

***WILL MY FAMILY FOLLOW  
THIS SAME PATHWAY?***

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# TYPICAL SCENARIO

*With a father and brother who have suffered heart attacks, I am now worried that I may have inherited “bad genes” that will soon make me a victim as well. Is this possible and what can I do about this?*

Inheriting heart disease is part of a complex situation which includes risk assessment as well as preventative measures.

# SOUTH AFRICAN STATISTICS

- 130 heart attacks and 240 strokes occur daily in South Africa.
- 33 people die per day from heart attacks and 60 people die per day from strokes.
- Ratio of men:women = 2:1
- 37 people die per day of heart failure which is a consequence of coronary artery problems.

- More than 50% of cardiovascular deaths occur before age of 65yrs (premature deaths) affecting the workforce. Premature deaths expected to increase by 41% by 2020.
- Highest death rates are found in Indian people followed by coloured people while the lowest rate occurs in white and black races.
- Caucasians mainly die from cardiovascular problems while black South Africans mainly die from stroke and heart failure due to complications of high blood pressure.

# RISK FACTORS CONTRIBUTING TO HEART DISEASE

- Although heart disease usually occurs in middle age and elderly people the impact of risk factors start before birth and prevention must start early.
- The risk of heart disease increases exponentially with each risk factor.
- This implies that a modest level of many risk factors may carry a higher risk than a single high level risk factor.

# RISK FACTORS CONTRIBUTING TO HEART DISEASE

- Risk factors are labeled *controllable* and *uncontrollable*:
  - *Controllable*: Weight, inactivity, hypertension, cholesterol, diabetes and smoking.
  - *Uncontrollable*: Age, gender and family history.

# RISK FACTORS CONTRIBUTING TO HEART DISEASE

- Heart disease typically occurs 10 yrs later in women than in men.
- After menopause this risk equals.
- Women do worse with heart disease.
- Heart disease is not just a man's disease and the risk of a woman dying from heart disease is 6 x higher than dying from breast cancer.

# RISK FACTORS

- Family History
- Hypertension
- Smoking
- Cholesterol
- Diabetes

# FAMILY HISTORY

- Father/brother who had heart disease before 55 years or mother/sister who had heart disease before 65 years of age.
- Family history of heart disease increases your risk 3 to 6 times more than the general population.
- Environmental factors like poverty and other factors like obesity and diet influence the incidence of heart disease in families.

# FAMILY HISTORY

- Positive family history makes one more susceptible to the effects of the other risk factors such as smoking, hypertension, diabetes and obesity.
- If one has a family history of heart disease your main course of action is to reduce your controllable risk factors.

# HYPERTENSION

- High blood pressure is defined as higher than 120/80mmHg.
- There is a very strong genetic component in high blood pressure.
- 25% of South Africans suffer from hypertension of which 25% of men and 50% of women knew that they had hypertension.

# HYPERTENSION

- 20% of men and 36% of women were taking antihypertensive drugs.
- 10% of men and 20% of women have their blood pressure under control.
- Secondary factors that contribute to high blood pressure is obesity, high salt intake, inactivity, lack of exercise and excessive alcohol intake.

# SMOKING

- The smoking habit often clusters in a family setting and contributes significantly to heart disease.
- Smokers have twice the risk of having a heart attack. It is also the biggest risk factor for sudden cardiac death.
- There is no safe level of exposure to tobacco products.
- Stopping smoking remarkably lowers your risk of getting a heart attack.

# CHOLESTEROL

- Familial hypercholesterolemia is a rare genetic disorder affecting 1/75 of Afrikaans speaking people. Their offspring have a 50% chance of inheriting it and carries a high risk of cardiovascular disease at a young age.
- Cholesterol levels increase with age and should be checked regularly.

# CHOLESTEROL

- Diet plays a very important role.
- There is effective medication called “statins” that not only lowers cholesterol but also lowers the risk of getting heart disease.

# DIABETES

- There are 2 main types of Diabetes.
  1. Type I: Early onset (insulin)
  2. Type II: Late onset (oral medication)
- Type I often clusters in families although a specific pattern does not exist.

# **CARDIOVASCULAR IMPACT OF DIABETES:**

- Hardening of arteries causing heart disease.
- Visual problems causing blindness.
- Kidney problems leading to kidney failure.
- Widespread nerve damage.

# CARDIOVASCULAR IMPACT OF DIABETES:

## ***IMPORTANT:***

- Diabetic patients get “silent” heart attacks as they do not feel typical pain due to nerve damage.
- Especially lethal is the combination of Diabetes and high blood pressure which increases the risk for heart disease as well as kidney failure.

# WHAT MEASURES CAN I TAKE TO PREVENT THIS FROM HAPPENING TO ME?

- There is nothing that motivates people like suffering a heart attack or undergoing bypass surgery.
- It does not always happen to someone else.
- We must change our way of thinking from one of damage control to one of proactive prevention.

# WHAT MEASURES CAN I TAKE TO PREVENT THIS FROM HAPPENING TO ME?

- Heart disease is a lifelong gradual process.
- You can do all the right things and still develop heart disease because there are so many factors involved.
- By living a healthier life you could delay heart disease for years or minimize its damage.

# SPECIFIC MEASURES:

- Get moving and maintain a healthy weight by regular exercise.
- Stick to a well balanced diet. Good eating habits need to start early.
- Control your blood pressure by maintaining your weight, by exercising and cutting down on salt and alcohol intake. If that does not work take medication.

# SPECIFIC MEASURES:

- Control your cholesterol, check it regularly and if it remains high take medication. “Statins” lower the risk of heart attacks by 20-30%.
- Do not smoke! People often fear getting into aeroplanes which is a lesser risk than putting a cigarette into their mouth.
- Control your Diabetes or glucose intolerance. That will protect your heart, eyes and kidneys.

# SPECIFIC MEASURES:

- Go and see your doctor to screen your risk for heart disease by testing your cholesterol and sugar and get a stress ECG done. A normal stress ECG predicts a low risk and good prognosis.
- Own or know your risk factors. If you are already at high risk, postponed or delay the onset of heart disease.