Early Detection and Prevention of Common NCD in Older People

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Outline

- Introduction
- Diabetic mellitus(DM)
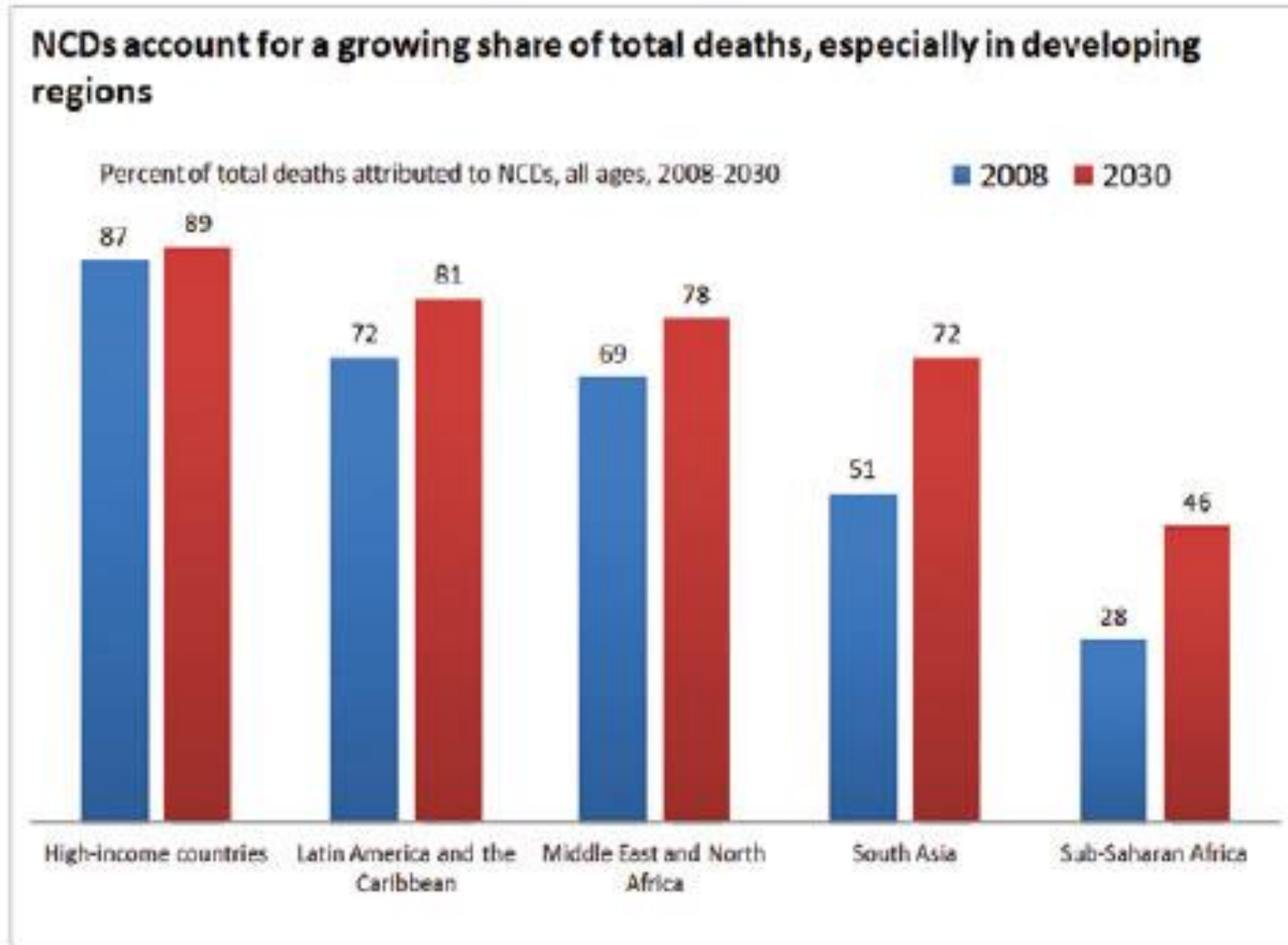- Ischaemic heart disease(IHD)
- Stroke
- Summary

Introduction

- Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally.

