



THE BOOK
OF BOOBS





TheaCare

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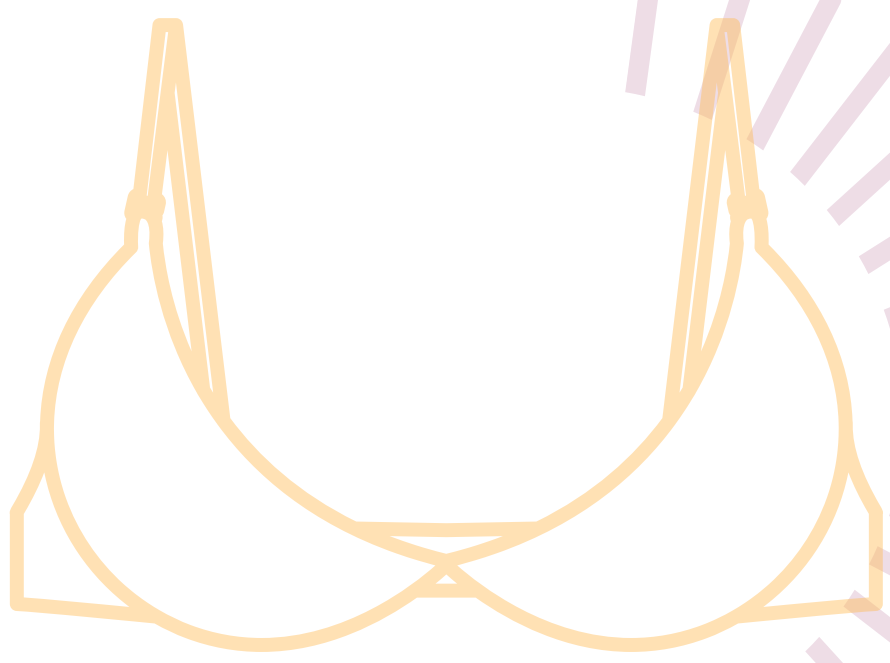


INTRODUCTION

Breasts are almost always, either hypersexualized in our society, or seen as the source of ultimate nutrition for new life on earth. They are never viewed as important markers of health, despite the increasing numbers of deaths due to breast cancer. Our breasts exhibit normal changes in appearance and texture as we age, or go through different phases like pregnancy, breastfeeding and menopause. We need to know what is normal and what we need to worry about. It is high time we learn more about breasts, know how to take care of them and when our breasts need a doctor's attention.

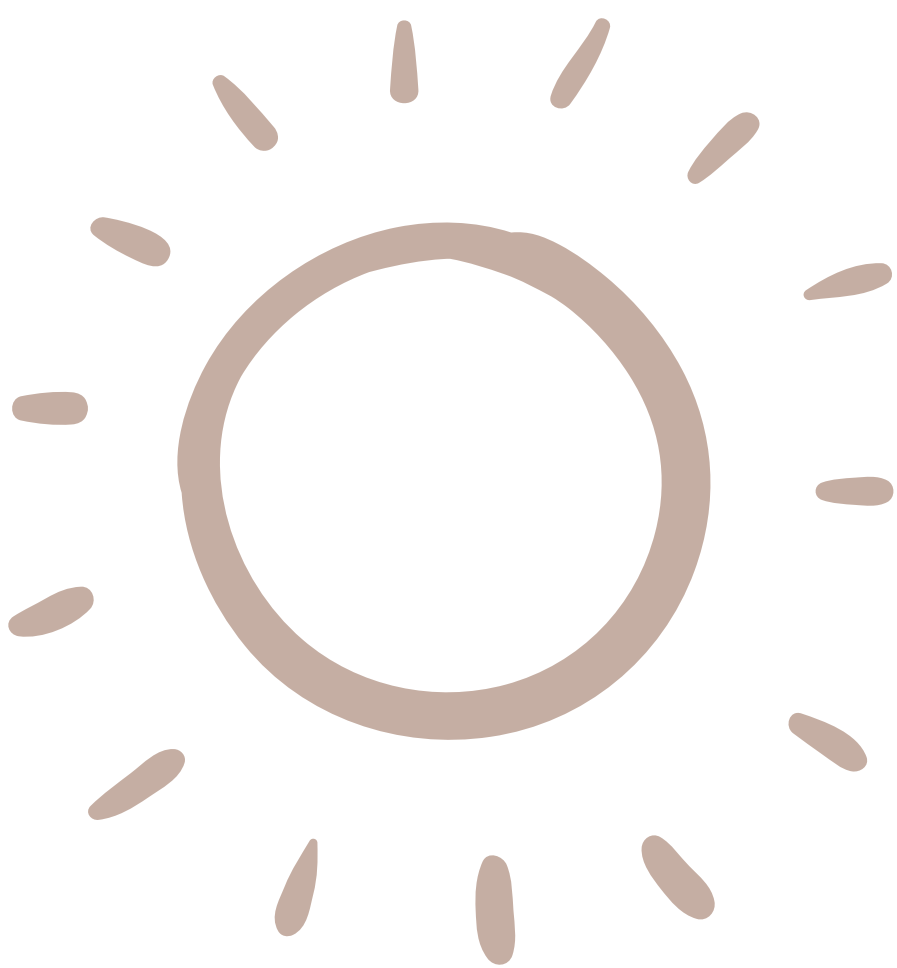
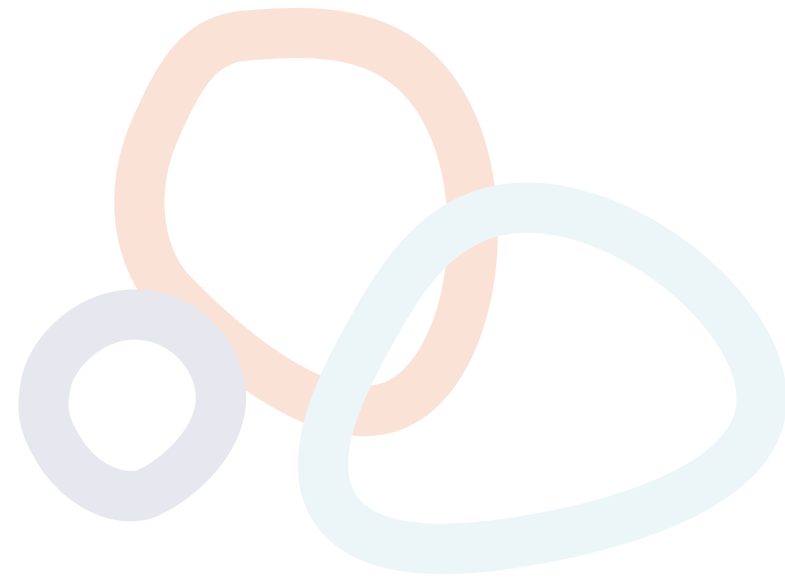
ANATOMY & APPEARANCE

- Under the outward appearance, breasts are made up of a dense network of **mammary glands and fat tissue.**



- Like the ovaries and uterus, breasts have a long **developmental cycle starting at the fetal stage**, and attaining complete maturity at pregnancy.
- The breasts also have **areolas and nipples.** Areolas are the more darkened skin area around the nipples which are of different colours in different women.

- Areolas have oil secreting glands which may be visible outwardly as small bumps in the skin. These are called Montgomery tubercles or Montgomery glands.



