

BREAST

Breast enlargement in men

Breast lumps in women

Breast pain

Nipple discharge

BREAST ENLARGEMENT IN MEN

The GP overview

Swelling of the breast tissue in a male is an embarrassing symptom, often presented behind the facade of a 'calling card.' The following differential diagnosis does not include other causes of breast swelling, which are referred to in the Top tips at the end of this section. In true breast swelling, glandular tissue is palpable behind the areola and is usually bilateral.

Differential diagnosis

COMMON

- ❑ puberty
- ❑ drugs (spironolactone, cimetidine, digoxin, cyproterone, finasteride, marijuana)
- ❑ chronic liver disease (especially alcohol)
- ❑ lung carcinoma
- ❑ hyperthyroidism

OCCASIONAL

- ❑ hypothyroidism
- ❑ hyperprolactinaemia
- ❑ haemodialysis and chronic renal failure
- ❑ testicular carcinoma
- ❑ adrenal carcinoma
- ❑ cryptorchidism and other causes of hypogonadism

RARE

- ❑ Klinefelter's syndrome
- ❑ true hermaphroditism and male pseudohermaphroditism
- ❑ acromegaly
- ❑ McCune–Albright syndrome
- ❑ hypernephroma
- ❑ carcinoma

Ready reckoner

	Puberty	Drugs	Liver disease	Lung cancer	Hyperthyroidism
Often unilateral	Yes	No	No	No	No
Cough	No	No	No	Yes	No
Weight loss	No	No	Possible	Yes	Yes
Generally unwell	No	Possible	Yes	Yes	Yes
Other physical signs	No	Possible	Yes	Yes	Possible

Possible investigations

LIKELY: (except for obvious pubertal cause) FBC, U&E, LFT, TFT.

POSSIBLE: testosterone, CXR, tests of pituitary function.

SMALL PRINT: tumour markers, chromosome analysis, CT scan, biopsy.

- ❑ FBC: many chronic systemic illnesses can cause gynaecomastia. There may be an associated normochromic, normocytic anaemia. MCV may be raised in hypothyroidism and chronic liver disease.
- ❑ U&E and LFT: will reveal chronic renal and liver disease.
- ❑ TFT: to diagnose thyroid abnormality.
- ❑ Testosterone: reduced in hypogonadism and chronic illness including liver disease.
- ❑ CXR: if lung carcinoma a possibility.
- ❑ Tests of pituitary function (e.g. FSH, LH, prolactin and other more complex, hospital-based tests): to check for pituitary hormone abnormalities.
- ❑ Tumour markers (usually hospital-based): AFP and HCG act as tumour markers for testicular carcinoma.
- ❑ Chromosome analysis: for Klinefelter's syndrome.
- ❑ CT scan (secondary care): may be necessary for testicular tumour staging and diagnosis of adrenal and renal tumours.
- ❑ Biopsy: if carcinoma suspected.

TOP TIPS

- ❑ Many male breast swellings are not true breast enlargement: possibilities include simple obesity, abscess, sebaceous cyst and lipoma.
- ❑ Pubertal boys will be very self-conscious about gynaecomastia. Reassure them that the problem is common and will resolve, and that they are not changing sex.
- ❑ Iatrogenic causes are common – check the drug history (including over-the-counter and illicit drugs).



- ❑ In a pubertal boy with a 'normal' and a 'small' testis, the 'normal' one may conceal a tumour. Check with an ultrasound if in doubt.
- ❑ Apparent unilateral gynaecomastia in an adult male may be due to breast carcinoma – refer urgently if there is a hard mass, you cannot feel glandular tissue behind the areola, or you're in any doubt.
- ❑ Gynaecomastia with a headache and visual disturbance may be caused by a pituitary tumour. Refer urgently.
- ❑ Clubbing of the fingers in a smoker with gynaecomastia is virtually pathognomic of bronchial carcinoma. Investigate urgently.

NOTES:

BREAST LUMPS IN WOMEN

The GP overview

The discovery of a lump in a woman's breast will usually create a lot of anxiety. She will probably have found it herself and with the high public awareness of breast cancer, will want reassurance or rapid action. A careful examination of both breasts and associated lymph nodes is mandatory.

