



Breast Cancer Awareness Month 2016

10 Important Questions Answered Concerning Breast Cancer

October is the month when many of those involved in the treatment and prevention of breast cancer once again take the stage and with a loud voice attempt to increase public awareness in a concerted attempt to further reduce the incidence of this most distressing of illnesses.

In this article by leading plastic and reconstructive surgeon Dr Allen Rezai, a specialist in breast surgery with practices in Harley Street, London and Dubai, UAE, the key aspects of breast cancer and its treatment are discussed in the context of modern medical diagnostic and treatment methods so as to broaden awareness and give hope both to those already suffering from breast cancer and the many people, women and men, who are concerned about it.

But first, the table to the right shows some statistics recently published by the UK based Breast Cancer Care charity. Some of them might be very surprising and raise an eyebrow or two.

Let's take a look at that last one just a little more closely. This increase is in spite of regular campaigning by those involved in cancer care over this period of time. It must be said that the rise is due in part to the increased surveillance and earlier diagnosis of cancer, which years ago might even have gone undetected, but it is also due to the ageing population and lifestyle factors such as higher levels of obesity.

The good news is that more people than ever before now survive cancer diagnosis, and the answers to the following 10 broad questions should lift a veil from the mystique still widely prevalent concerning breast cancer, and hopefully also allay certain fears.

- *1 in 3 women do not check their breasts regularly for signs of cancer.*
- *Almost three-quarters of men don't regularly check for breast cancer symptoms.*
- *1 in 7 women aged 50-70 attending for routine mammograms never check their breasts for signs of cancer.*
- *Over half of younger women with breast cancer are in the dark about preserving their fertility.*
- *A tenth of younger women with breast cancer are pregnant or breast feeding when they spot a symptom.*
- *The number of newly-diagnosed breast cancer cases has risen by 20% in the past 10 years.*

1) What exactly is breast cancer?

Breast cancer starts when cells in the breast begin to grow out of control. These cells usually form a tumour that can often be seen on an x-ray or felt as a lump. The tumour is malignant (cancerous) if the cells can grow into (invade) surrounding tissues or spread (metastasise) to distant areas of the body. Breast cancer occurs primarily in women, but men can also get it.

Cells in nearly any part of the body can become cancerous and can spread to other areas of the body. Breast cancers can start from different parts of the breast. Most cancers begin in the ducts that carry milk to the nipple. Some start in the glands that make breast milk. A small number of cancers start in other tissues in the breast. These latter types of cancer are called *sarcomas* and *lymphomas*.

Although many types of breast cancer can cause a lump in the breast, not all do. However it's important to understand that most breast lumps are not cancer – they are benign. Benign breast tumours are abnormal growths, but they do not spread beyond the breast and they are not life threatening, although they can increase the risk of getting breast cancer. Any breast lump or change needs to be checked by a health care provider to determine whether it is benign or cancerous, and whether it might impact your future cancer risk.

2) What are the risk factors for breast cancer?

First of all, before answering this question in more detail, it must be stated that most women who have one or more breast cancer risk factors never develop breast cancer, while many women with breast cancer have no known risk factors (other than being a woman of a particular race and growing older). Some risk factors, like a person's age or race, can't be changed. Others are linked to personal behaviours such as smoking, drinking and diet. They can also change over time due to ageing and lifestyle changes.

The following are some of the most significant factors which have been directly linked to a tendency to develop breast cancer:

Being a woman. Simply being a woman is the main risk factor for breast cancer. Men can also have breast cancer, but the disease is about 100 times more common in women than in men.

Getting older. As you get older, your risk of breast cancer increases. Most invasive breast cancers (those that have spread from where they started) are found in women age 55 and older.

Genetic factors. About 5% to 10% of breast cancer cases are thought to be hereditary, meaning that they result directly from gene defects (called *mutations*) passed on from a parent. The most common cause of hereditary breast cancer is an inherited mutation in the *BRCA1* and *BRCA2* genes.

Having a family history of breast cancer. Although it's important to note that most women (about 8 out of 10) who get breast cancer *do not* have a family history of the disease.