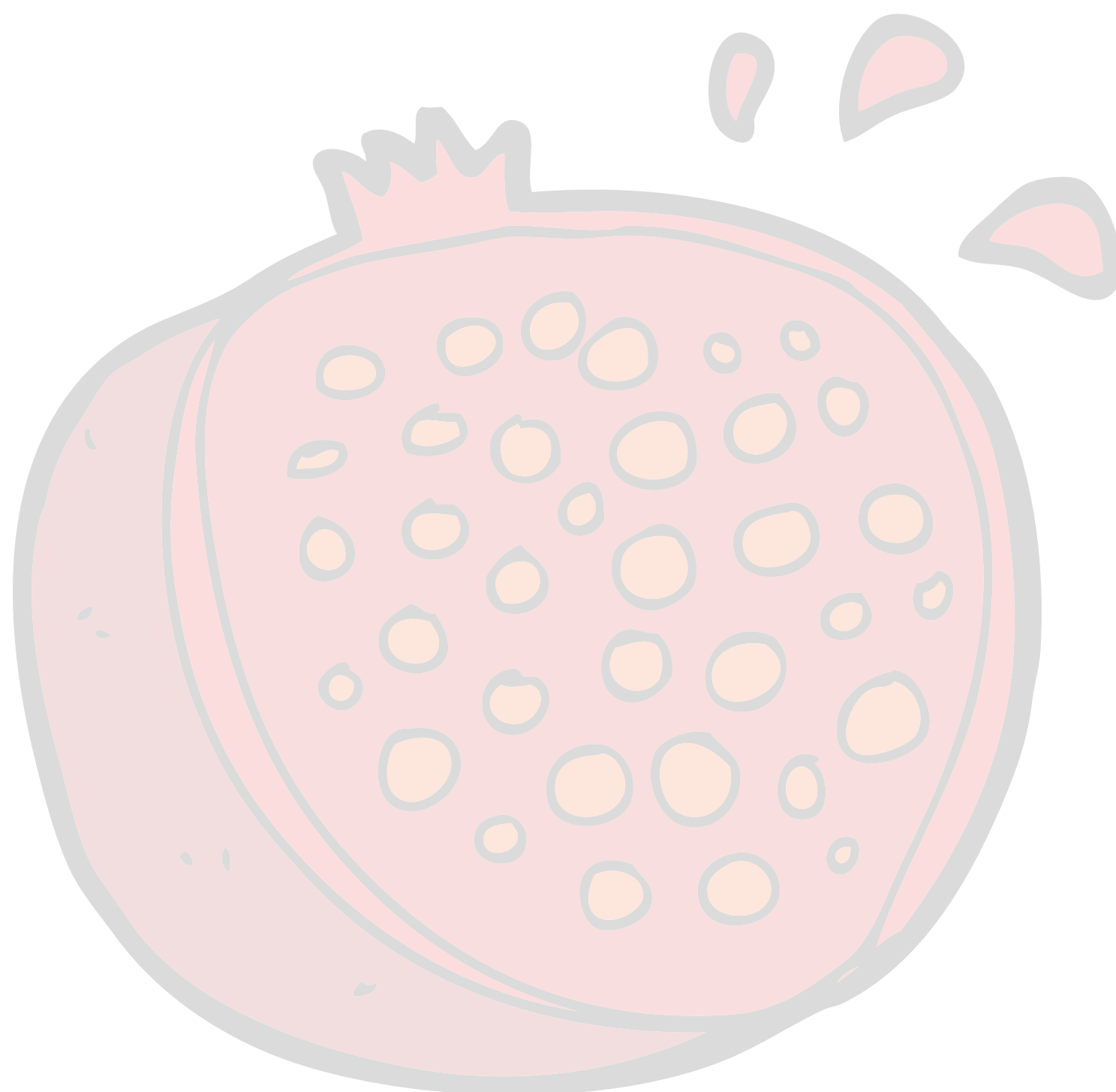
- **A small amount of hair around the nipples is normal,** but excessive dark and thick hair could be a symptom of hormonal imbalance.

- Milk production in the breasts happen in small pockets called **alveoli**. The suckling of the baby draws milk from the ducts in alveoli and through small holes in the nipple.

- Periareolar glands of Montgomery help secrete oil, **keeping the nipple moisturized**. This is especially helpful during breastfeeding.

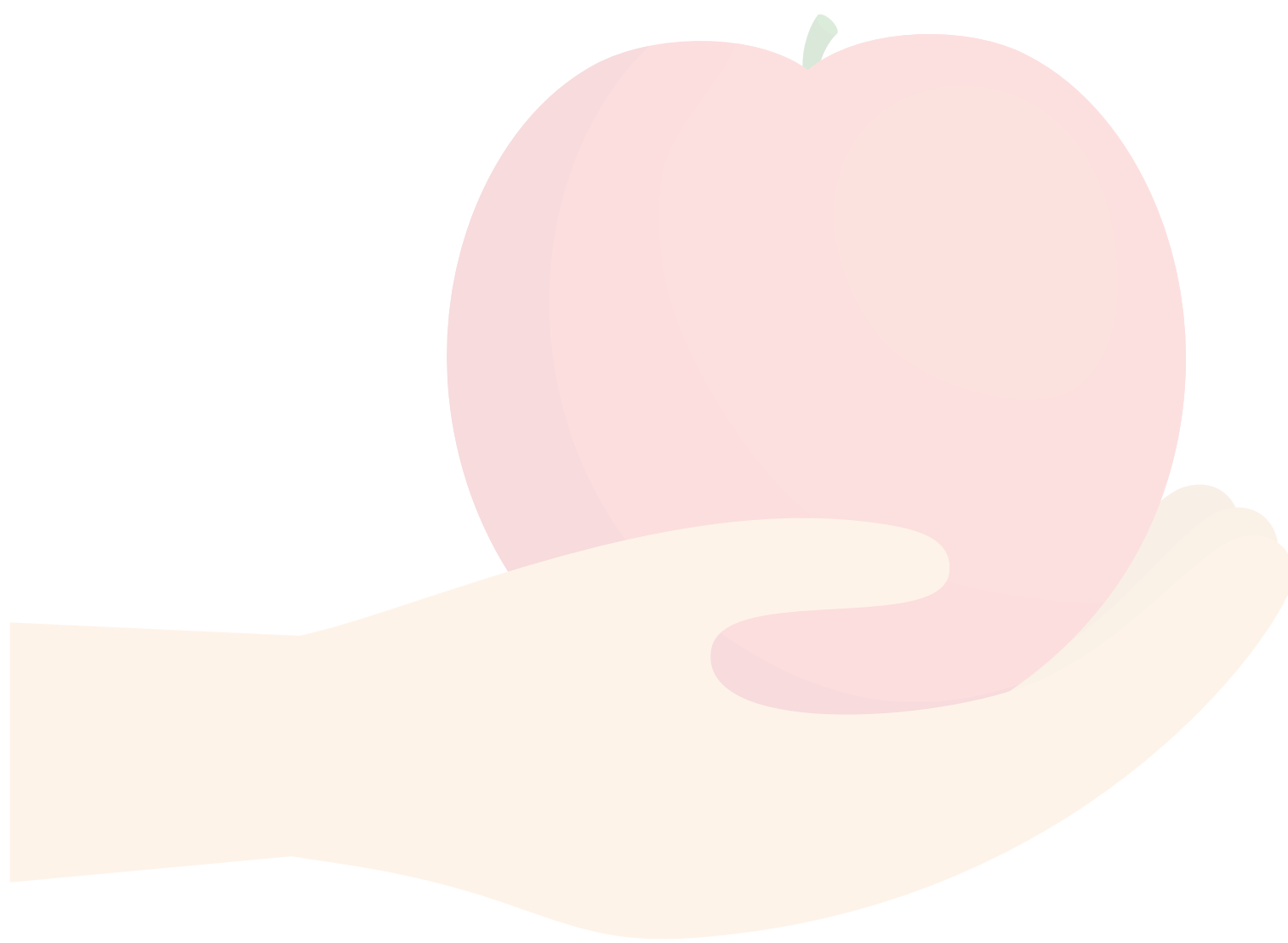
FUNCTION OF THE BREASTS

The function of breasts is normally considered to be **milk production** for feeding a newborn baby. But it also **provides sexual stimulation** and arousal because of the dense network of nerve endings, which become erect during sexual activity. Breasts are a **marker of health** and also play a role in signalling the **onset of puberty.**



