

# **NEW HORIZONS IN PREVENTION OF CORONARY ARTERY DISEASE IN INDIANS**

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**by**

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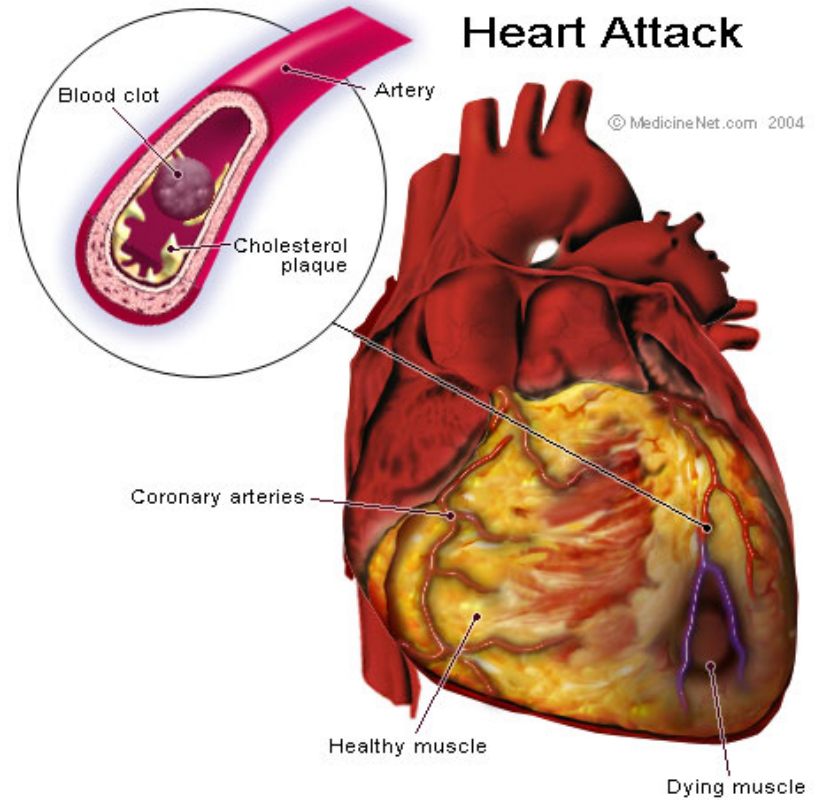
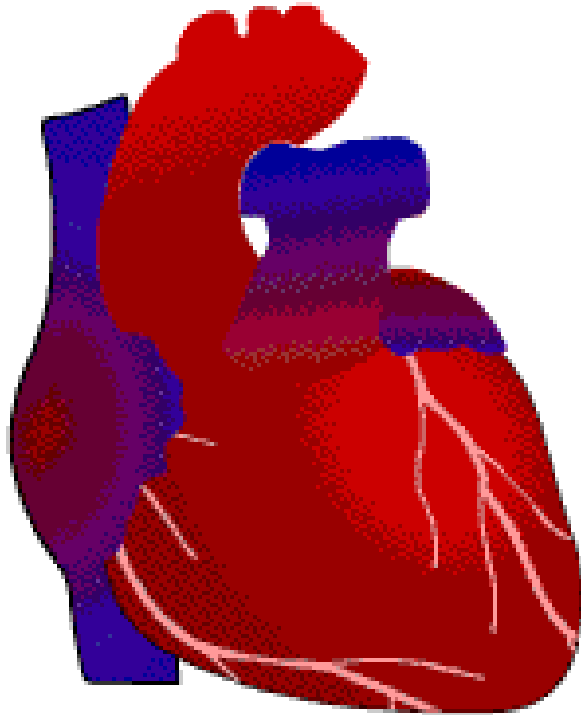
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# HEART ATTACK IN INDIANS



# **INTRODUCTION**

## **HEART ATTACK IN INDIANS**

Several studies have revealed, that among all ethnic groups, Indians whether in India or abroad, have a 4-6 times higher rate of developing a heart attack, and that too at a much younger age.

Established risk factors such as diabetes, smoking, high blood pressure, elevated blood cholesterol, diet high in saturated fat, lack of exercise and stress are common to all ethnic groups.

However, Indians have a combination of unique genetic, biochemical and anatomic abnormalities that makes them vulnerable to developing serious coronary artery disease at a much younger age. It is important to note that both men and women are at equal risk.