Having a personal history of breast cancer. A woman with cancer in one breast has a higher risk of developing a new cancer in the other breast or in another part of the same breast.

Race and ethnicity. Certain races and ethnic groups are more prone to breast cancer than others.

Having dense breast tissue. Breasts are made up of fatty tissue, fibrous tissue, and glandular tissue. Someone is said to have dense breasts (on a *mammogram*) when they have more glandular and fibrous tissue and less fatty tissue. Women with dense breasts on a mammogram have a risk of breast cancer that is up to 2 times that of women with average breast density.

Starting menstruation (periods) before age 12. Women who have had more menstrual cycles because they started menstruating early (before age 12) have a slightly higher risk of breast cancer.

Going through menopause after age 55. Women who have had more menstrual cycles because they went through menopause later also have a slightly higher risk of breast cancer.

Having radiation to your chest. Women who as children or young adults were treated with radiation therapy to the chest for another cancer (such as Hodgkin disease or non-Hodgkin lymphoma) have a significantly higher risk for breast cancer.

Drinking alcohol. Drinking alcohol is clearly linked to an increased risk of developing breast cancer. The risk increases with the amount of alcohol consumed. Compared with non-drinkers, women who have 1 alcoholic drink a day have a very small increase in risk, however this risk increases with the volume of regular alcohol consumption.

Being overweight or obese. Being overweight or obese after menopause increases breast cancer risk.

Physical activity. Evidence is growing that physical activity in the form of exercise reduces breast cancer risk.

Having children. Women who have not had children or who had their first child after age 30 have a slightly higher overall breast cancer risk.

Birth control. Studies have found that women using oral contraceptives (birth control pills) have a slightly higher risk of breast cancer than women who have never used them.

Tobacco smoke. In recent years an increasing number of studies have shown that heavy smoking over a long period of time is linked to a higher risk of breast cancer.

Risk Factors

- *Being female*
- *Ageing*
- *Genetic factors*
- *Family history of cancer*
- *Personal history of cancer*
- *Race and ethnicity*
- *Having dense breast tissue*
- *Starting menstruation early*
- *Starting menopause late*
- *Having had chest radiation*
- *Excessive alcohol consumption*
- *Being significantly overweight after menopause*
- *Women without children or late starting family*
- *Taking birth control pills*
- *Lengthy exposure to tobacco smoke*

It is also worthwhile pointing out that over the years there have been suggestions that certain other factors might increase the risk of breast cancer. Such as using antiperspirants, wearing tight bras, induced abortion, and breast implants. However studies have since confirmed that this is not the case and they do not increase risk.

3) Can breast cancer be prevented?

There is no sure way to prevent breast cancer, but there are things you can do that might lower your risk, such as changing certain risk factors that are directly under your control. For example body weight, physical activity and, to some extent, diet have all been linked to breast cancer, so these might be areas where you can take positive action.

For people who possess certain risk factors for breast cancer, such as a family history, there are a number of medical options that may help prevent breast cancer. For example drugs such as *Tamoxifen* and *Raloxifene* have been shown to reduce risk, although such products can have their own risks and side effects. Other drugs, such as *aromatase inhibitors* and dietary supplements that may help lower risk are also being studied.

Those with a strong family history of breast cancer can talk to their doctor about genetic testing for mutations in genes that increase the risk of cancer, such as the *BRCA* genes. If you have a genetic mutation or come from a family with a mutation, you could consider surgery to lower your risk of cancer.

4) Can breast cancer be found early?

Screening exams, such as *mammograms*, *ultrasound* and *MRI*, can find cancers before they start to cause symptoms. This is called early detection. Cancers that are found early – when they're small and haven't spread – are easier to treat and have better outcomes. The earlier breast cancer is found, the better the chance that treatment will work.

Breast cancers that are found because they can be felt tend to be larger and are more likely to have already spread beyond the breast. But screening exams can often find breast cancers when they are small and still confined to the breast. The size of a breast cancer and how far it has spread are some of the most important factors in predicting the outlook (prognosis) for a person with this disease.

