

# How Mammograms Can Detect Heart Disease

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## Introduction

- Traditionally, mammograms are used to detect breast cancer.
- Women should start getting mammograms at the age of 45.
- Recent studies show that mammograms can detect heart disease in the form of breast arterial calcifications.
- These calcifications can be a strong indicator that the patient has heart disease.

## Diagnosis

- Mammograms are a way of finding heart disease in women, they are not a method of diagnosis.
- Doctors read the mammograms and then schedule for further testing if heart disease is detected.
- For example, a coronary angiogram uses x-rays and a specific dye to view the blood vessels in the heart.
- Blood tests are also used to diagnose heart disease.
- Blood tests can indicate if the patient has heart disease or if they are at risk for developing it.

## Prevalence

- Heart disease is the leading cause of death among women in the U.S.
- Over 60 million women suffer from heart disease; which is 40% of the population.
- In 2021, heart disease was the cause of death of over 310,661 women in the U.S.
- Women are twice as likely to get misdiagnosed after having a heart attack than men.
- Women are also 30% more likely to have stroke symptoms misdiagnosed.

## Breast Arterial Calcifications

- Normal breast tissue on a mammogram appears in shades of gray and white.
- The fat surrounding the breast tissue may appear more gray on the image, while denser tissue appears whiter.
- Mammograms with an abnormal number of white spots may indicate the patient has breast arterial calcifications (BAC).
- BAC are calcium buildup found between the middle layer of the breast's arterial wall.
- These calcifications are an indicator of heart disease; specifically coronary artery disease and cardiovascular disease.
- Women with BAC are 51% more likely to have heart disease than women without them.

## Symptoms

- Heart disease does not show any symptoms for some women.
- Heart disease is known as the "silent killer".
- Many women complain of jaw pain, pain in the upper back or abdomen, vomiting, nausea, shortness of breath or excessive tiredness.
- Many women also experience chest pain that can mimic heart burn or indigestion.
- Chest pain is one of the most common symptoms.

## Risk factors

- Heart disease affects everyone differently, but certain factors can increase the risk, such as:
  - High blood pressure
  - Pregnancy
  - Medical conditions
  - Lifestyle habits
  - Diabetes
- High blood pressure affects 1 in 10 women.
- High blood pressure can offset the normal function of the heart, which increases the chances of developing heart disease.

## Conclusion

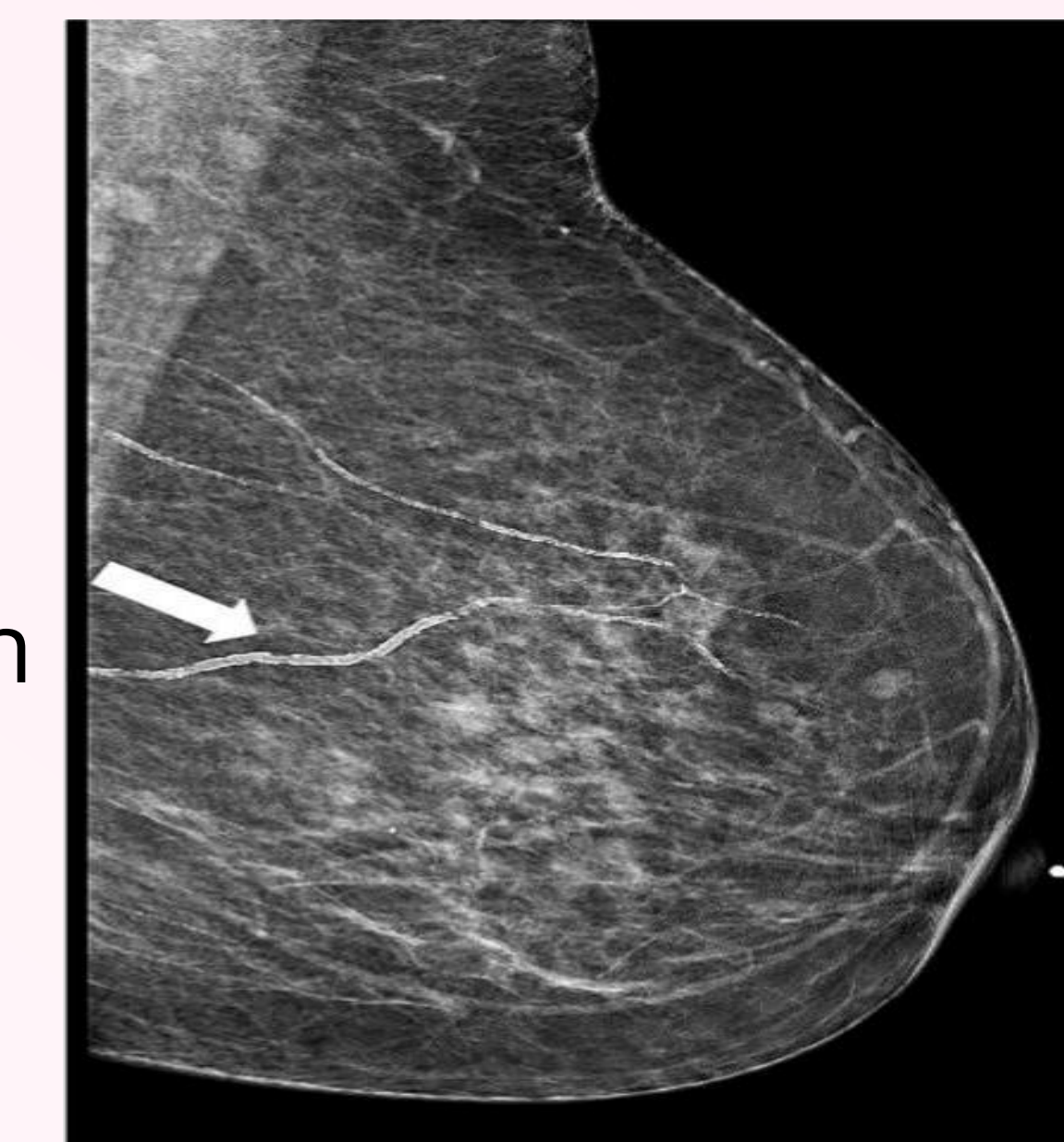
- Mammograms are useful in detecting heart disease in women.
- Mammograms identify calcifications within the breast, which can indicate heart disease.
- Mammograms are not a method of diagnosing heart disease; they are used for detection.

