

FIBROCYSTIC BREAST DISEASE

WHAT IS FIBROCYSTIC BREAST DISEASE?

Fibrocytic breast disease is a name used to describe a host of different non-cancerous disorders affecting the breast. It can be in the form of large single cysts or multiple areas of small lumps or nodules. Fibrocytic breast disease is the most common form of benign (non-cancerous) breast disease and affects many women. It usually affects younger women and often disappears after menopause. It is also often relieved by pregnancy.

Fibrocytic breast disease is also called chronic cystic mastitis, cystic disease, mammary dysplasia and ductal dysplasia. "Mammary" means "pertaining to the breast" and "ductal" refers to the little tubes which drain the milk-secreting glands in the breast and which open in the tip of the nipple.

Fibrocytic conditions are usually considered to be an exaggeration of changes that normally happen with the menstrual cycle. Each month, prior to menstruation, a woman's body prepares for pregnancy. Breast tissues begin to prepare for milk production. In the first half of the menstrual cycle, when the hormone estrogen predominates, the cells of the milk-secreting glands, the ducts that carry the milk, and the fibrous tissue which supports the breasts multiply. Once ovulation has occurred, the levels of the hormone progesterone rise and this triggers the first step of the secreting process in the milk glands. Fluid and nutrients are preserved, often resulting in painful tender breasts which increase in size. If pregnancy does not occur, the secreting process stops and the newly grown cells and fibrous tissue break down, just as the thick rich lining of the uterus breaks down and is shed in the form of menstrual blood. In the breast, however, there is no place for the broken down cells and tissue to go, so they must be reabsorbed by the breast tissues, along with the excess fluid. In the case of fibrocytic breast disease, the process of growing new cells and secreting fluid goes too far and/or the process of breaking down and reabsorption does not function correctly. The fibrous tissue thickens and very often small pockets or sacs filled with fluid or semisolid material form. These are called cysts. They may join together to form larger cysts.

One type of cyst tends to occur in one breast and is a rounded, moveable lump, separated from surrounding tissue. More than one can occur, and sometimes they occur in both breasts. They can be soft or firm. The other type tends to occur in both breasts, starting with a general thickening, usually at the outer sides of the breasts, and may become lumpy as groups of small cysts develop. Both types of cysts may be painful or painless, and may or may not change in size and painfulness with the menstrual cycle, although they are most likely to increase in size and painfulness in the week or two preceding menstruation. They can develop quickly and also disappear quickly. Their occurrence seems related to excess estrogen (a female hormone) in the system. Excess prolactin (another female hormone) and imbalances in adrenal and thyroid hormones are also implicated, as well as impaired liver function. Low production of a prostaglandin called PGE₁ may also have a role.

Cystic disease can also exist at a microscopic level, so a woman may not notice any symptoms.

To date there is no precise definition of "disease" as it relates to fibrocytic breast disease. It should probably

be called a condition rather than a disease.¹ Autopsies have shown that nearly all women in North America have some kind of overgrowth of cells in their breasts, leaving open the question of what is in fact "normal breast tissue" and what warrants such tissue being called "diseased." A recent study² suggests that there is a difference between cyclic conditions (those which change with the menstrual cycle) which are hormone-related and the existence of cysts, two conditions which may or may not co-exist.

Despite this lack of definition, there does come a point when the condition is noticeable enough to warrant attention, e.g. if the cysts have become unusually large or painful. The medical profession tends to regard this condition as a disease and to treat it with drugs which affect the hormonal system. Because so little is understood about breast disorders, the use of hormonal treatments is experimental and potentially dangerous.

DIAGNOSIS AND CONVENTIONAL MEDICAL TREATMENT

Although most breast lumps are benign, especially if they are moveable and change with the menstrual cycle, they can be a source of anxiety. Some of the procedures described here are done to determine whether the lumps are benign or malignant.

