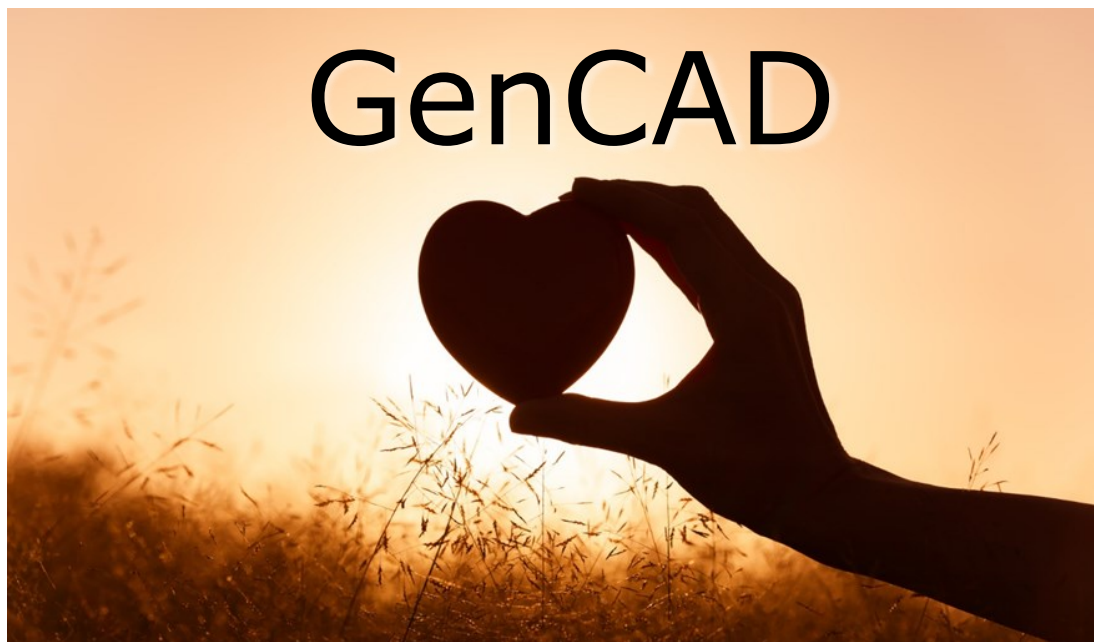




How to protect your heart - are women and men different?



Being a woman or a man and having a heart disease

Does it make a difference if you are a woman or a man when it comes to coronary artery disease and heart attack?

Doctors say it does, and it's important to understand how it appears in women and men so you know what to look out for and how best to deal with it if you have it.

Are women and men different?

Women and men get different forms of heart disease at different ages, with different symptoms and may need different types of prevention and therapy.

Some risk factors for heart disease differ in women and men

Age: Men develop coronary heart disease early, mainly in their sixties, and women in their seventies, but throughout their lives, both have the same risk for getting it.

High blood pressure is most common in young men and old women. High blood pressure causes more strokes and heart failure in women than in men.

Diabetes increases the risk of coronary heart disease more in women than in men. This makes women with diabetes high-risk patients who need intense treatment.

High cholesterol levels are equally dangerous and must be treated in both women and men.

Young women who **smoke** increase their risk for heart disease more than men. Smoking, being overweight and taking hormone therapy is a very dangerous combination.

Depression and stress are risk factors for women. They are often overlooked in men. Both must be treated by doctors.

Rheumatic diseases, like arthritis, and other **diseases of the immune system** cause heart disease more often in women than in men.

Pregnancy: Women who have high blood pressure during pregnancy – or preeclampsia – are more likely to develop heart disease and hypertension later in life and should have their blood pressure monitored after pregnancy.

Erectile dysfunction may be an early sign of coronary heart disease in men.

Differences in risk factors between women and men:

- Age
- High blood pressure
- Diabetes
- Smoking
- Depression and stress
- Rheumatic diseases
- Pregnancy complications
- Sexual hormones



Heart disease may differ in women and men

Large and small coronary arteries: Men and older women usually have atherosclerosis (lipid deposits) in their large coronary arteries. Women before age 65 have more frequently spasms (cramps) of their coronary arteries or disease of the small vessels. This may lead to different symptoms.

Stress induced heart disease: Women after menopause may develop acute stress induced heart disease - severe chest pain that can mimic myocardial infarction. This condition is called broken heart syndrome and is rare in men. It is usually cured by medical treatment.

During and shortly after **pregnancy** very special acute forms of heart disease with severe chest pain may arise that require immediate medical attention.

- Women and men can have different types of heart disease.
- Stress induced heart disease is more common in women.
- Pregnancy can lead to special forms of heart disease.



Prevention in women and men

What can women and men do to reduce their risk of coronary heart disease?

Be aware - Don't underestimate your risk. Women often do.