## References

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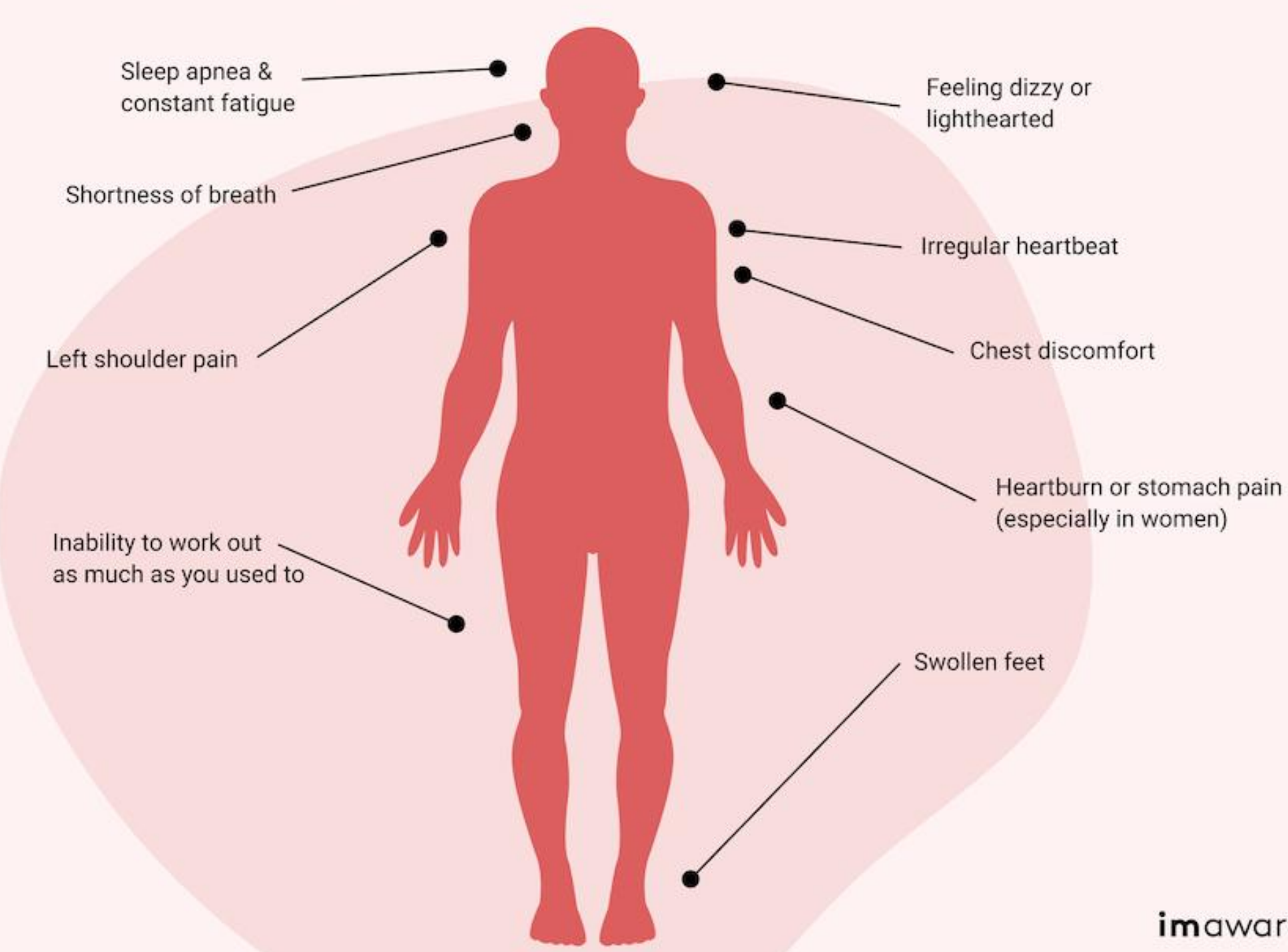


Normal mammogram  
-Science Photo Gallery



Mammogram with breast arterial calcifications  
-Clinical Imaging

## Common Symptoms of Heart Disease



-Every Day Health