1. Needle aspiration: an office procedure in which a long, fine, hollow needle is inserted into the cyst to withdraw the fluid, after which the cyst usually disappears. If the fluid is clear and no lump remains, this is considered sufficient proof of non-malignancy, although the fluid might be analyzed. Fine needle aspirations are 92% accurate in determining malignancy.
2. Needle core biopsy: if fluid cannot be extracted, the lump is presumed to be solid and a needle biopsy may be performed. Some tissue is withdrawn from the lump by a slightly larger needle than used in aspiration and then looked at under a microscope for possible abnormalities. The diagnosis may not be accurate because only a small portion of the lump is removed and any cancerous cells might be missed. Positive results of this test (confirmation of cancer) can be trusted, but not negative ones. This procedure can also be performed on an outpatient basis with local anaesthetic.
3. Surgical or open biopsy: the removal of a small sample of cells from a suspicious area so that they can be studied under a microscope for possible malignancies. A small incision is made in the breast under general or local anaesthetic.
4. Mammography: a mammogram or breast x-ray which in some situations can give information about the texture of the cyst lining, which is smooth if benign, irregular if cancerous. The use of mammograms should be approached cautiously as x-rays in themselves can cause cancer.
5. Surgery: because the presence of multiple cysts could possibly conceal the presence of a malignant lump, some practitioners encourage women, especially those they consider at high risk for breast cancer, to have the cysts surgically removed.

A recent approach for chronic benign breast disease is a plastic-surgery procedure called "subcutaneous

mastectomy". A curved incision is made in the lower crease of the breast, and all the cystic breast tissue is removed. A silicone implant is inserted, and the skin with the nipple re-covers the implant. This operation is a serious one which can involve the removal of most of the breast tissue. The mastectomy and implantation may have to be performed on separate occasions, and complications, often caused by the silicone implant, requiring further operations are fairly common. Possible complications are haemorrhage (bleeding), infection, fibrosis (excessive growth of connective tissue causing distortion) and the death of the skin and/or nipple. Often women lose skin and nipple sensation after this operation and some have permanent discomfort.

Some women are encouraged to have a subcutaneous mastectomy to eliminate the risk of developing breast cancer. It is usually impossible to remove all of the breast tissue during a subcutaneous mastectomy. Breast tissue must be left around the nipple if the nipple is left intact, and sometimes breast tissue remains in other areas. There is concern that if a woman has a subcutaneous mastectomy and a later silicone implant, and breast cancer does develop in the small bits of remaining breast tissue, it will be more difficult to detect than if the breast was left intact.

LINK BETWEEN FIBROCYSTIC BREAST DISEASE AND BREAST CANCER

Some studies have suggested that women with fibrocystic breast disease are more prone to develop breast cancer (3 times more likely is the figure usually given). These studies may well be meaningless, since so many women have undiagnosed fibrocystic breast disease and since the definition of fibrocystic breast disease is so imprecise. More recent thinking is that identification of fibrocystic breast disease as a major high risk factor for breast cancer has been overrated.¹

The number of cysts and/or the severity of fibrocystic breast disease have no link with the likelihood of breast cancer. The common denominator, though, seems to be excess estrogen in the system and other hormonal imbalances. Numerous breast cysts may mask cancerous lumps, should they develop, so they should not be ignored.

TREATMENT FOR FIBROCYSTIC BREAST DISEASE

Because fibrocystic breast disease is in fact a number of different disorders or conditions, no single approach is going to help every woman. Each woman can try the various treatments suggested here and see which ones affect her body and relieve the condition.

Avoid methylxanthines (caffeine, theophylline and theobromine), the active agents in coffee, tea, chocolate, cola drinks and certain cold and pain relievers like Anacin, Excedrin and Midol. Methylxanthines are chemicals which block the action of certain enzymes which act as energy messengers from hormones to cells. It is believed that interrupting this mechanism leads to prolonged hormonal and growth activity which may result in the production of cysts. Peanut butter also contains methylxanthines as can decaffeinated coffee and certain herb teas like Morning Thunder. Many women have found that giving up coffee alone was enough to eliminate their breast cysts.³

Vitamin E (up to 600 IU daily) is a natural antagonist of excess estrogen which is partly responsible for breast cysts, although the mechanism by which Vitamin E normalizes hormone levels is not understood. Many women have found significant improvement from taking Vitamin E.⁴ (Some women, though, have found that

Vitamin E aggravates their condition.) Women with diabetes, high blood pressure, rheumatic heart condition, and anyone taking drugs derived from digitalis (digoxin and digitoxin) should not take Vitamin E except under medical supervision and then only very small doses.