Early detection tests for breast cancer save thousands of lives each year. Many more lives could be saved if even more women and their health care providers took advantage of these tests.

5) What are the signs and symptoms of breast cancer?

Knowing how your breasts normally look and feel is an important part of keeping up with your breast health, and finding breast cancer as early as possible gives you a better chance of successful treatment.

The most common symptom of breast cancer is a new lump or mass. A painless, hard mass that has irregular edges is more likely to be cancerous, but breast cancers can also be tender, soft, or rounded. They can even be painful.

For such reasons, it is important to have any new breast mass or lump or breast change checked by a health care professional experienced in diagnosing breast diseases.

Other possible symptoms of breast cancer include:

- Swelling of all or part of a breast
- Skin irritation or dimpling
- Breast or nipple pain
- Nipple retraction (turning inward)
- Redness, scaliness, or thickening of the nipple or breast skin
- Nipple discharge (other than breast milk)

Sometimes a breast cancer can spread to lymph nodes under the arm or around the collar bone and cause a lump or swelling there, even before the original tumour in the breast tissue is large enough to be felt. Swollen lymph nodes should also be reported to your doctor.

Although any of these symptoms can be caused by things other than breast cancer, if you have them, they should be reported to your doctor so that he or she can find the cause. Because mammograms do not find every breast cancer, it is important for you to be aware of changes in your breasts and to know the signs and symptoms of breast cancer.

The following useful diagrams are provided by **Breast Cancer Care**:

How do I CHECK my breasts?

Check all parts of your breast, your armpits and up to your collarbone for changes.

breast cancer care

- A change in size or shape**
- Redness or a rash** on the skin and/or around the nipple
- Discharge** (liquid) that comes from the nipple without squeezing
- A swelling** in your armpit or around your collarbone
- A lump or thickening** that feels different from the rest of the breast tissue
- A change in skin texture** such as puckering or dimpling (like orange skin)
- Your nipple becoming inverted** (pulled in) or changing its position or shape
- Constant pain** in your breast or your armpit

6) How is breast cancer treated?

Most people with breast cancer will have some type of surgery to remove the tumour. Depending on the type of breast cancer and how advanced it is, other types of treatment may also be needed, either before or after surgery, or sometimes both. However, surgery is less likely to be a main part of the treatment for more advanced breast cancers. Treatment plans will be decided upon based on the type of breast cancer, its stage, and any special situations, such as if the cancer is found to be invasive, non-invasive, or whether occurring during pregnancy. It will also depend on other factors including overall health and personal preferences.

Surgery may be undertaken for a variety of reasons. For example, to remove as much of the cancer as possible (known as *breast-conserving surgery* or *mastectomy*); to determine whether the cancer has spread to the lymph nodes under the arm; to restore the breast's shape after the cancer has been removed (*breast reconstruction*); or to relieve symptoms of advanced cancer.

There are two main types of surgery to remove breast cancer. Firstly there is what is known as *breast-conserving surgery* (also called a *lumpectomy*, *quadrantectomy*, or *partial mastectomy*), in which only the part of the breast containing the cancer is removed. The other type is the well-known *mastectomy*, in which the entire breast is removed, including all of the breast tissue and sometimes other nearby tissues.

Following a mastectomy (or some breast-conserving surgeries), a woman might want to consider having the breast mound rebuilt to restore the breast's appearance. This is known as breast reconstruction, of which there are several varieties, with options depending upon the individual medical situation and personal preferences.

Other treatments might also be necessary following mastectomy, such as radiation therapy, hormone therapy, chemotherapy, or targeted therapy, each of which has their own specific reasons for application, and indeed possible side effects.

The need for radiation depends upon the type of surgery, whether the cancer has spread to the lymph nodes or somewhere else in the body, and in some cases, a person's age.

Some women with breast cancer might also receive chemotherapy. This treats the whole body for breast cancer, not just the breast. Many different side effects are possible from chemotherapy drugs, but not all patients will have the same ones. Chemotherapy is treatment with cancer-killing drugs that may be given either intravenously (injected into a vein) or by mouth.