Know your normal values and take action if your values are higher:

Blood pressure: **optimal** <120/80 mmHg, pharmacotherapy is indicated when \geq 140/90 mmHg

Blood glucose level: \leq 100 mg/dl (5,6 mmol/l)

Blood lipid levels: LDL-Cholesterol \leq 115 mg/dl,

Waist circumference: women \leq 80 cm, men \leq 94 cm

- **Stay healthy** - Adopt a healthy lifestyle to reduce your risk of coronary heart disease
- **Quit or don't start smoking:** It is more difficult for women to stop smoking. Try to stop and get help if needed.
- **Exercise regularly:** Women and men can make big improvements to their heart health by exercising regularly. Take time (e.g. 30 minutes per day/ 5 days a week) for walking.
- **Eat a healthy diet:** Eat plenty of whole grains, a wide variety of fresh fruits and vegetables, low-fat or fat-free dairy products, and lean meats. Avoid saturated or trans-fat, added sugars, and especially salt. Maintain a normal weight for optimal health and longevity.
- **Alcohol:** limit your alcohol consumption.

- *Women and men should be aware of their risk of coronary heart disease.*
- *Women and men can prevent coronary heart disease by adopting a healthy lifestyle.*
- *In some cases, drugs are needed.*



Heart attack symptoms and help seeking in women and men

Symptoms:

The most common heart attack symptom in women and men is pain, pressure or discomfort in the chest. It is not always be the most prominent symptom.

Women with heart attacks frequently experience other symptoms, in addition to or without chest pain, such as:

- Neck, jaw, shoulder, upper back or abdominal discomfort
- Shortness of breath
- Pain in one or both arms
- Nausea or vomiting
- Sweating
- Light-headedness or dizziness
- Unusual fatigue

Help seeking: Because women often do not recognise they are having a heart attack, they tend to arrive later at hospitals than men.

- *Symptoms of a heart attack can differ in women and men.*
- *Women more often have a heart attack without chest pain.*



Diagnosis of coronary heart disease

The tests doctors choose to diagnose chronic coronary artery disease can differ in women and men.

Exercise testing and coronary angiography is usually used in men and can be used in women if they have a number of risk factors and they can exercise sufficiently.

If women are younger, cannot exercise and have no other risk factors, alternative diagnostics may be preferred.

There are different ways to diagnose coronary heart disease, and your doctor can choose the most effective method.

Managing heart disease may differ in women and men

Drug therapy:

High blood pressure and high blood lipids should be treated in both women and men.

Aspirin does not prevent coronary heart disease in healthy women below 65 years.

Hormone therapy after menopause does not prevent heart disease.

Drugs may act differently in women and men and they may have different adverse effects. Adverse effects are more frequent in women and should be reported to the doctor

What else can be done? — Interventions:

Both women and men can benefit greatly from invasive therapy; e.g. catheters, balloon dilatations, cardiac surgery and advanced pacemakers. However, women are treated less frequently. Talk to your doctor.

Recovery and rehabilitation:

Women take longer to recover than men after a heart attack or surgery. This may be due to the early resumption of household activities, family care, and missing out on cardiac rehabilitation. It's important that both men and women go to cardiac rehabilitation.

- *Optimal doses and adverse effects of drugs may differ in women and men.*
- *Women and men benefit from surgery and modern interventions.*
- *Both men and women need rehabilitation after myocardial infarction or surgery.*



In a nutshell

- ***Heart disease can manifest differently in women and men, in risks, symptoms, causes and diagnosis. Be aware - know your risk factors.***
- ***Exercise regularly, eat a healthy diet, maintain a healthy weight, and quit or don't start smoking. Be active.***
- ***There are various ways to diagnose heart problems. Listen to options - protect yourself from delayed diagnosis.***
- ***Best medications and doses may differ in women and men. Talk to your doctor.***
- ***Both women and men benefit from cardiac interventions, surgery, pacemakers and cardiac rehabilitation.***

© European Union, 2017

GenCAD project partners: Institute of Gender in Medicine, Berlin School of Public Health, Andalusian School of Public Health, European Public Health Association, Institute of Health and Wellbeing, Radboud University Medical Centre, European Association for Cardiovascular Prevention & Rehabilitation.

Pilot Projects is an initiative "of an experimental nature designed to test the feasibility of an action and its usefulness" and permits appropriations for it to be entered in the EU budget for more than two consecutive financial years.

For any reproduction of texts or photos which are not under © European Union, permission must be sought directly from their copyright holders: Shutterstock.de, iStock.de.

The information and views set out in this publication are those of the authors (GenCAD consortium) and do not necessarily reflect the official opinion of the European Commission. The Commission does not guarantee the accuracy of the information included in this publication. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.

This document has been revised in accordance with recommendations from DG Health and Food Safety.