Selenium, a mineral, enhances the effect of Vitamin E and, along with Vitamin C, seems to be an inhibitor of unnatural tissue growth. Both selenium and Vitamin C should therefore be taken with Vitamin E. Some Vitamin E tablets have selenium in them. Garlic is the richest food source of selenium. Selenium supplements should be taken with caution and not exceed 50 mcg daily; selenium is very toxic.

B Vitamins, especially choline and inositol, are essential for the liver to perform properly its function in processing excess estrogen. Too much sugar, refined carbohydrates (white flour, etc.) and alcohol deplete the body of B vitamins so should be avoided. (Some vegetable juices such as celery and cranberry help the liver flush toxins from the body.) A good source of B vitamins is brewers yeast which also contains selenium.

Vitamin B₆ is particularly significant for its role in reducing or eliminating breast cysts. It has a role in the production of the prostaglandin PGE₁ and is a natural diuretic (reduces fluid retention). Vitamin B₆ must be taken in conjunction with a B-complex vitamin as all the B vitamins work together. Start with 50 milligrams of B₆ daily and increase the dosage until some improvement is noticed (to a maximum of 800 milligrams daily). If any side effects are noticed such as nausea, gastric acidity, dizziness, headaches, sleep disturbances, difficulty walking and/or numbness in the feet, decrease the dosage immediately. The dosage has to be much higher than 800 mg daily for Vitamin B₆ to be dangerous.

Magnesium, a mineral, is necessary for the breakdown of excess estrogen and for the production of the prostaglandin PGE₁. It should be taken along with Vitamin B₆ and calcium (250-300 mg of magnesium with calcium equal to double the amount of magnesium). Good sources of magnesium are whole grains, nuts, legumes (peas, beans and lentils), potatoes and green vegetables. Animal fats, especially dairy products, block the absorption of magnesium and alcohol depletes the body of magnesium.

NOTE: Although specific vitamins and minerals are suggested here as having particular relevance to fibrocystic breast disease, it is important to know that it is necessary to take a multi-vitamin/mineral supplement which provides all the required nutrients. If the multi-vitamin/mineral tablet is not adequate in a particular vitamin or mineral, the specific nutrient can be taken in addition to the multi-vitamin/mineral tablet. For example, a good multi-vitamin/mineral tablet may provide enough B complex except for B₆ which can then be taken in addition to the multi-vitamin/mineral tablet.

Decrease salt intake. As well as table salt, this includes any high sodium foods such as pickles, soy sauce, soda water, canned foods, bouillon cubes, snack foods, condiments and cured meats. Excess salt contributes to fluid retention.

Evening Primrose Oil is a natural source of gamma-linolenic acid, which is necessary for the production of the prostaglandin PGE₁. Prostaglandins are hormone-like substances. A shortage of PGE₁ has been linked with fibrocystic breast disease, as has an overproduction of the hormone prolactin. PGE₁ may inhibit the effects of excess prolactin, i.e. fluid retention and breast tenderness. During tests with Evening Primrose Oil for other reasons (Evening Primrose Oil has helped many women with premenstrual syndrome, heavy menstrual

bleeding and hot flashes, among other conditions), it was discovered that breast cysts softened or disappeared within two to four months. Vitamin B₆ and Vitamin E seem to make Evening Primrose Oil work more effectively. Evening Primrose Oil is available under the brand name Efamol at some vitamin and health food stores but unfortunately it is quite expensive.⁵

Avoid refined (white) sugar: as well as robbing the body of B vitamins, it interferes with hormonal balances. Simply eliminating sugar has helped some women with breast lumps.

Fibre: severe or chronic constipation has been linked to breast disease.⁶ Excess estrogen which the body is trying to eliminate can be reabsorbed into the bloodstream if the bowels are not moving efficiently. A high fibre diet assists in regularity of bowel movements (as does lots of fluids). Foods high in fibre are bran, apples, peaches, plums, pears, prunes, leafy green vegetables, whole grain cereals, legumes (peas, beans and lentils) and root vegetables. These complex carbohydrates should form the bulk of our daily diet. Avoid refined foods such as white flour and white rice which are stripped of many of their nutrients and contribute to constipation. Flax seeds, garlic and dandelion leaf tea are also aids to regularity, as is exercise. It is important to avoid the regular use of laxatives. When really necessary, use a gentle herbal laxative or drink prune juice.