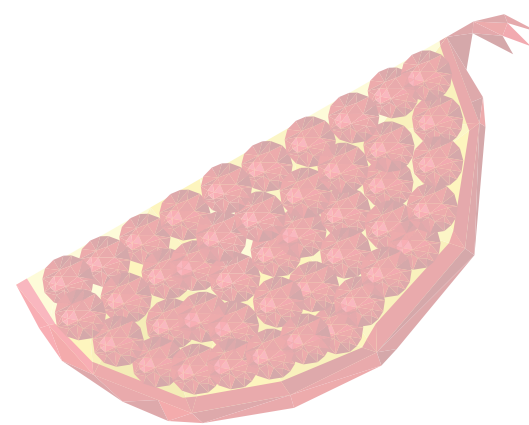
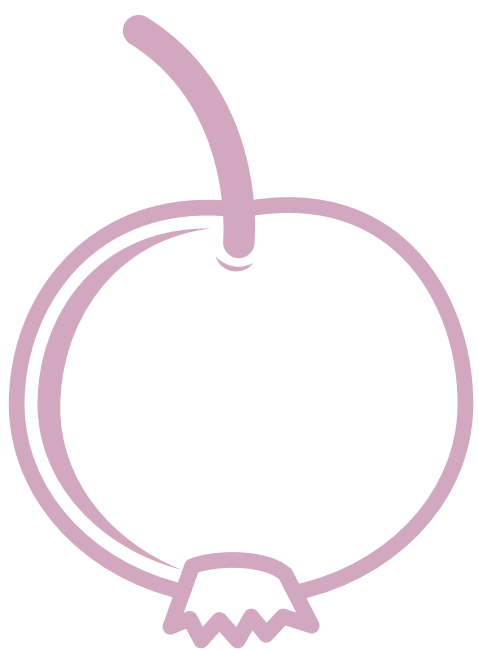
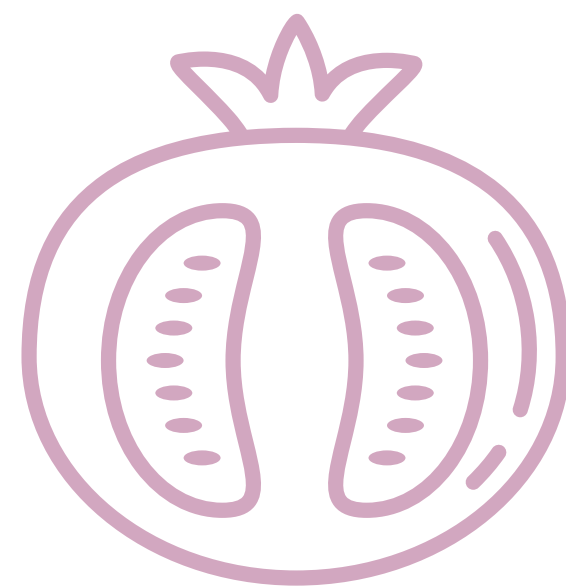
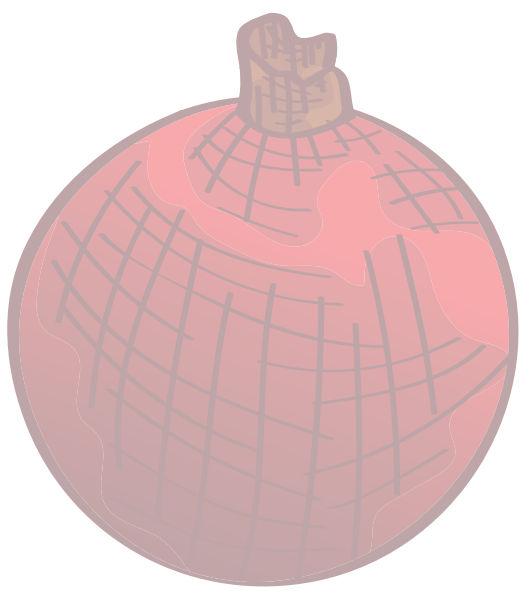
BREAST DEVELOPMENT DURING ADOLESCENCE

The breasts develop as a result of a variety of complex hormonal changes, which prepare the body for menarche and puberty.



A small lump, called the “**Breast Bud**”, begins to grow under the areola and nipple. The breasts grow further as the bud grows in a **round, circular pattern**.

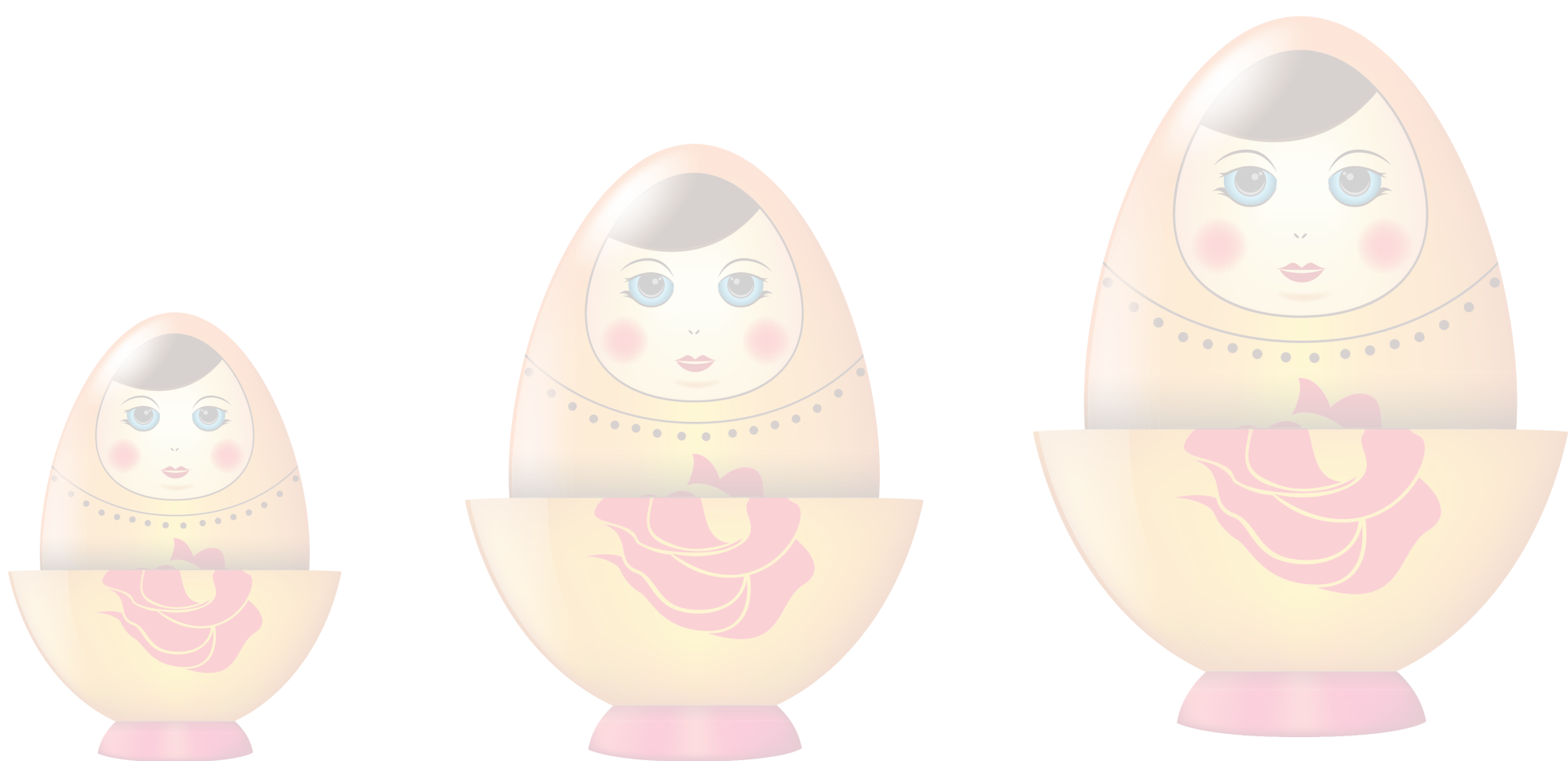
The average age of breast development is 9–10 years of age, but it **varies from person to person.**



All **breast shapes and sizes are different**, and there is literally no science behind what is supposed to be the perfect breasts, despite the premium placed on large round breasts.