- NCD deaths;

  Cardiovascular diseases   - 17.9 million people (annually)

  Cancers   - 9.0 million

  Respiratory diseases   - 3.9million

  Diabetes mellitus   - 1.6 million

- These 4 groups of diseases account for over 80% of all premature NCD deaths

NCDs among developing regions

NCDs account for a growing share of total deaths, especially in developing regions

Percent of total deaths attributed to NCDs, all ages, 2008-2030

■ 2008 ■ 2030

Region	2008	2030
High-income countries	87	89
Latin America and the Caribbean	72	81
Middle East and North Africa	69	78
South Asia	51	72
Sub-Saharan Africa	28	46

Our country…..

- In Sri Lanka, non communicable diseases (NCDs) cause more than three quarters of all deaths

- Nearly 1 in 5 people die prematurely from NCDs.

- Epidemic of NCDs has now become a serious economic as well as public health issue in Sri Lanka.

DM, IHD and Stroke will be discussed under the following headings

- Introduction

- Symptoms

- Related /Risk factors

- Prevention strategies

- Self –assessment risk factor identification

Diabetes Mellitus

Introduction

- In SriLanka 55% of the elderly over 60 years of age have reported some chronic illness.

- 30.4% had diabetes

- By 2030 more than half of diabetes sufferers in the world will live in Asia; 53% are above 60 years and more than 85% are above 45 years

Hyperglycaemic state in elderly

Risk factors...

- overweight or obese BMI>23

- not physically active < 3/week

- have a family history of diabetes

- have a low level of HDL ("good") cholesterol, or a high level of triglycerides

- have high blood pressure >140/90 mmHg

But diagnostic criteria are the same as in younger subjects

Symptoms..

- Often gradual onset

- Commonly mistaken for normal aging

- Symptomatic (coincidental finding)

- Spectrum of vague symptoms; Depressed mood;   apathy; mental confusion

- Slow recovery or increased vulnerability;

   e.g. impaired recovery from stroke, repeated   infections, poor wound healing

Criteria for the diagnosis of Diabetes

FPG ≥ 126 mg/dL(7.0mmol/L)

OR

2-hPG ≥ 200 mg/dL(11.1 mmol/L) during OGTT.

OR

A1C ≥ 6.5% (48mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay.*

OR

In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥ 200 mg/ mg/dL(11.1 mmol/L)