Use seaweeds: they are a natural source of iodine. Iodine deficiency (caused by an underactive thyroid gland) can lead to breast cysts as iodine is necessary to break down fats and is also an estrogen antagonist. The use of seaweeds in the traditional Japanese diet may account for the Japanese women's low rate of breast disease compared to North American women. Various kinds of seaweeds are available in health food stores and in Japanese stores. They can be used whole in soups or in powdered form. Kelp is easily available in powdered form and can be used as a salt substitute in soups, stews, etc.

Avoid saturated fats (fats which harden when cool) and use instead unsaturated cold-pressed vegetable oils such as safflower, sunflower and soy oil.

Lecithin contains choline and inositol which help the liver process excess estrogen. Take 1-2 teaspoons of lecithin granules daily; they can be sprinkled on fruit or yogurt or mixed in fruit juice.

Herbs: some herbs are diuretics i.e. they reduce fluid retention. Some diuretic herbs which can be made into teas are dandelion, camomile, spearmint and raspberry leaf. Herbs should be used sparingly (not more than 3 times a day for a tea made from these herbs, and then only when necessary).

Avoid certain estrogen containing foods: whole wheat, citrus rinds, wild yams, animal fats and dairy products (milk, butter, cheese, etc.; yogurt is acceptable).

Don't smoke: nicotine stimulates abnormal breast tissue growth in a similar way to methylxanthines.

Switchel, a Vermont folk remedy, has helped breast swelling and tenderness. Take one teaspoon apple cider vinegar and one to two teaspoons honey in one to two cups of water, either hot or cold, two to three times a day.

Food sensitivity: adverse reactions to foods, as well as to methylxanthines, can trigger or worsen breast disease. Sensitivity can exist to such common foods as wheat, beef and sugar. Self-testing can be done by eliminating three or four of the most common foods in the diet, one at a time, for 10 to 14 days. If the breast condition improves and then worsens again when the food is reintroduced, this is good evidence

of a relationship between the food and the breast condition. More sophisticated allergy testing can be done by an allergist.

DRUGS TO AVOID

Danocrine, whose active ingredient is danazol, a synthetic androgen (male hormone) which is supposed to decrease estrogen production. Although it sometimes relieves cystic conditions, the condition usually recurs when treatment is stopped. Long-term use of this drug is not known to be safe, and it can have a number of disturbing side effects such as masculinization, amenorrhea (no periods) and irregular periods, liver damage, headaches, anxiety and miscarriage in the three months after the treatment is stopped. It is also very expensive.

Parlodel, whose active ingredient is bromocriptine which is prescribed for fluid retention because it suppresses prolactin, a hormone thought to be responsible for fluid retention. It can make the condition worse for some women although it appears to help others. Side effects include hypotension (rarely), dizziness, nausea, vomiting and headaches.

Nolvadex, whose active ingredient is tamoxifen which blocks estrogen by destroying ovarian function. It is sometimes prescribed for fibrocystic breast disease. There are many negative side effects, including menstrual irregularities, abnormal hair growth, excess calcium, hot flashes, vaginal bleeding, dizziness and nausea.

Oral contraceptives (the birth control pill) which have also been prescribed for fibrocystic breast disease, in the hope that they will regulate hormone levels. They may bring some relief to some women but for others there will be an increase in problems with breast disease. The Pill has many dangerous or uncomfortable side effects, a few of which are an increased chance of blood clots, strokes and heart conditions, stimulation of liver tumours and uterine fibroids, fluid retention and weight gain, eye and skin problems, and depletion of some vitamins. The Pill should never be taken by women with known or suspected breast or other estrogen-dependent cancer, liver, circulatory or heart problems, or by smokers.

Diuretics which are prescribed for fluid retention. They can be dangerous because they deplete the body of potassium, magnesium and zinc, all important minerals.

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