Breast development is **accompanied by other changes** in the body such as pelvic widening, pubic hair, armpit hair and more.

Some women have smaller breasts all their lives and it is not a sign of developmental issues.



Breast development depends on various factors like genetics, nutrition, exercise, hormonal patterns, weight, stress, underlying chronic illnesses and more. These are the factors that make up each woman's unique body clock, which affects breast development menarche and more.

BENIGN BREAST CONDITIONS

Not all breast conditions lead to cancer.

There are many other breast conditions that are easily treatable, but need urgent medical attention. Some of the benign breast conditions are listed below:

Cysts and fibroadenomas

- These are sacs filled with fluid
- Usually appear between Menarche and Menopause
- Move when touched
- Are up to 2 cm, and rarely larger than that
- May be multiple

Cyclical breast pain

- Very common
- Normally happens during the Luteal phase of the menstrual cycle
- Presents in the form of dull or shooting pain, tenderness or soreness, either in the whole breast or just the nipples.

Non-cyclical breast pain

- Does not appear according to menstrual cycle
- Could be as a result of inflammation or infection
- Is a symptom of a hormonal imbalance

Milky nipple discharge

- Can happen on its own, or when the nipple is squeezed
- Symptom of a serious hormonal imbalance

Intraductal papilloma

- A wart-like lump
- Develops in the milk ducts

Fat necrosis

- This is like a lump
- Forms when a part of the fatty breast tissue is damaged

Rash

- Can happen due to infections
- Can happen due to certain skin conditions

Calcifications

- Generally has no symptoms except a dull pain.

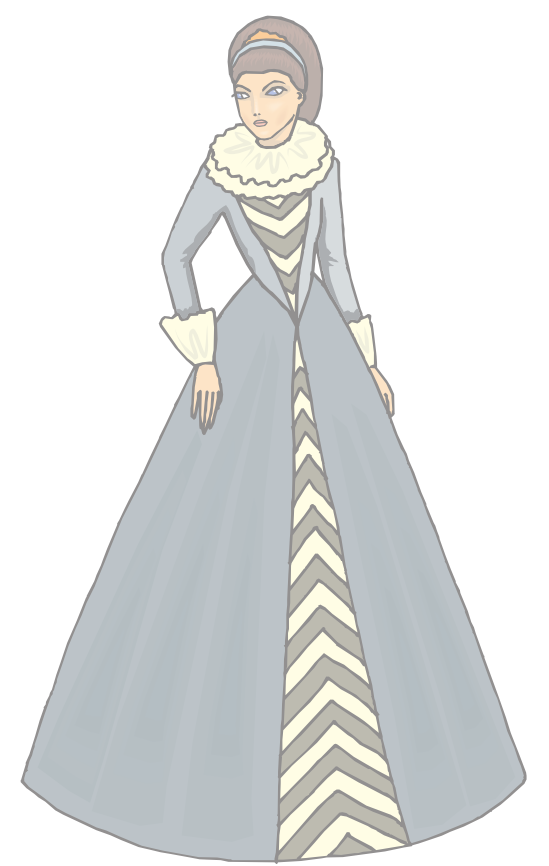
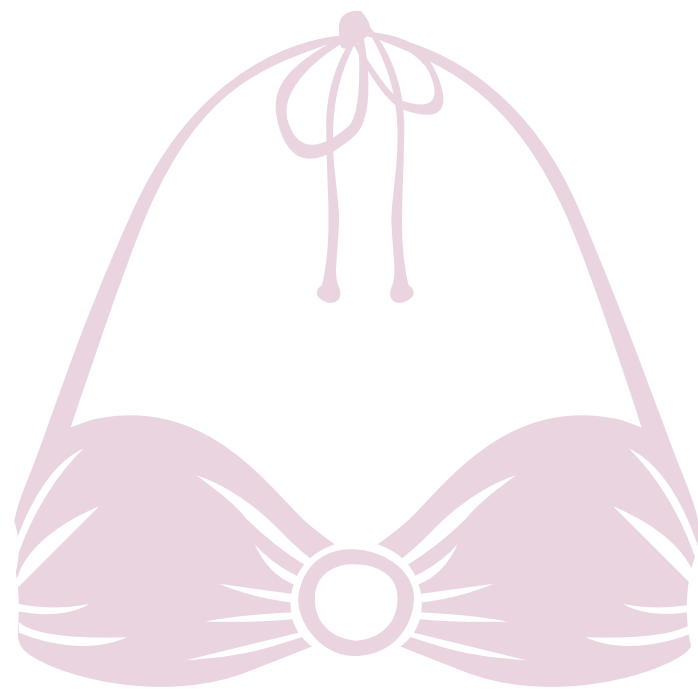
Periductal mastitis

- Happens as a result of inflammation or infection of the nipples

All of the above are not a sign of Cancer but it is necessary to consult a Doctor to assess the situation as soon as possible.

TO BRA OR NOT TO BRA

Besides having a fairly sexist history, bras continue to elicit controversy and bitter debate. Should women wear them at all? Does wearing bras, cause cancer? Does not wearing bras cause cancer? Are we wearing the right size? The debates are endless.



We attempt to answer a few common questions.

How to wear the right bra?

To begin with, **figure out your band size**. Stand straight and relax. Place the tape measure right beneath your breasts, and measure around your body. **If you get an even number, add four to it. If you get an odd number, add five, and you get the size of your band.**



Secondly, **get the cup size**. Measure around the fullest part of your bust, without pulling too tightly, but keeping the tape measure snug.



Now, **subtract the number from your band size**. For example, if your band size was 38' and your cup size is 36, subtract $38 - 36 = 2$. The result will indicate the appropriate cup size, based on the following guide.