## **HEART ATTACK IN INDIANS**

**A significant number are vegetarians, and many have made maximum modification to their lifestyle to reduce their risk of heart attacks, yet they still have a very high incidence of coronary artery disease.**

**Every Indian unless proven otherwise is at high risk for coronary artery disease. Early detection and intervention at younger age with appropriate drug therapy has shown significant reduction and reversal of coronary artery disease.**

# **STATISTICS ON CORONARY DISEASE IN INDIANS**

- **In India 90 people die of heart disease every hour**
- **30% of the adult population including vegetarians have inherent risk factors**
- **10 - 15% of adult Indian population has coronary artery diseases**
- **By 2010 India will have maximum cases of coronary artery disease in the world**
- **By 2015 India will have maximum coronary deaths in the world**

# **PRESENT STATUS OF CORONARY ARTERY DISEASE IN INDIANS**

- **Heart attack four to six times higher than in other ethnic group**
- **15 million men and women in India have coronary artery disease**
- **Incidence of coronary disease in young and women is increasing**
- **Insulin resistant diabetes mellitus both in men and women is rapidly increasing**

# **RISK FACTORS FOR CORONARY ARTERY DISEASE**

**Inherent genetic abnormalities**

**Abnormal lipids**

**Tobacco**

**Stress**

**High calorie fat rich food**

**Lack of exercise**

**Obesity**

**Diabetes**

**Hypertension**



## **SERIOUS INHERENT RISK FACTORS IN INDIANS**

- 1. Increase in Lipoprotein (a)**
- 2. High Total Cholesterol**
- 3. Low High Density Lipoprotein (HDL)**
- 4. High Low Density Lipoprotein (LDL)**
- 5. Elevated levels of Triglycerides**
- 6. High incidence of Insulin Resistant Diabetes**
- 7. Smaller coronary arteries**
- 8. High incidence of hypertension**
- 9. Increase in Homocysteine levels**
- 10. Increase in Cardio C- Reactive Protein levels**

# INDIANS MUST ATTAIN THESE TARGET VALUES IN THEIR LIPID PROFILE TO PREVENT A HEART ATTACK

- Total cholesterol < 120 mg
- Triglycerides < 140 mg
- HDL (good cholesterol) > 40 mg
- LDL (bad cholesterol) < 50 mg
- Homocysteine < 15 um
- Lipoprotein (a) < 30 mg
- Fasting blood sugar < 110 mg
- Cardio CRP (>3.0mg = high risk) < 1.0 mg/L

# **DIAGNOSIS OF CORONARY ARTERY DISEASE**

- **HISTORY OF ANGINA**
- **FAMILY HISTORY OF HEART DISEASE**
- **BLOOD TESTS**
- **ECG**
- **STRESS TEST**
- **ECHOCARDIOGRAPHY**
- **THALLIUM SCAN**
- **CORONARY ANGIOGRAPHY**
- **PET SCAN**