Differential diagnosis

COMMON

- ❑ carcinoma
- ❑ cyst
- ❑ abscess
- ❑ fibroadenoma
- ❑ fibrous dysplasia

OCCASIONAL

- ❑ duct ectasia
- ❑ fat necrosis
- ❑ lipoma
- ❑ Paget's disease of the nipple
- ❑ galactocoele
- ❑ multiple cysts

RARE

- ❑ tuberculosis
- ❑ sarcoma
- ❑ lymphoma
- ❑ Phylloides tumour (benign)
- ❑ Mondor's disease (thrombophlebitis)

Ready reckoner

	<i>Cancer</i>	<i>Cyst</i>	<i>Abscess</i>	<i>Fibroadenoma</i>	<i>Fibrous dysplasia</i>
Changes with periods	No	Possible	No	No	Yes
Discharge	Possible	No	Possible	No	Possible
Painful	Possible	Possible	Yes	No	Possible
Bilateral	Possible	Possible	No	Possible	Yes
Highly mobile	Possible	No	No	Yes	No

Possible investigations

There are few investigations worth doing in general practice other than attempted aspiration of a suspected cyst.

Specialist investigation may include aspiration, mammography, ultrasound (for example, to distinguish a solid from a cystic lump), biopsy and, when appropriate, cancer staging.

TOP TIPS

- ❑ If the lump feels cystic, attempt aspiration – instant resolution of the problem will result in a very grateful patient. But warn the patient that unsuccessful aspiration, while requiring referral, does not necessarily imply a sinister diagnosis – some cysts can be very difficult to aspirate.
- ❑ Check the breast again a couple of weeks after aspiration. As long as the lump has completely resolved and the aspirate was not bloodstained, no further action is required.
- ❑ It is quite common for women to think they can feel a lump while the doctor has difficulty in detecting a discrete lesion. Re-examine after the patient's next period – but then make a firm management decision. If in doubt, refer rather than delay further as the woman will understandably be very anxious.
- ❑ In the very elderly, breast carcinoma may run a relatively benign course, responding very well to tamoxifen alone. In certain cases it might be worth discussing the situation with your local specialist, as GP treatment will provoke far less anxiety.



- ❑ Skin dimpling, local flattening of the breast and nipple alteration indicate cancer until proved otherwise.
- ❑ Even if the diagnosis is likely to be a fibroadenoma – as in a young woman with a highly mobile lump – refer, as unpleasant surprises do occur.
- ❑ In a post-menopausal woman, the diagnosis is almost certain to be carcinoma. Refer urgently.
- ❑ A mass appearing after trauma may be fat necrosis – but recheck after a few weeks and refer if not resolved.

NOTES:

BREAST PAIN

The GP overview

Breast pain can be caused by a variety of innocent causes: the commonest are puberty and pregnancy. It can be a troublesome recurrent problem for women with cyclical mastalgia. Cancer is very likely to be a major concern: this is an uncommon cause and pain is an unfortunately late sign of the disease.

Differential diagnosis

COMMON

- ❑ pregnancy
- ❑ cyclical mastalgia
- ❑ cracked or inflamed nipple
- ❑ breast abscess
- ❑ mastitis

OCCASIONAL

- ❑ carcinoma
- ❑ onset of puberty
- ❑ lactation and/or galactocoele
- ❑ simple cyst
- ❑ trauma

RARE

- ❑ chondritis of costal cartilage
- ❑ angina
- ❑ cervical spondylosis
- ❑ Herpes zoster
- ❑ Mondor's disease (thrombophlebitis of chest wall or breast veins – Rare: 0.5–0.9%)
- ❑ tuberculosis

Ready reckoner

	<i>Pregnancy</i>	<i>Cyclical mastalgia</i>	<i>Inflamed nipple</i>	<i>Abscess</i>	<i>Mastitis</i>
Bilateral	Yes	Yes	No	No	No
Fever	No	No	No	Yes	Yes
Discrete mass	No	No	No	Yes	No
Local erythema	No	No	Yes	Possible	Yes
Diffuse nodularity	Possible	Yes	No	No	No

Possible investigations

LIKELY: none.

POSSIBLE: pregnancy test, fine needle aspiration, mammography.

SMALL PRINT: swab of any nipple discharge, other investigations if non-breast causes suspected.

- ❑ Pregnancy test worthwhile in bilateral pain if a period has been missed.
- ❑ Fine needle aspiration of a tense cyst may yield fluid for cytology and relieve the pain. If only blood is obtained, refer urgently.
- ❑ Mammography may help if pain is accompanied by a mass or ill-defined nodularity.
- ❑ If the aetiology is infective and the nipple is discharging, a swab may help guide treatment.
- ❑ Other investigations: if a non-breast cause is suspected, other tests may be required according to the pattern of the symptoms, e.g. stress test (angina) or cervical spine X-ray (cervical spondylosis).