Hormone therapy is most often used following surgery to help reduce the risk of the cancer recurring, but it can also be started before surgery, and is usually employed for at least 5 years. It can also be used to treat cancer that has come back following treatment or that has spread to other parts of the body.

Treatment Options

(often in combination)

- *Surgery:*
 - *Breast-Conserving*
 - *Mastectomy*
- *Radiation Therapy*
- *Chemotherapy*
- *Targeted Therapy*
- *Hormone therapy*

Targeted therapy for breast cancer is a more recent innovation. As researchers have learned more about changes in cancer cells that cause them to grow out of control, new types of drugs have been developed to target some of these cell changes. These special drugs are designed to block the growth and spread of cancer cells. However they work differently from chemotherapy drugs, which attack all cells that are growing quickly, and not just the cancer cells. Targeted drugs sometimes work even when chemotherapy does not, and they can also help other types of treatment work better. They also tend to have less severe side effects than chemotherapy.

7) I have been diagnosed with breast cancer. Can I still have children?

Many women are able to become pregnant after treatment for breast cancer. However, some treatments make it harder to get pregnant. If a cancer patient thinks that they may want to have children one day, or just want to keep their options open, the best time to talk to a doctor about fertility is before commencing the cancer treatment.

Many breast cancers are sensitive to oestrogen, so there has been concern that, for women who have had breast cancer, the high hormone levels that result from a pregnancy might increase the chance of the cancer coming back. However studies have shown that pregnancy does not increase the risk of the cancer coming back after successful treatment. There is also no proof that breastfeeding after cancer treatment increases the risk of recurrence. In fact, some research suggests having a history of breastfeeding might actually lower the risk of the cancer coming back.

Many doctors advise breast cancer survivors to wait at least 2 years after all cancer treatment has finished before trying to get pregnant. This is thought to be enough time to find any early return of the cancer, which could affect a person's decision to become pregnant. However this advice is not based on data from any clinical trials, and some breast cancers can return after the 2-year mark, so each case is different. Thus the decision should be based on many things, including age, desire for more pregnancies, type of breast cancer, and the risk of the cancer coming back early.

There is no proof that a woman's past breast cancer has any direct effect on her baby. Researchers have found no increased rate of birth defects or other long-term health concerns in children born to women who have had breast cancer. On the other hand, for those still getting any type of treatment for breast cancer, it is essential to talk to their doctor before trying to become pregnant. Certain drugs can affect a growing foetus, so it is safer to wait to get pregnant until all treatment is complete.

Those who have had breast surgery and/or radiation may have problems breastfeeding from the affected breast. Studies have shown reduced milk production in a treated breast as well as structural changes that can make it difficult and painful for the baby to latch onto the breast. Yet still many women are able to breastfeed.

However for those still taking any medicines to treat breast cancer, it is very important to talk with their doctor before trying to breastfeed, since some drugs can enter the breast milk and might affect the baby.

8) What is it like to be a breast cancer survivor?



For many women with breast cancer, treatment may remove or destroy the cancer. Concluding the treatment can be both stressful and exciting. There will be massive relief whilst at the same time worry about the cancer coming back. This is a very common situation.

For others, breast cancer may never go away completely. Some women may require regular treatment with chemotherapy, radiation, or other treatments to try to help keep the cancer in check. Learning to live with cancer that does not go away can be difficult and stressful. Living with cancer is different from living after cancer. Life after breast cancer means returning to some familiar things and also making some new choices.

Having completed breast cancer treatment, doctors will want to survey the patient closely. It's very important to attend follow-up appointments. Almost any cancer treatment can have side effects. Some might only last for a few days or weeks, but others might last a long time. Some side effects might not even show up until years after the treatment is finished.

Some people are affected by emotional issues more than others. But everyone can benefit from help and support from other people, whether friends and family, religious groups, support groups, professional counsellors, or others.

