does not improve after the underlying cause has been addressed. Liposuction removes fatty tissue. Surgical excision removes glandular breast tissue, and the two techniques may be combined. A surgeon can explain likely scars, recovery, the possibility of uneven contour, and whether treatment of a medical cause should come first.

Supportive measures can also help. A compression shirt may make the chest less noticeable under clothing. Counseling or mental health support may be useful when body image, teasing, anxiety, or avoidance of activities is affecting daily life.

Complications

Gynecomastia itself usually does not cause serious physical complications. Tenderness may interfere with exercise, sleep position, or clothing choices. Persistent enlargement can affect confidence, relationships, sports participation, or willingness to seek medical care.

Long-standing glandular tissue may become more fibrous, meaning it is firmer and less likely to shrink with time or medicine. Surgery can reduce persistent tissue but has possible complications such as bleeding, infection, scarring, changes in nipple sensation, or an uneven chest contour.

Gynecomastia is not generally considered a precancerous condition. However, breast cancer and gynecomastia can occasionally occur in the same person. Some conditions associated with gynecomastia, such as Klinefelter syndrome, can also raise breast cancer risk independently.

Follow up

Routine follow-up may involve watching for changes in breast size, tenderness, or firmness. A clinician may repeat the breast examination or review whether an underlying condition or medicine has been addressed. If observation is chosen during puberty, follow-up can confirm that the tissue is stable or improving.

Arrange a medical appointment if breast enlargement is new, continues to grow, causes ongoing pain, appears after starting a medicine or supplement, or is accompanied by symptoms of low testosterone, thyroid disease, liver disease, or a testicular problem.

Seek prompt medical assessment for:

A breast change by itself is rarely an emergency. Emergency care is appropriate for severe chest pressure, difficulty breathing, fainting, major bleeding, or rapidly increasing swelling after a significant injury. These symptoms may have another cause and should not be assumed to come from breast tissue.

- A hard, fixed, or irregular breast lump
- A lump located away from the nipple
- Bloody or clear nipple discharge
- Nipple pulling, skin dimpling, ulceration, or persistent scaling
- A new lump in the armpit
- A testicular lump or swelling
- A red, hot, rapidly worsening breast, especially with fever

Sources

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