*In the absence of unequivocal hyperglycemia ,results should be confirmed by repeat testing.
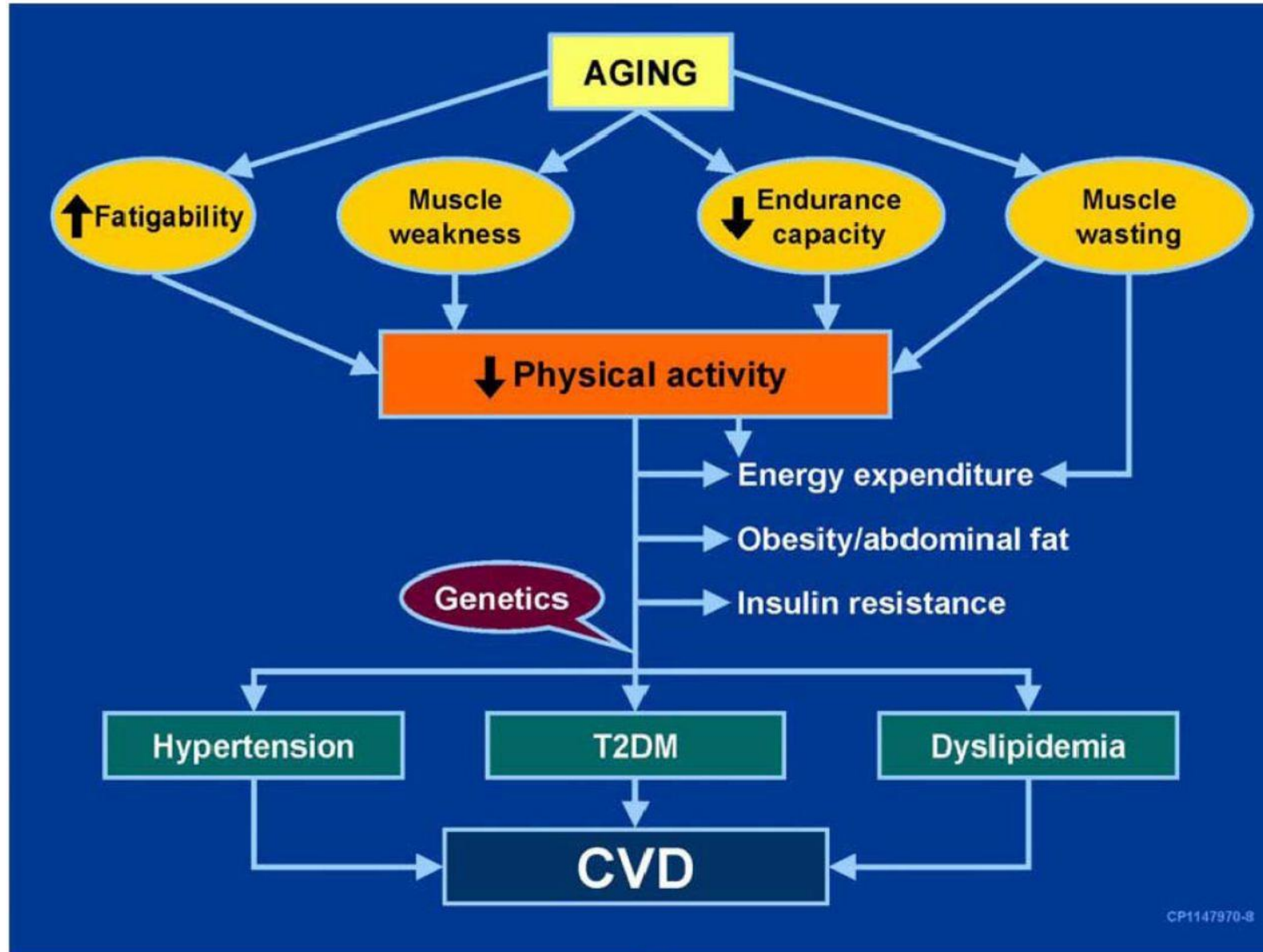
Ischaemic heart disease(IHD)

- Four out of five CVD deaths are due to heart attacks and strokes.

- Prevalence of CAD increases with advancing age.

- Nearly 20% of males and 9.7% of females in the age group of 60-79 years.
- 32% of males and 19% of females in the age group more than 80 years.

Pathogenesis of CVD in elderly

Risk factors for IHD and stroke

The risk factors that can be controlled (modifiable)	Those that cannot be controlled (conventional)
High BP	Age (simply getting older increases risk)
High blood cholesterol levels	Sex (men are generally at greater risk of coronary artery disease)
Smoking	Family history
Diabetes	Race
Overweight or obesity	
Lack of physical activity	
Unhealthy diet	
Stress	

Symptoms..

- In the elderly, IHD symptoms are more difficult to detect than in younger patients for a variety of reasons.

- Elderly patients frequently have a more sedentary lifestyle and may not have exertional symptoms.

- Although chest discomfort remains the most frequent presenting complaint of patients with IHD,