# **ACCURACY OF DIAGNOSTIC MODALITIES IN DETECTING CORONARY ARTERY DISEASE**

**ECG – 40%,**

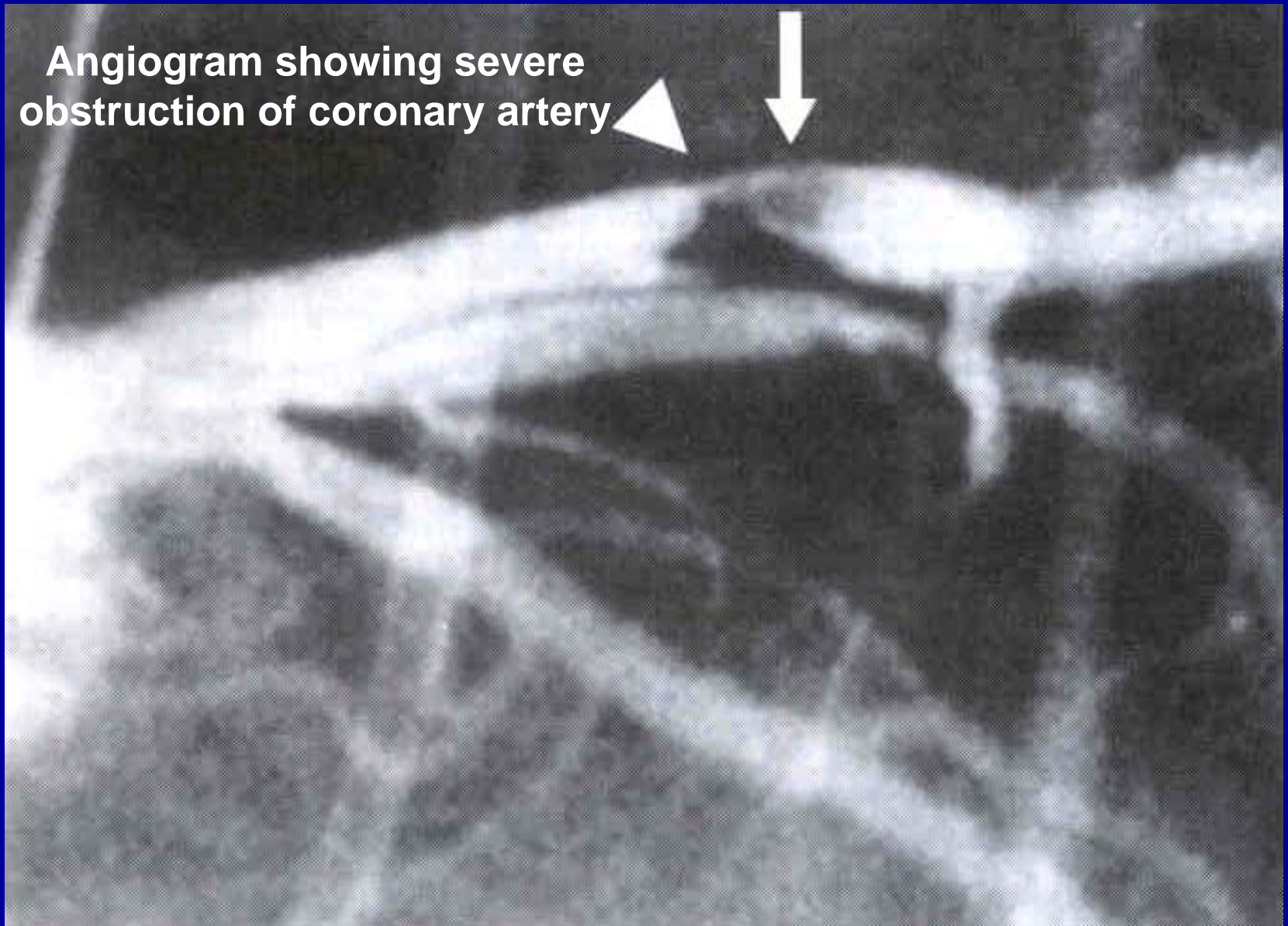
**STRESS TEST – 50%,**

**STRESS THALLIUM – 75%,**

**NON-INVASIVE CT CORONARY SCAN – 80%**

**CORONARY ANGIOGRAPHY – 100%**

**Angiogram showing severe  
obstruction of coronary artery**



# **RECOMMENDED TREATMENT SCHEDULE**

- 1. Correction of lipid abnormalities with Statins and Ezetimibe**
- 2. Fish Oil capsules 1000mg / day**
- 3. Folic Acid 1000 ug per day**
- 4. Vitamin B-12 500 ug per day**
- 5. Vitamin B-6 50 mg per day**
- 6. Rigorous control of diabetes and hypertension.**
- 7. Multi vitamin one daily.**
- 8. Use only Olive oil or Canola oil for cooking.**
- 9. Total fat intake of no more than 30 to 40gms per day.**
- 10. Treadmill exercise 20 to 30min. at 3.00 to 3.5 mph daily.**
- 11. Life style changes, stress reduction, meditation, yoga, etc.,**
- 12. Sometimes high dose Niacin under MD supervision only.**
- 13. Enteric Coated Aspirin, 81 mg daily.**

## **SUMMARY**

### **HEART ATTACK IN INDIANS**

**An Indian with or without a bad family history of Coronary Artery Disease (CAD), must have a thorough lipid evaluation. There is no excuse for not getting it done early in your life.**

**Lifestyle changes alone are not enough to correct the abnormalities. Drug therapy is a must to bring the levels to target values. One cannot achieve them by diet or exercise alone.**

