



# Heart Disease and Hypertension

## Heart disease in the Pacific

**C**oronary heart disease (CHD) is the first or second leading cause of death in most Pacific Island countries and territories. It is also a common cause of sickness and ill health. Rates are increasing in most countries in the region.

### What is coronary heart disease?

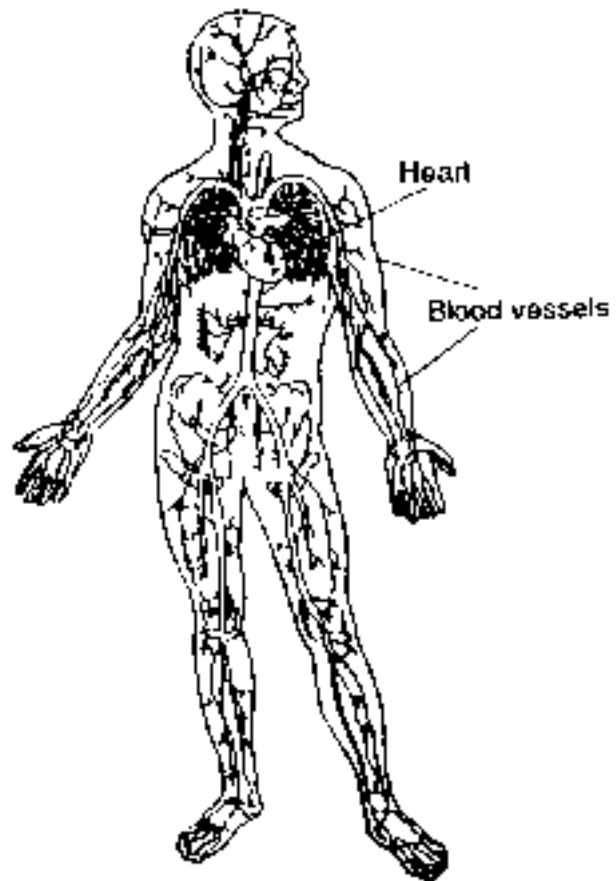
- ✦ Coronary heart diseases (CHDs) are diseases that affect the heart and the heart's blood vessels.
- ✦ Cardiovascular diseases (CVDs) are diseases that affect the heart and all the blood vessels in the body. CVD includes CHD and strokes (Strokes will not be discussed in this section because they are closely linked to high blood pressure. See information in 'High Blood Pressure' below.)

CHD occurs when the heart muscle does not get enough blood. This happens mostly when a clot of blood blocks a narrowed blood vessel (narrowing due to a fatty build-up on the inside surface of the vessel – atherosclerosis). This can cause a heart attack or an angina attack.

### Symptoms of coronary heart disease

Until a heart attack or angina attack happens, many people will not notice any symptoms. Some may have chest pains or be short of breath during physical activity.

- ✦ A heart attack will include chest pain, often along with sweating, nausea and extreme tiredness.
- ✦ Severe heart attacks can lead to heart failure and death.



### Angina

- ✦ Angina is a type of CHD.
- ✦ Often no clot is involved with angina attacks and they are less severe than a heart attack.
- ✦ Angina attacks cause chest pain.
- ✦ Activity, stress or a large meal often trigger attacks (because they create extra work for the heart).
- ✦ Angina attacks can be treated well with medication in most cases.

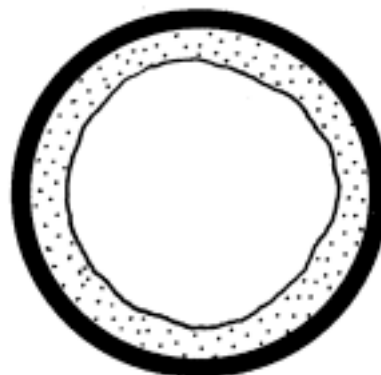
Risk factors	Action to lower risk	Evidence?
Family history (genetics)	None	Very good
Lack of physical activity	Be active every day. Perform activities such as walking, swimming, and gardening.	Very good
Smoking	Stop smoking.	Very good
Stress	Try to reduce stress.	Very good
Excess alcohol intake	Drink in moderation only – a maximum of two measures per day.	Very good
Lack of fruits and vegetables	Eat more fruit and vegetables.	Very good
Diabetes	Take care of diabetes according to medical advice.	Good
Obesity	Maintain a healthy weight through healthy eating and physical activity.	Good
Age and gender (older men are at greatest risk)	None	Good
Ethnicity (certain ethnic groups, e.g. Pacific Islanders and native Americans, have increased risk)	None	Good
High blood pressure	Follow advice to lower blood pressure: Eat a healthy diet and increase physical activity.	Good
High fat intake	Eat less fat and fewer fatty foods, and use less oil for cooking.	Good
High saturated-fat intake	Eat less fatty meat and butter.	Good
High trans-fatty acid intake	Eat fewer processed fatty foods and less margarine (which are high in trans fatty acid).	Moderate
High blood cholesterol level	Reduce fat intake, in particular animal fat. Increase activity levels.	Moderate
High cholesterol intake	Eat fewer cholesterol-rich foods e.g. eggs, liver	Poor

*Note: Evidence refers to the amount of research and other studies that support this 'theory.'*

**Blood Vessel with Fat Build-up**



**Normal Blood Vessel**



## Overall recommendations for preventing and controlling heart disease

- ⚡ Be physically active.
- ⚡ Eat less fat and fewer fatty foods. Replace some of your animal fats (e.g. meat and butter) with fish and vegetable oils.
- ⚡ Eat plenty of fruits and vegetables.
- ⚡ Do not smoke.
- ⚡ Drink sensibly.
- ⚡ Try to minimise stress.
- ⚡ Eat less salt and fewer salty foods.
- ⚡ Avoid becoming overweight. If overweight, try to lose weight.