0= AA

1= A

2= B

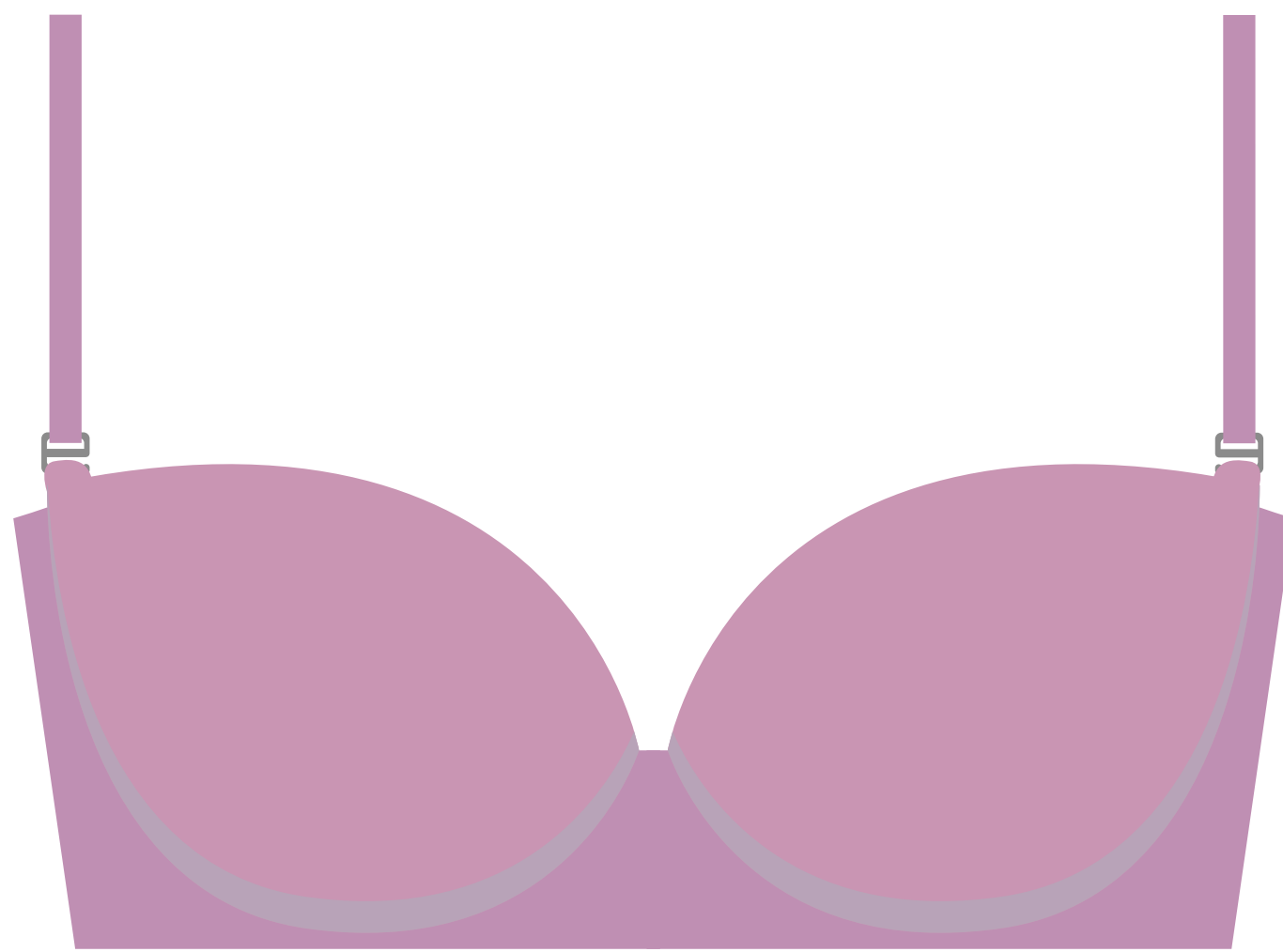
3= C

4= D

5= DD

6= DDD, F

7= G



A mistake that a lot of us make, is we settle for 'almost'. Something that's not it, but is almost there, will never be comfortable.

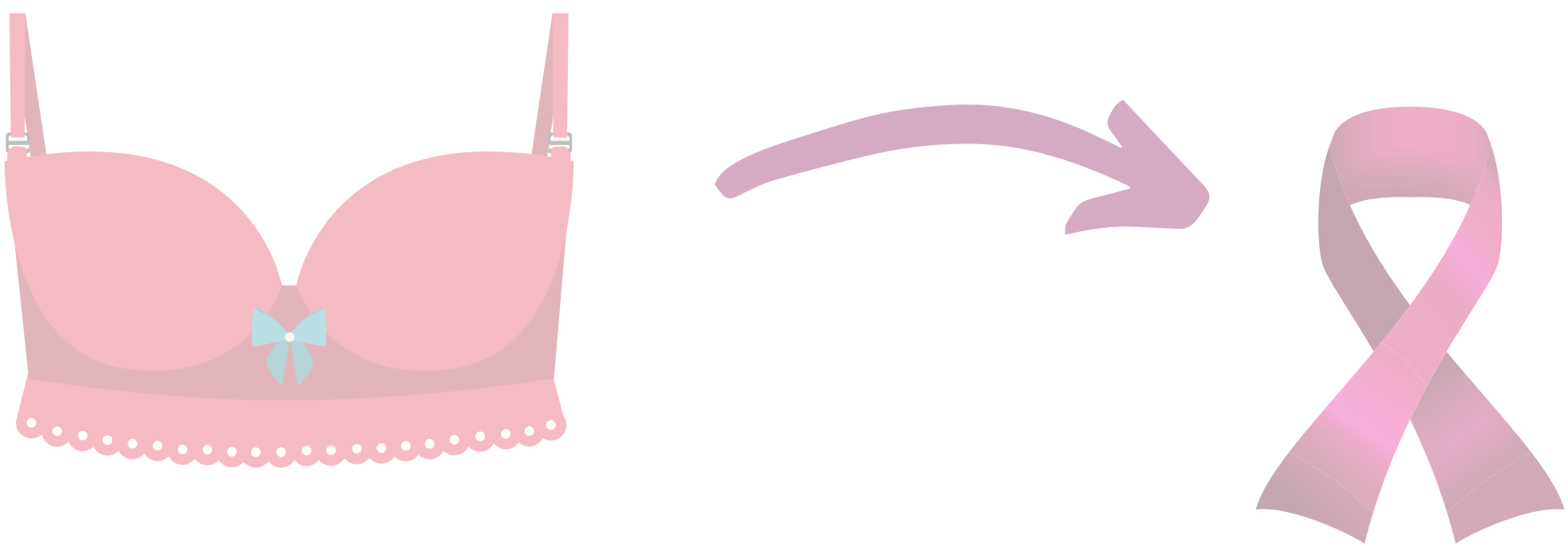
The way to check if the bra is the perfect one for you, is by bending over and letting them fall naturally into the cups.

The centre of the bra should always lie flat against the breastbone, the right bra will not have a gap.



Also, check that the bra cups have no wrinkles, and then turn to the side to check whether the back of the bra is resting comfortably against the middle of your back.

Does wearing a bra cause cancer?



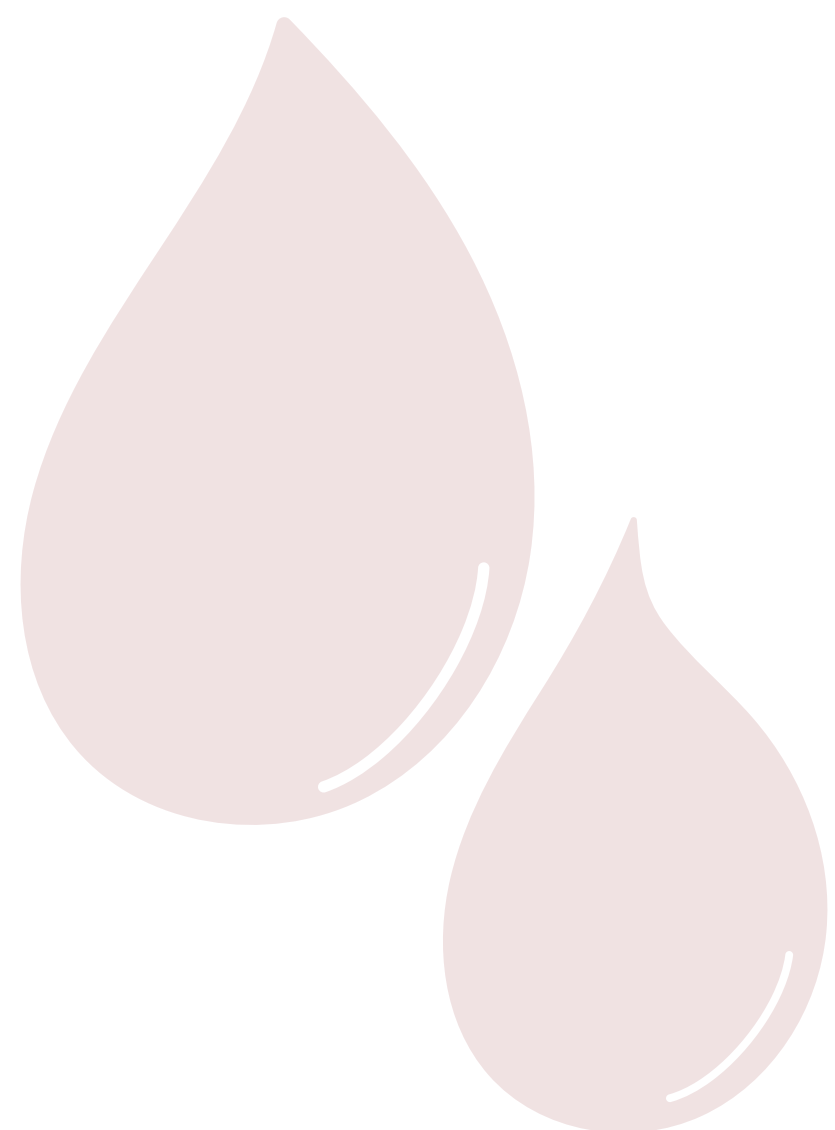
This myth has been busted by quite a few recent researches. Harvard Health Publishing reported that a new study in the journal, "Cancer, Epidemiology, Biomarkers and Prevention", found no causal connection between bras and breast cancer.