- the elderly have a higher percentage of atypical chest pain complaints

- as well as nonchest pain presentations like

 (general fatigue/malaise, dyspnea, abdominal pain, nausea
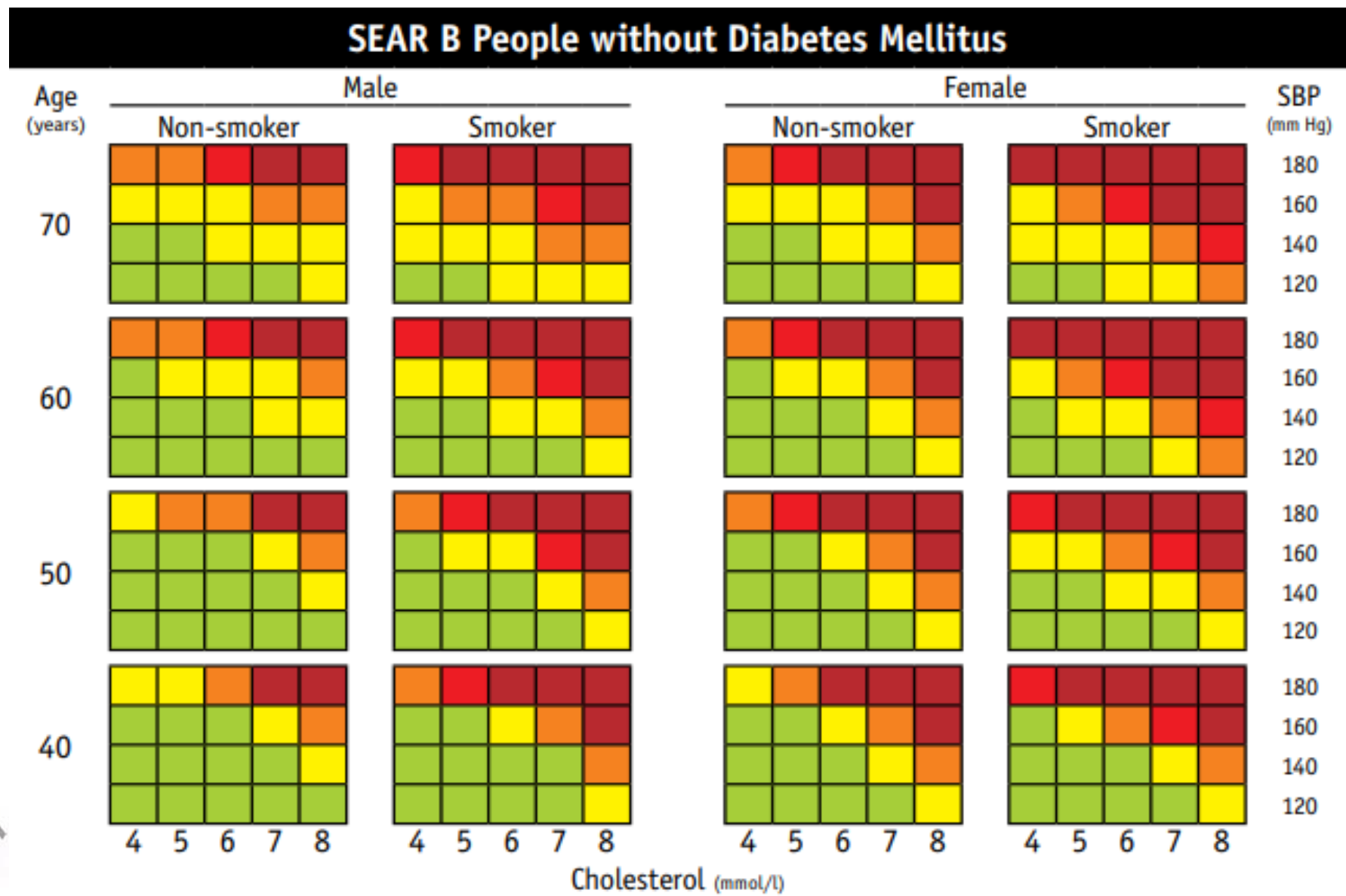
  or syncope).

CVD Risk prediction

Figure 21. WHO/ISH risk prediction chart for SEAR B. 10-year risk of a fatal or non-fatal cardiovascular event by gender, age, systolic blood pressure, total blood cholesterol, smoking status and presence or absence of diabetes mellitus.

Risk Level   <10%   10% to <20%   20% to <30%   30% to <40%   ≥40%

Continue...