**To prevent a coronary event, attaining the target values is absolutely essential!**

# **SUMMARY**

## **HEART ATTACK IN INDIANS**

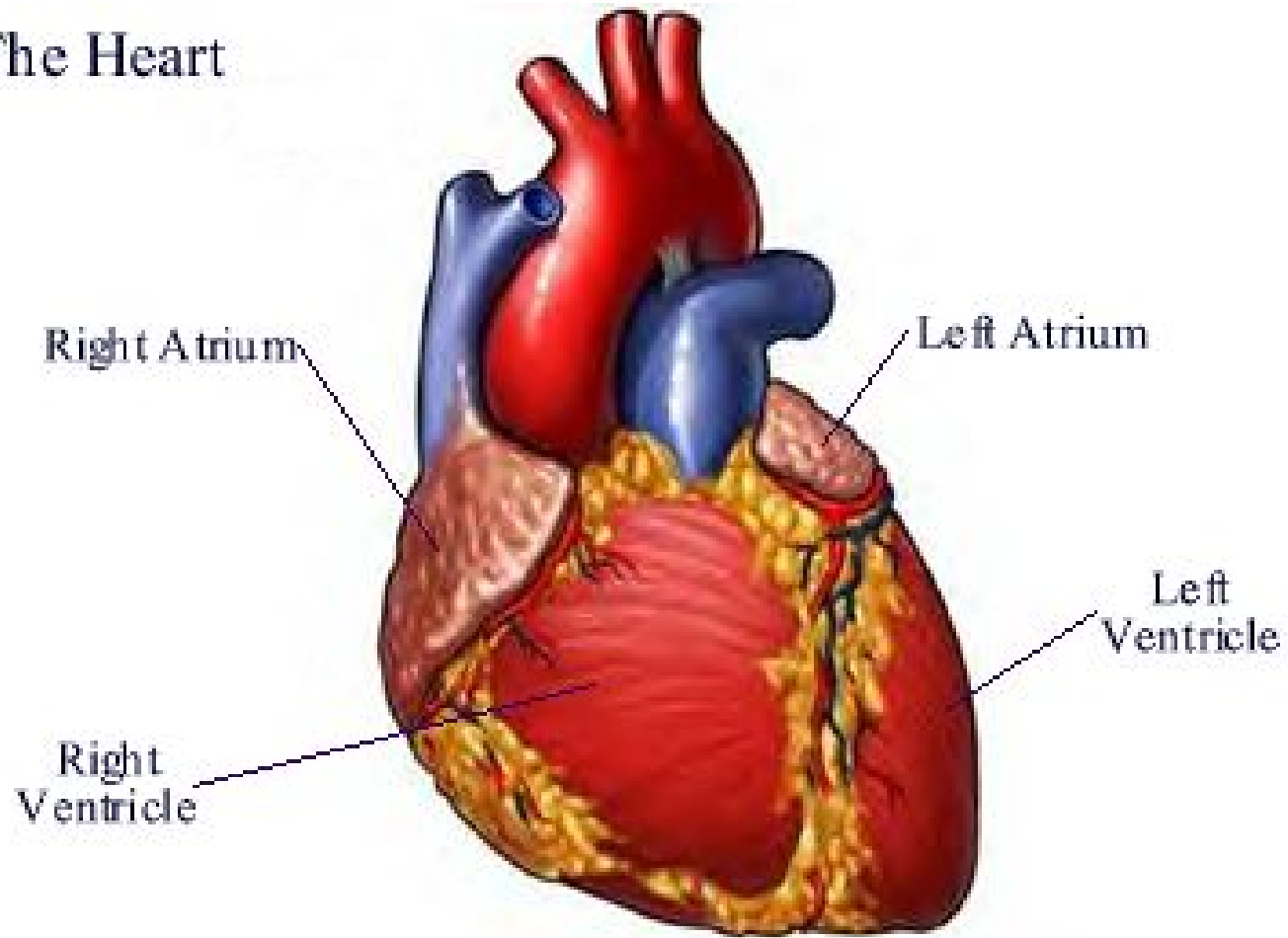
**This is a simplified outline of Coronary Artery Disease, and the associated genetic and lipid abnormalities that are frequently encountered in Indians. Most of these abnormal factors can be corrected or even reversed with appropriate drug therapy**

**The earlier in your life you get your lipids and metabolic status evaluated and corrected the better are your chances of avoiding a serious cardiac event.**

**Drug therapy is safe and a must to attain target values.**



# The Heart



**KEEP IT HEALTHY**