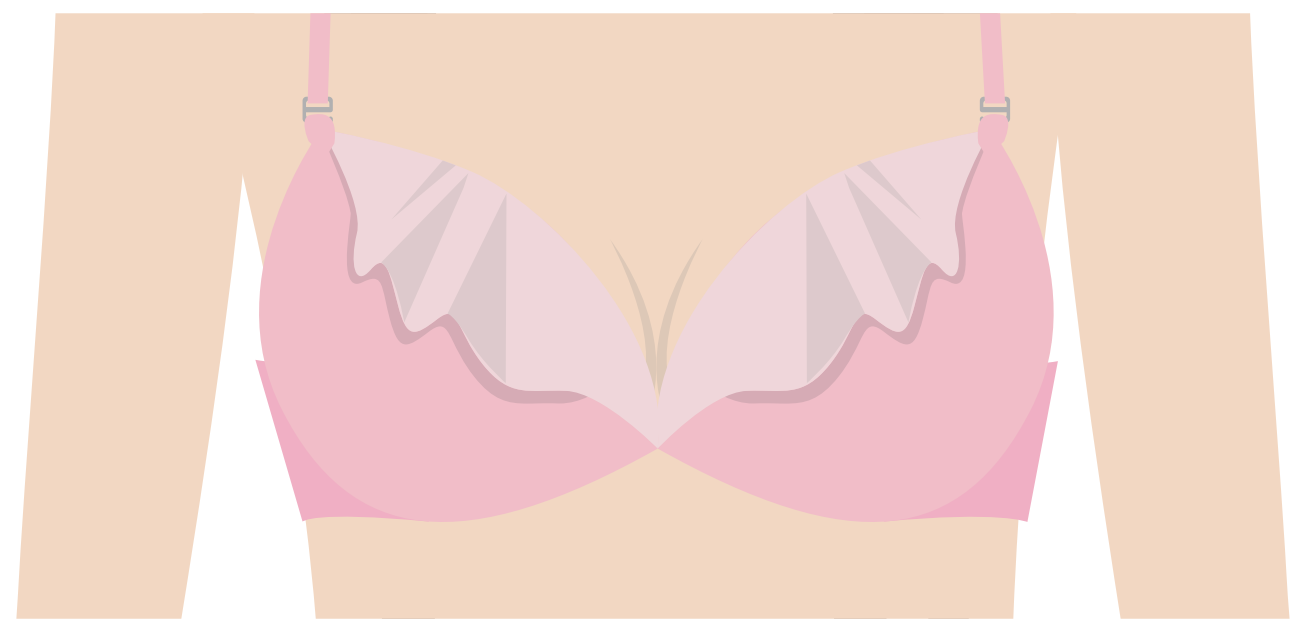
Harvard Health Publishing reported that “no association was seen between risk of invasive ductal carcinoma, or invasive lobular carcinoma, and any aspect of bra wearing, including cup size, use bra with an underwire, age at first bra use, and average number of hours per day a bra was worn.” This conclusion supports the findings of the Harvard School of Public Health and well.

Is wearing a bra really important?

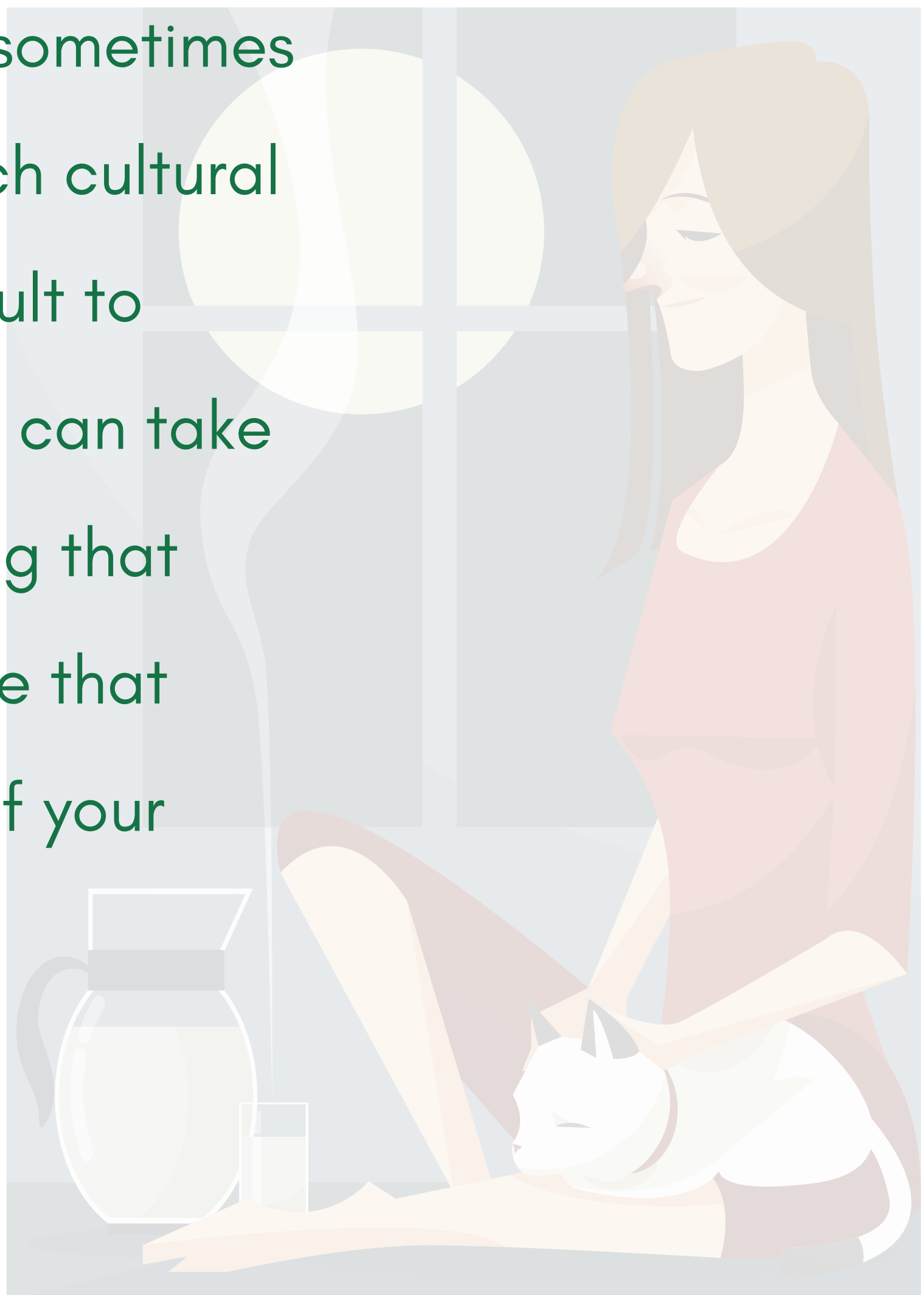
There is so far no final word on whether or not to wear a bra. A lot of people say that wearing a bra constraints the breast tissue, affects blood circulation and may even affect lymphatic drainage from the breast.