### What are the risk factors?

- ⚡ The more risk factors you have, the higher is your risk of heart disease.
- ⚡ Reducing the number of risk factors that a person has will lower their overall risk of developing CHD.

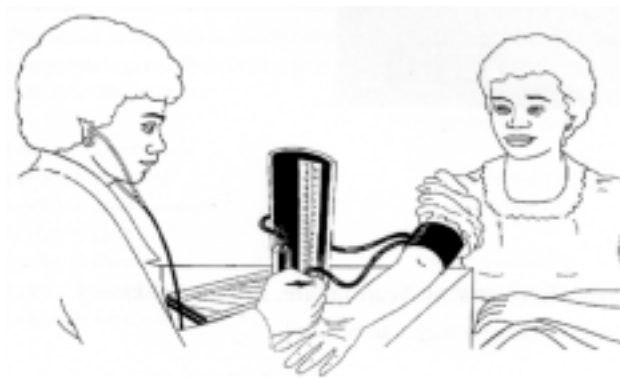
## Hypertension – High Blood Pressure

### Blood pressure

Blood in the blood vessels (arteries and veins) is under pressure (blood pressure), because of the heart beating.

- ⚡ *Systolic* (higher number) *pressure* – is the pressure when the heart is beating.
- ⚡ *Diastolic pressure*– is the pressure between heartbeats.

Blood pressure is always expressed as systolic then diastolic, e.g. 122/76 (122 over 76).



### Blood pressure measurement

A doctor or a health professional will use something called a 'sphygmomanometer'. A cuff is inflated on someone's upper arm, to stop the blood flow. As the cuff is slowly released, the blood starts to flow back through the arm. The doctor listens using a stethoscope to an artery in the arm. The initial noise will be the systolic pressure. As the pressure in the cuff is further lowered, there is another sound (quieter) indicating diastolic pressure. The readings will be in terms of millimetres of mercury seen in the sphygmomanometer (mm Hg).

### Definitions of hypertension

When blood vessels are healthy, blood flows through them easily. When vessels become hard or blocked, the blood cannot flow as easily. The heart therefore has to work harder to move the same amount of blood. This is how high blood pressure develops.

### Risks from hypertension

- ⚡ Often the person feels well and healthy.
- ⚡ For the person with hypertension, there are very high risks of stroke, coronary heart disease (CHD), heart failure and kidney disease.

	<i>Systolic (mm Hg)</i>	<i>Diastolic (mm Hg)</i>
Normal	Less than 130	Less than 85
Grade 1 hypertension (mild)	140–159	90–99
Grade 2 hypertension (moderate)	160–179	100–109
Grade 3 hypertension (severe)	More than 180	More than 110

*(One high result is not enough to show a problem, another measurement should be taken at a different time, to confirm diagnosis.)*

A **stroke** occurs when blood supply to the brain is reduced. It causes weakness or numbness on one side of the body, dizziness and unsteadiness. Effects can be permanent.

### **Causes of hypertension:**

- ⚡ Age – as we grow older, blood pressure naturally increases,\*
- ⚡ Genetics/hereditary factors,\*
- ⚡ Obesity and overweight,
- ⚡ Too much salt/sodium,
- ⚡ Drinking too much alcohol,
- ⚡ Smoking and use of tobacco,
- ⚡ Not enough activity/exercise,
- ⚡ Stress,
- ⚡ Diabetes (high blood sugar damages blood vessel walls),
- ⚡ Pregnancy (many pregnant women develop high blood pressure).

### **To prevent or control hypertension**

- ⚡ Stop smoking – the most important issue.
- ⚡ Lose weight if overweight.
- ⚡ Drink alcohol with care – no more than two alcoholic drinks (measures) per day. Avoid binge drinking.
- ⚡ Eat less salt and fewer salty foods.
- ⚡ Eat a healthy balanced diet with plenty of

variety. Include plenty of fruits and vegetables.

- ⚡ Increase physical activity. Walking regularly is helpful.

### **Role of salt**

- ⚡ Salt is very important for many people with hypertension; they need to eat less.
- ⚡ Only a few people who are hypertensive are not affected by salt.

See Factsheet No. 12 for more information on salt.

#### *Eating less salt*

- ⚡ Avoid adding salt or soy sauce at the table and in cooking.
- ⚡ Eat fewer salty foods such as: savoury snacks (potato chips), sauces (ketchup and meat gravies), soy sauce, bread, margarine, butter, cheese, ramen, canned meats (corned beef and spam).
- ⚡ You will even find salt in things like biscuits and cookies, many canned/tinned foods, cakes, pastries, and many frozen foods.
- ⚡ We become used to high salt levels in our food, and in time can also get used to eating less salt.
- ⚡ Instead of using salt, try using herbs and spices, lemon juice, vinegar, garlic or fresh chillies for extra flavour.

(\* cannot be controlled)