SEAR B People without Diabetes Mellitus
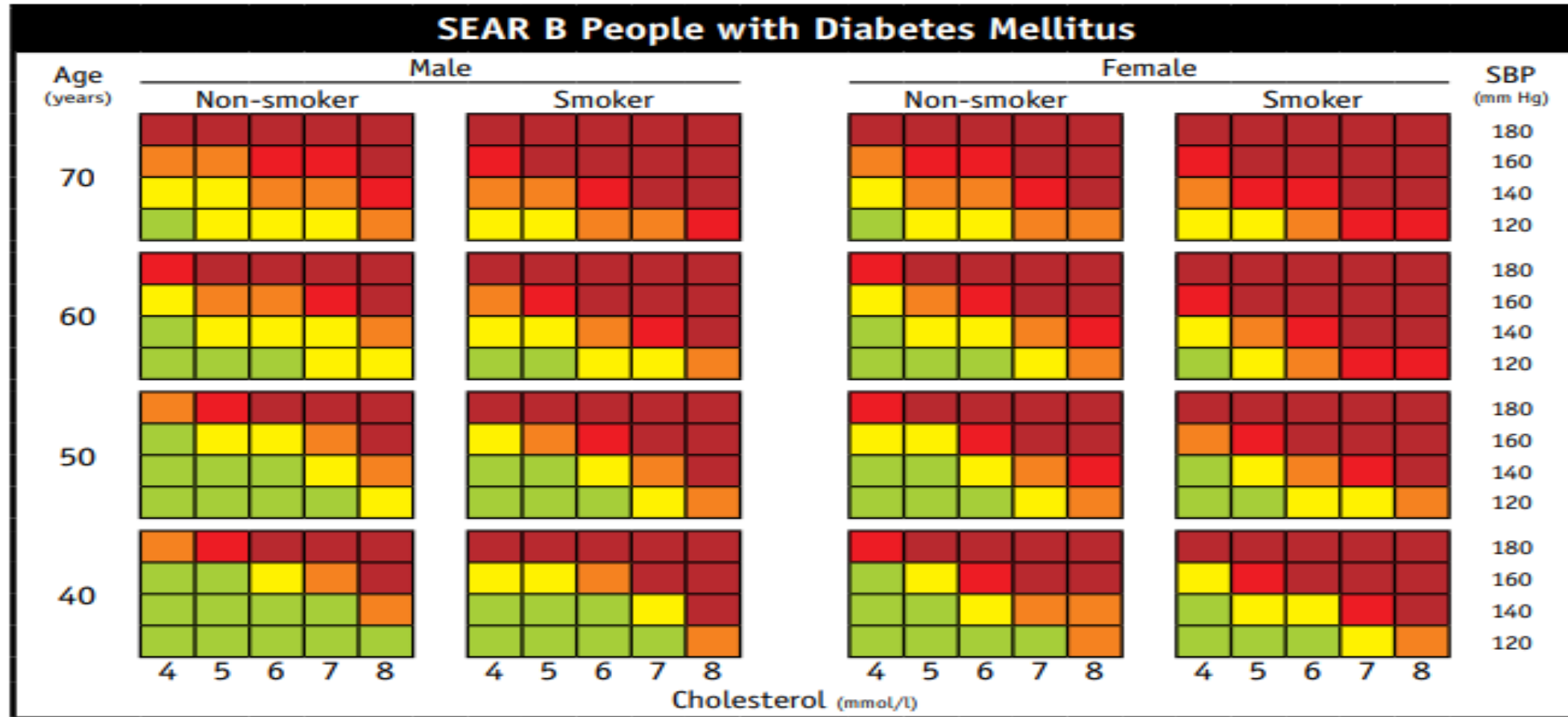
Stroke

- Out of 21 million population there are 200,000 who have survived strokes.

- Strokes are serious threat to the quality of life.

- In urban Sri Lanka, the prevalence of stroke was found to be 10.4 per 1000 persons.

- In Sri Lanka, the prevalence of stroke in the Colombo district was 37 per 1000 adults aged over 65 years.

Symptoms

- **Trouble with speaking and understanding.**

  confusion, slurring of speech or have difficulty in understanding the speech

- **Paralysis or numbness of the face, arm or leg or both**

  sudden numbness, weakness or paralysis of the face, arm or leg.

  mouth may droop when try to smile.

- **Trouble with seeing in one or both eyes.**

  blurred or blackened vision in one or both eyes, or may see double

Symptoms continue

- **Headache.**
  A sudden, severe headache, which may be accompanied by vomiting, dizziness or altered consciousness, may indicate a stroke.

- **Trouble with walking.**
  stumble or experience sudden dizziness, loss of balance or loss of coordination.

- **Difficulty in swallowing**

- **Memory loss or behavioral changes**

Quick assessment .....