However, it is also important to note that wearing a comfortable bra provides support, especially to women with bigger breasts, decreasing the strain on Cooper's suspensory ligaments, reducing back pain and the risk of damaging fat tissue in the breast due to vigorous physical activity.



However, all of this depends entirely on each woman. We urge everyone to find a comfortable kind of bra, and where it even when it's convenient for you. In our culture it is difficult for women to go braless in public places, or sometimes even at home. Such cultural barriers are difficult to surmount, but you can take comfort in knowing that there is no science that disproves either of your decisions.



NUMBERS TO KNOW

- 4 out of 5 women report sexual arousal due to nipple stimulation
- 1 in 8 females, and 1 in 800 males are diagnosed with breast cancer
- For those feeling only breast pain with no discomfort or unusual symptoms, it is cancer in only 1-3 out of 100 people
In 9 of 10 cases a breast lump turns out to be not cancer

- Cyclical breast pain affects 7 out of 10 people
- 12% people reporting nipple discharge was diagnosed with cancer
- In India, the breast cancer survival rate is 66%
- Breast Cancer is the number 1 cancer among Indian females, at 25.8 per 100,000 women
- At least 17,97,900 women may have breast cancer by 2020 India

THE ESSENTIAL BREAST CANCER PRIMER

SYMPTOMS OF BREAST CANCER

- **Lumps**, especially those which are hard and stationery. A painless lump can also be cancerous, but all lamps are not cancer. However, they all need immediate medical attention



Photo Credits: Mammi Breast Care

- **Swelling** in a part of, or in the entire breast, whether or not accompanied by lumps

- **Breast pain**, if all other benign causes are ruled out

- **Changes in the shape or appearance of the nipple**

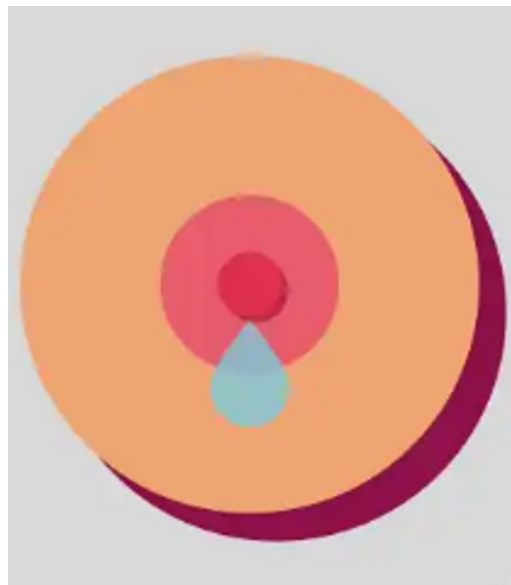
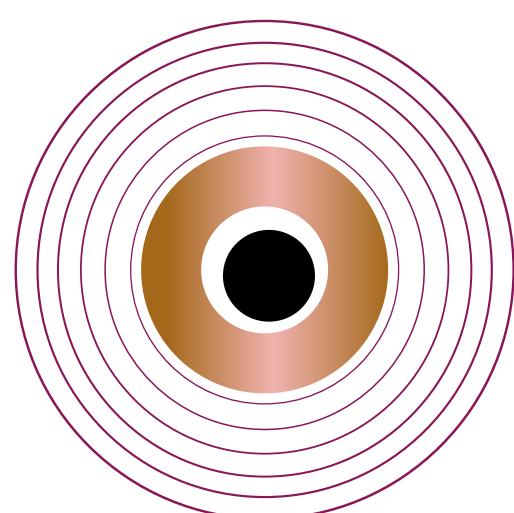


Photo Credits: Mammi Breast Care

- **Nipple discharge** that is non-milky. Clear, red, brownish, yellowish or anything else, are signs to watch out for

- Unexplained swelling or lumps under the **collar bone or arm**

- **Nipple turning inwards**



- **Dimpling of the breast surface**

- **Increasing size of the lump**

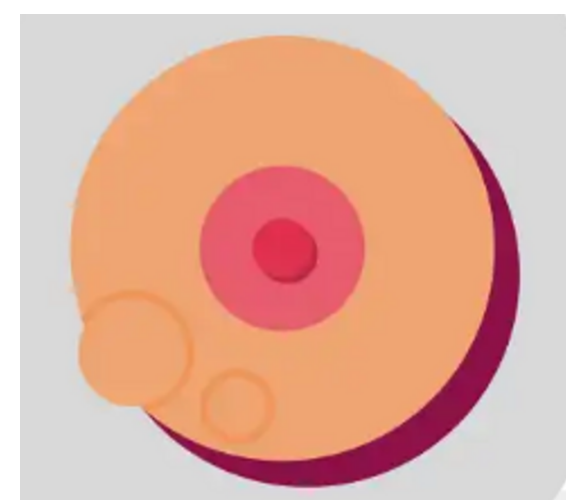


Photo Credits: Mammi Breast Care

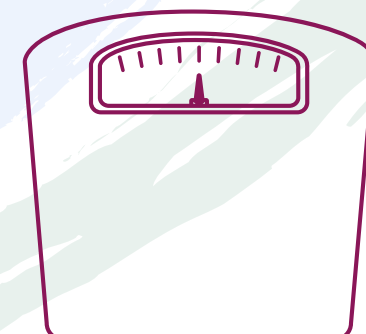
- **Vaginal pain**

FEMINISTING THE RISK FACTORS FOR BREAST CANCER

There is a lot of inconclusive research around breast cancer, and a lot is often irresponsibly reported in the media. We are wary of research that holds “lifestyle” culpable, because many social cultural and economic factors determine lifestyle. Some parts of the wellness industry would have you believe that everything is preventable, in your hands, or caused by you.



There is a lot of cultural sensationalism and paranoia around women's habits, and the focus becomes women's "lifestyle", rather than the wide range of factors that are mostly uncontrollable, and needing more research. However, we are listing below some evidence based on credible research methodology. While it is a great idea to keep these in mind, it's also important to note that this is an evolving and dynamic field of research.



Risk Factor

Weight gain among women during adulthood

How/Why

Estrogen which is suspected to have a link with breast cancer, how exactly we still don't know. Fat tissue converts precursor cells of the body into estrogen. So the level of estrogen does not drop in the body even after ovarian production stops post menopause

Research

According to a study reported in Harvard Health Publishing, women who gained 20–30 pounds after the age of 18, were 40% more likely to develop breast cancer post menopause. A Nurses Health Study drew a similar conclusion.

Solution

Try to manage weight gain around Menopause. Start holistic strategies for healthy weight gain management right from perimenopause if not earlier.

Risk Factor

Sedentary lifestyle

Research

Various

How/Why

An active lifestyle can help maintain a healthy body weight in a healthy manner. It can help hormonal balance and regulation, reducing exposure of estrogen to breast tissue. It also regulates insulin levels, which have been linked to breast cancer growth.

Solution

Regular exercise for 45 to 60 minutes. Moderate but sustained. Keep gradually increasing the difficulty level.

