Breast pain is one of the most common breast disorders experienced by women. In a study of 2,400 women who were enrolled in a HMO over a 10 year period, breast pain was found to be the most common breast symptom accounting for 47% of breast related visits. Mastalgia can be divided into three forms. They are cyclical mastalgia, non-cyclical mastalgia, and extra-mammary causes of breast pain.

Cyclical mastalgia is breast pain that is related to the menstrual cycle and usually involves the upper outer quadrant of the breast. It may radiate to the axilla or upper arm and is usually diffuse and bilateral, but may be more severe on one side or the other. Although its exact etiology is unknown, proposed hormonal imbalances such as increased estrogen, decreased progesterone, decreased progesterone/estrogen ratio, increased FSH and LH, and increased prolactin levels are thought to be possible mechanisms.

Non-cyclical mastalgia is a constant or intermittent form of breast pain that is not associated with the menstrual cycles. It accounts for approximately one-third of all breast pain patients and will typically present later in life than cyclical mastalgia. It tends to be unilateral and localized but it may be diffuse. As with cyclical breast pain, its exact etiology is also unknown. There may, however, be identifiable underlying causes such as mastitis, cyst formation, trauma, thrombophlebitis or Mondor’s disease, ductal ectasia, prior breast surgery, prior breast radiation, and even breast cancer. Medications such as exogenous hormones, antidepressants, antipsychotics, antihypertensive medications, cardiac drugs, and antifungal agents can contribute to non-cyclical mastalgia.

Extra-mammary breast pain presents as pain within the breast but it is caused from a non-breast source. It is most commonly caused by inflammation of the chest wall and ribs (chostochondritis) and can be seen in chest wall syndromes or associated with trauma. Gastroesophageal reflux, coronary artery disease, and even intra-abdominal pathology can cause extra-mammary breast pain.

The initial evaluation of breast pain or mastalgia should include a detailed history featuring the characteristics of the pain, its relationship to menses, its duration, severity, location, and underlying medical conditions, medications, and dietary habits. The clinical breast exam includes a thorough exam of the breast, nipple areola complex, axilla, and the chest wall. Imaging studies to evaluate breast pain depend on the patient's age, underlying risk factors, and the findings on clinical breast exam. It should include mammography, especially in women over age 30, or ultrasound, which can be used to evaluate focal pain in women of any age. A breast MRI can be helpful in selected cases.
Coastal Carolina Breast Center is the area’s only surgical practice dedicated solely to breast health and is one of only eight centers in South Carolina to be accredited by NAPBC. Recognized as a Center of Excellence, Coastal Carolina Breast Center demonstrates a commitment to patient education, advocacy, and awareness of advanced breast cancer treatments. In the last fifteen years, they have treated an estimated 25,000 patients.

Management generally evolves around reassuring the patient after normal evaluations. Supportive measures that may be helpful include good mechanical support (bra), heat and/or cold therapy, breast massage, and even relaxation techniques. Dietary recommendations include decreasing fat intake and reducing caffeine (coffee, tea, chocolate, etc.) intake is particularly helpful in women who consume a large amount of fatty foods or caffeine each day. Supplementation with selenium, iodine, vitamin E, B1, or B6 have shown minimal benefit over placebo in clinical trials that were performed. Evening Primrose Oil (EPO) is a gamma-linoleic acid and has been shown to be quite effective in treating moderate to severe mastalgia. Its proposed mechanism of action involves the restoration of abnormal fatty acid profiles which then decreases the sensitivity of the breast epithelium to steroid hormones such as estrogen and progesterone. It is given as 1 gram three times per day while assessing the response over the next three to six months. This therapy should be avoided in women on certain blood thinners or with seizure disorders as it may decrease the seizure threshold.

Pharmacological therapy is considered in women with severe, prolonged cyclic mastalgia that is not responsive to the above regimens. The most common agents used are Tamoxifen, Danazol, Progenstins, and Bromocriptine. These medications are used for three to six months and then the doses are tapered and discontinued. Danazol is a drug that suppresses gonadotropin secretion, prevents the LH surge during menses, and inhibits ovarian steroid formation. It was shown to be effective in 59 - 92% of women. The initial dose is 200 mg per day with tapering over time. Unfortunately, it has multiple adverse side effects including acne, hair loss, decreased voice pitch, weight gain, headaches, nausea, rash, anxiety, depression, and menstrual irregularities. These may be less severe if given during the luteal phase of menstruation. Bromocriptine decreases prolactin secretion from the pituitary gland and was found to be effective in 47 - 88% of women. The dose is 2.5 mg twice a day which can be decreased to 1.25 mg per day if side effects become problematic. Adverse side effects include nausea, vomiting, dizziness, dry mouth, headaches, and fatigue. Tamoxifen is a well known selective estrogen receptor modulator and was shown to be effective in 71 - 96% of women.

It is given in 10 mg per day doses over six months. Adverse side effects include hot flashes, nausea, menstrual irregularities, vaginal dryness, discharge, and weight gain. Its use in treating ER/PR positive breast cancers and its effectiveness in high risk patients is well established.

In conclusion, mastalgia is one of the most common breast symptoms in women that lead to evaluation by a physician. Reassurance after appropriate evaluation along with supportive measures is usually all that is required. A trial with EPO should be tried initially in women seeking treatment for their pain. Pharmacological therapy should be reserved for women with severe and prolonged mastalgia and should be monitored by a physician.

**Turn to the professionals that women know and trust.**

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