Many women with breast cancer face additional stressful issues. For example, changes in appearance can result from breast cancer surgery. For younger breast cancer survivors, changes in appearance and sexuality might be particularly stressful. Some women might still be thinking about having a family, and might worry about how the cancer and its treatment might affect this. Others might have already started families and might worry about how this could affect them. For some women, chemotherapy may cause early menopause, which can be very distressing on its own.

Regardless of the changes experienced, it's important to know that there is advice and support out there to help you cope. What's best will depend upon individual situations and personalities. But certainly, there are usually many avenues of support there for the taking, and asking your medical practitioner for advice can often be a good starting point.

9) How can the risk of breast cancer progressing or returning be lowered?

People who have had breast cancer can still get other cancers, although most don't get cancer again. Breast cancer survivors are at higher risk for getting another breast cancer, as well as some other types of cancer. Indeed they can be affected by a number of health problems, but often the major concern is facing cancer again.

The most common second cancer in survivors of breast cancer is another breast cancer. The new cancer can occur in the opposite breast, as well as in the same breast for women who were treated with breast-conserving surgery. The risk of a second breast cancer is increased no matter which treatments have been employed. This is probably because factors like genetics or hormonal risk factors might play a role in these cancers.



Whilst it is not possible to prevent all cancers, there are steps that can be taken to lower the risk and stay as healthy as possible. Getting the recommended early detection is one way to do this.

Women (and men) who have had breast cancer should do their best to stay away from tobacco products. Smoking increases the risk of many cancers and might further increase the risk of some of the second cancers seen after breast cancer.

To help maintain good health, breast cancer survivors should also:

- Get to and stay at a healthy weight
- Keep physically active
- Eat a healthy diet, with an emphasis on plant foods
- Limit alcohol intake to no more than 1 drink per day

These steps represent solid general wellness advice and may also lower the risk of some other health problems.

10) What's new in breast cancer research and treatment?

Researchers around the world are working to find better ways to prevent, detect, and treat breast cancer, and to improve the quality of life of patients and survivors. Some of the many active areas of research include:

- Breast cancer causes
- Reducing breast cancer risk
- New lab tests for breast cancer
- New imaging tests for breast cancer
- Breast cancer treatment

All of the above areas of research are extremely important and much progress is being made on an ongoing basis. Whilst newer, more sophisticated, lab tests such as those testing for circulating tumour cells, and methods of molecular breast imaging, help in early cancer detection, evaluating the success of treatments, and even in predicting whether cancer might recur, the development of new targeted therapy drugs represent a major step forward in cancer treatment.

Targeted therapies are a group of drugs that specifically target gene changes in cancer cells that help the cells grow or spread. Some types of targeted therapy drugs are already being used to treat breast cancer. These include drugs that target HER2 (a human growth factor receptor present in 20% of breast cancers) and those that help hormone therapy work better. Other types of targeted therapies include those known as PARP inhibitors (frequently to help with cancers caused by BRCA mutations); *anti-angiogenesis* drugs, inhibiting blood supply to cancerous cells; and bone-directed treatments such as *Bisphosphonates* and *Denosumab* that help strengthen and reduce the risk of fractures in bones that have been weakened by metastatic breast cancer.

There are many other developments, particularly in the field of what is known as *oncoplastic surgery*, which typically combines cancer surgery with plastic surgery to reshape the breast at the same time as addressing the cancer; and other techniques at the leading edge of reconstructive surgery, such as the various *perforator flap* procedures producing very natural results.

Overall the future for breast cancer sufferers is continuing to be brighter with every year that passes and further advances are made in the diagnosis, treatment and, most importantly, prevention of this most distressing type of cancer. For this reason the Breast Cancer Awareness month of October each year is of great importance worldwide for informing the public at large about progress and developments, and how each person can play their part in the journey towards the ultimate eradication of this disease.



About the Author:

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For more information concerning reconstructive breast surgery and the options available, reference can be made to his websites www.allenrezaimd.co.uk in the United Kingdom and www.elitecosmeticsurgery.ae in the United Arab Emirates.