Risk Factor

Vitamin D

Research

Research has linked high blood vitamin D levels to 50% reduction in the risk of breast cancer

How/Why

Explanation is inclusive

Solution

If vitamin D levels are less than 50, consider supplements. Most doctors are worried that sunlight exposure and dietary intake are not enough, especially in a country like India

Risk Factor

Breast density (Less fat and more glandular tissue or fibrous tissue)

Research

Unknown reasons and explanation, only statistical connection

Solution

This can't be helped, and is often heritable.

Risk Factor

Heredity

Research

Inheriting a mutation of the BRCA-1 and BRCA-2 genes

Solution

Cannot be helped, but some individuals perform elective mastectomy. But a very minor percentage among all cancer cases, is accounted by BRCA-1 and BRCA-2 genes

Risk Factor

Prolonged exposure to estrogen

Research

Various

How/Why

Unexplained link. There is some fear around oral contraception pills, IVF and hormonal replacement therapy, because it increases exposure to estrogen. But there has been no clear research on this, or any research with a credible methodology.

Solution

Not much research

BREAST SELF-CARE

- **The science behind breast care is very sparse, but some things work in some women, and are safe to try.**
- **Light massage with Sarson ka tel, that is, mustard oil of lukewarm temperature.**
- **Using warm or cold compress whatever makes you feel more comfortable.**
- **Adjusting the bra, some find relief in continuing to wear it while others feel more comfortable when it's taken off.**
- **Over-the-counter painkillers, although that is not recommended on regular basis**
- **Primrose oil**
 - **Less fatty foods**



DOCTOR SAHIBA

Self Breast examination is a practise that must be a mandatory routine part of every woman's life. This should start as early as in the 20's and should be performed once a month.

For **premenopausal** women, a few days after the periods finish is the best time as breasts are soft and less tender .Routine examination gives a woman a good idea about what is normal for her breast , so any abnormality can be detected at the earliest.

The things to look for are lumps in the breast or armpit , pulling in of the nipple , nipple discharge , dimpling of the skin and a rash that doesn't go away within a week or two.



DR. KANCHAN KAUR
Specialist, Onco Plastic
Breast Surgeon.
Director, Medanta Breast
Service.

DOCTOR SAHIBA

A big **myth** is that cancer should produce pain .

However the truth is that in more than 90% of cases , cancer does not produce pain.

Women who feel a **lump** will often not seek advise as it doesn't hurt! This leads to the lump growing and the patient then presents at a late stage It is imperative that **any lump must be investigated by a doctor.**

Nipple discharge is broadly of two types . **Physiological** , which is normal and **pathological** which is due to an underlying disease

DOCTOR SAHIBA

Majority of women will have a **milky , dirty green or yellowish discharge** on pressing the nipple. This is **normal**.

However when the discharge is **blood stained , thin watery (the colour of green tea) and spontaneous** , it could be a **sign of an underlying breast pathology**.

Some women can have **profuse milky discharge** which can arise due to a **hormonal disorder** involving a gland called the pituitary gland in the brain.

The recommendation for breast examination is **monthly self breast check** , annual **clinical check up** by a doctor starting at age **35-40** years and a **mammogram starting at age 40-45 years**

DOCTOR SAHIBA

There is a **myth** that **mammograms expose a woman to too much radiation** .

However ,this is not true .

Mammograms done at **intervals of 1-2 years** do **not** expose a woman to risky radiation .

On the contrary , mammograms can **pick up cancers at stage 0-1** when treatments have **100% success rates**.

It is important to understand that it is **not right to undergo a mammogram in isolation** without a clinical input .

Mammograms should be done **after consultation with a breast specialist** who then helps plan individual screening plan for the patient and guides on when an USG / MRI are needed.

DOCTOR SAHIBA

Breast pain is one of the commonest symptom that brings a woman to a doctors clinic.

However , in a majority of cases there is no underlying disease that produces this pain.

Hormonal changes and response of the breast tissue to these changes can lead to tenderness of the breast.

Wearing the **right support undergarment** that gives full cup coverage and lifts the breasts goes a long way toward **supporting breast health.**

DOCTOR SAHIBA

Firstly. **Before the age of 35** years if you have any complaint or you have a positive **family history** of breast or ovarian cancer then you visit a doctor once a year as a routine check up.

After 35 years of age annual clinical breast examination by a Breast specialist is required.

Apart from this **monthly breast self examination** is needed which will be guided by your doctor. If you feel there is any change in the breast while practicing the monthly self examination do not ignore and visit a doctor immediately.

Any **nipple discharge**, or any **change in the skin of the breast or axillary region**, a **node or lump, pain or stretching** then visit a doctor.



DR. GLOSSY SABHARWAL
Director of Radiology at
Jeewan Mala Hospital &
Apollo Spectra Hospital.
Founder and Chief
Radiologist WISH
Diagnostics.

DOCTOR SAHIBA

It is safe to get an **Ultrasound** in young adolescent women and children and in pregnancy.

Any breast complaint warrants an ultrasound scan. Routinely between the ages of **35-40 years, annual breast ultrasound can be done.**

In **adolescent girls** sometimes **developing breast tissue can form a painful lump** then it is better to get a clinical breast examination and learn how to do monthly breast self examination.

DOCTOR SAHIBA

There are **2 types of Mammograms**, 2D mammography and 3D mammography (called 3D Tomosynthesis). They are available in India now almost in every centre.

Mammogram is most useful **after the age of 40 years** when the density of the breast is appropriate for evaluation on mammogram.

It does contain a small amount of radiation, however once a year or once every 2 years is definitely beneficial for the detection.

DOCTOR SAHIBA

Mammograms are the only single test that has increased the diagnosis of the initial stages of breast cancer, because it shows us the powdered stages of calcification which cannot be picked up by breast ultrasound or MRI.

Comparisons with older mammogram reports is important and it should always be done. So **after the age of 40 it should be done every year or every 2 years depending on your risk assessment** depending whether you are getting a 2D or a 3D mammogram.

DOCTOR SAHIBA

Breast Self Examination is simple and easily doable. You can stand in front of a mirror where both your breast tissues are visible. You can **start by observing the nipple, skin and the axillary region which is the armpit area.**

Then you can **press the nipples to check for any discharge.**

Thirdly, you can **palpate the breast tissue, one breast at a time with the tips of two fingers,** your ring finger or middle finger or index finger and middle finger whichever is comfortable to you in both clockwise & anti-clockwise direction.

Once you start doing it every month it becomes easier for you to pick up any changes that happen to your breast and **in case of a lump you have to go for a clinical breast examination.**

DOCTOR SAHIBA

Breast Care Tips:

In adolescent girls developing breast tissue can sometimes be painful. Between 10-13 years of age if it is happening and persisting then it is important to consult a doctor.

Secondly every girl **after the age of 16** must know how to do a **breast self examination**.

Thirdly, after **30 or 35 years** of age you must visit your doctor to do a **risk assessment** whether you are at a higher risk of breast cancer or not. According to the low, moderate or high risk assessment the yearly examination will vary. The clinical breast examination should only be done by a **breast care specialist**. Once it is done and as per your risk factors you can ask for further guidance whether you have a family history of breast or ovarian cancer.

DOCTOR SAHIBA

Then comes **Ultrasound** of the breast which is very safe.

Whenever you have a problem you should at least get an Ultrasound scan of your breast. It doesn't have any radiation unlike mammogram.

Mammogram should only be done once a year unless there is an indication of cancer. And is more **beneficial in diagnosis** than its radiation in that case. After one year it can be repeated.

After the age of 40 mammograms are needed.

Before 40 it isn't that beneficial. Then comes the role of MRI of the breast.

Self Breast examination is the most important thing. It should start at home. We must teach ourselves, our friends, our daughters the same.

SOURCES

- **Clue App**
- **BreastCancerCare.org.uk**
- **Health.Harvard.Edu**
- **John Hopkins University**
- **Cancer.gov**