TOP TIPS

- ❑ Offer to examine the breasts even if you are sure from the history that there is no significant pathology – many women fear breast cancer and will find your reassurance hard to accept if they feel they haven't been taken seriously.
- ❑ Don't reflexly prescribe in cyclical mastalgia; the patient's agenda is often to exclude serious disease rather than seek drug therapy.
- ❑ Remember pregnancy as a cause – the patient will not always volunteer this as a possibility, even if she has just missed a period.
- ❑ Unilateral breast pain with no other local signs may be an early symptom of shingles. Check the back in the T4/5 dermatomes for a rash.



- ❑ 'Chest pain' may be a euphemism used by a (frequently older) woman in denial. Don't miss advanced tumour through not examining the breasts.
- ❑ Cancer rarely presents with breast pain but consider this possibility in a woman complaining of constant 'pricking' breast pain.
- ❑ A lactating woman with unilateral breast pain and flu-type symptoms is probably developing mastitis – treat early to avoid the development of an abscess.
- ❑ If the pain is related to exertion in a late middle-aged or elderly woman, consider angina as a possibility.

NOTES:

NIPPLE DISCHARGE

The GP overview

Nipple discharge has a number of disparate causes, from the first outward sign of a previously unrecognised pregnancy, to a late sign of an advanced carcinoma. It can cause embarrassment and concern in equally large amounts. Compared with breast pain and lumps, it is a relatively rare presenting symptom. Take it seriously and assess carefully – investigation will often be needed.

Differential diagnosis

COMMON

- ❑ pregnancy
- ❑ duct papilloma
- ❑ duct ectasia
- ❑ acute mastitis/breast abscess
- ❑ areolar abscess (infected gland of Montgomery)

OCCASIONAL

- ❑ oral contraceptives
- ❑ intraduct carcinoma
- ❑ neonatal and peripubertal galactorrhoea (also post-lactation)
- ❑ hyperprolactinaemia (drugs, prolactinoma, hypothyroidism)
- ❑ duct epithelial proliferation
- ❑ galactocoele

RARE

- ❑ periductal (plasma cell) mastitis
- ❑ mechanical stimulation
- ❑ invasive carcinoma
- ❑ tuberculous abscess
- ❑ mamillary duct fistula
- ❑ Paget's disease of nipple
- ❑ comedo mastitis

Ready reckoner

	<i>Pregnancy</i>	<i>Papilloma</i>	<i>Ectasia</i>	<i>Mastitis</i>	<i>Areolar abscess</i>
Bloodstained	No	Yes	Possible	Possible	Possible
Multicoloured/cheesy	No	No	Yes	No	No
Purulent	No	No	No	Yes	Yes
Hot tender segment	No	No	No	Yes	Yes
Bilateral	Yes	No	Possible	No	No

Possible investigations

LIKELY: none (referral for biopsy or mammogram in suspicious cases).

OCCASIONAL: pregnancy test, prolactin level, TFT.

SMALL PRINT: swab of purulent discharge.

- ❑ Pregnancy test if pregnancy suspected.
- ❑ Swab purulent discharge: may help guide antibiotic therapy.
- ❑ Prolactin level and TFT: to check for hyperprolactinaemia or hypothyroidism in galactorrhoea.
- ❑ Excision biopsy will be performed if a suspicious lump is palpable. In cases of doubt, mammography may help; surgical exploration may also be undertaken if pressure on an area of one breast consistently elicits discharge.

TOP TIPS

- ❑ Women presenting with breast discharge are likely to be afraid there may be an underlying cancer. To 'reassure' properly, make sure you address this anxiety.
- ❑ If the discharge is bilateral, then serious breast disease is highly unlikely.
- ❑ In a woman of child-bearing age with bilateral serous discharge, enquire specifically about pregnancy: this possibility may be deliberately concealed or genuinely overlooked by the patient.
- ❑ If a pre-menopausal woman is amenorrhoeic with bilateral discharge and pregnancy has been excluded, remember the possibility of hyperprolactinaemia.



- ❑ Women with new breast discharge over the age of 50 (unless there is an obvious benign cause), and all women with bloody discharge, should be referred to exclude serious pathology.
- ❑ If a lump is palpable, or pressure on a certain area of the breast consistently produces the discharge, refer for probable excision biopsy.
- ❑ Bright red blood from one orifice suggests duct papilloma or carcinoma.
- ❑ Nipple discharge in a male is always abnormal, except occasionally in pubertal boys. Investigate or refer as appropriate.

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