



## Benign Breast Conditions among the Patients

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### DESCRIPTION

Benign breast disease can occur in both women and men. There are many different types of benign breast disease. Most of the following types do not increase the risk of cancer and do not require treatment. Breast development in boys is also common during puberty and occurs in about half of all boys. It usually settles and disappears spontaneously within a year or two years.

#### Types of breast conditions

**Breast cysts:** Up to a quarter of breast lumps are fluid-filled cysts. Breast cysts may be soft and bumpy, but they don't make them more susceptible to cancer. Cysts often heal without treatment.

**Fibroadenomas:** These are the most common benign solid breast tumors found in women between the ages of 15 and 35. Fibroadenoma does not increase cancer risk and often resolves on its own.

**Fibrocystic breast changes:** Fluctuations in hormone levels can make your breasts lumpy, tight, or tender, especially just before menstruation. It is often seen in women.

**Hyperplasia:** This condition is caused by overgrowth of the cells that line the ducts or glands of the breasts. A condition commonly called hyperplasia does not increase the risk of cancer and does not require treatment. If we have atypical hyperplasia, our doctor recommends surgical removal of the affected breast tissue.

**Intraductal papilloma:** These small, wart-like growths form in the milk ducts near the nipple. Intraductal papilloma can cause nipple discharge. This condition most commonly affects women between the ages of 30 and 50. Having more than five papillomas on her at the same time increases her risk of cancer. Surgery can remove these tumors and reduce the risk of cancer.

**Mammary duct ectasia:** Menopausal and postmenopausal women are prone to duct ectasia. Swollen and inflamed ducts that are blocked may cause inverted nipples and nipple discharge. Also known as periductal mastitis, this condition does

not increase the risk of cancer. Antibiotics may be needed if a bacterial infection is causing the inflammation or blockage. Otherwise, no treatment is needed.

**Traumatic fat necrosis:** These breast lumps form when scar tissue replaces breast tissue that has been damaged by trauma, surgery, or radiation therapy. These lumps do not increase the risk of cancer and do not require treatment.

Alone, premature thelarche can occur. Breast development can occur in a girl under the age of 3 and then resolve spontaneously. This is commonly seen in girls under the age of 3 and is caused by maternal estrogen during the first few months. There is fairly static breast development before true puberty finally occurs at normal times. This is a benign condition and has been confirmed by:

- 1) Absence of any other signs of puberty.
- 2) Normal growth with appropriate bone age.
- 3) Minimal increase in breast tissue with time.
- 4) Age-appropriate uterine measurements (ultrasound) with normal endometrial echo and no vaginal bleeding etc.

If we don't have real signs of precocious puberty such as precocious pubic hair, reassurance is enough.

Hormones and growth factors act on stromal and epithelial cells to regulate mammary gland development, maturation, and differentiation. Broadly speaking, estrogen mediates the development of ductal tissue. Progesterone promotes ductal branching and lobular alveolar development. Prolactin regulates milk protein production. During puberty, estradiol and progesterone levels rise and breast development begins. A complex tree consisting of 5-10 primary ducts starting at the nipple, 20-40 segmental ducts, and 10-100 subsegmental ducts ending in glandular units called Terminal Ductal Lobular Units (TDLUs). During the menstrual cycle, increase in estrogen and progesterone stimulate cell proliferation during the luteal phase. Cycle-dependent apoptosis balances proliferation. Depending on the increased proliferation, the breast increases in size by up to 15% during the luteal phase.

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