FACE DROOPING   ARM WEAKNESS   SPEECH DIFFICULTY   TIME TO CALL

ABCD2 predict severity of recurrence events after TIA

Risk stratification for TIA with ABCD2 score

ABCD^2	Criteria	Points
Age	≧ 60 years	1
Blood pressure	≧140/80	1
Clinical features	Unilateral weakness	2
	Speech impairment without weakness	1
Duration of Sx	>60minutes	2
	10-59 minutes	1
Diabetes	Yes	1

Score	2day-risk for stroke	Recurrence within 90days
0-3	Low	1.0%
4-5	Moderate	4.1%
6-7	High	8.1%

JAMA 2000;284:2901-2906

Risk Predictor

Stroke Risk Scorecard

Each box that applies to you equals 1 point. Total your score at the bottom of each column and compare with the stroke risk levels on the back.

RISK FACTOR	HIGH RISK	CAUTION	LOW RISK
Blood Pressure	>140/90 or unknown	120-139/80-89	<120/80
Atrial Fibrillation	Irregular heartbeat	I don't know	Regular heartbeat
Smoking	Smoker	Trying to quit	Nonsmoker
Cholesterol	>240 or unknown	200-239	<200
Diabetes	Yes	Borderline	No
Exercise	Couch potato	Some exercise	Regular exercise
Diet	Overweight	Slightly overweight	Healthy weight
Stroke in Family	Yes	Not sure	No
TOTAL SCORE	High Risk	Caution	Low Risk

National STROKE Association™

Risk Scorecard Results

National STROKE Association™

High Risk ≥3: Ask about stroke prevention right away.

Caution 4-6: A good start. Work on reducing risk.

Low Risk 6-8: You're doing very well at controlling stroke risk!

Ask your healthcare professional how to reduce your risk of stroke.

To reduce your risk:

1. Know your blood pressure.
2. Find out whether you have atrial fibrillation.
3. If you smoke, stop.
4. Find out if you have high cholesterol.
5. If diabetic, follow recommendations to control your diabetes.
6. Include exercise in your daily routine.
7. Enjoy a lower-sodium (salt), lower-fat diet.

Act FAST and CALL 9-1-1 IMMEDIATELY at any sign of a stroke:

F **FACE:** Ask the person to smile. Does one side of the face droop?

A **ARMS:** Ask the person to raise both arms. Does one arm drift downward?

S **SPEECH:** Ask the person to repeat a simple phrase. Is their speech slurred or strange?

T **TIME:** If you observe any of these signs, call 9-1-1 immediately.

1-800-STROKES (787-6537) • www.stroke.org

Prevention strategies –Community perspectives

Adequate Physical activity

Type of physical activity depend on day to day activity, availability and

ability.

- At least 150 minutes of moderate-intensity aerobic physical activity throughout the week or

- 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent.

- Poor mobility, should perform physical activity to enhance balance and prevent falls on 3 or more days per week.

- Cannot do the recommended amounts of physical activity due to health conditions, they should be as physically active as their abilities and conditions allow.
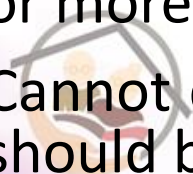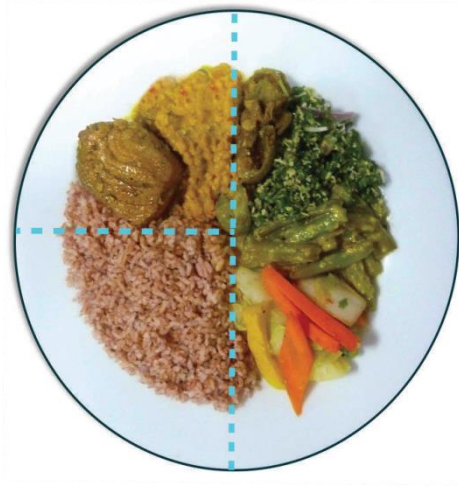
Physical activity

Dietary Intake

Will be discussed under Nutrition lecture.

Avoidance of Tobacco (smoking and chewing)

- Tobacco use is the single greatest preventable cause of NCDs

- Second –hand smoke also responsible for death among non-smokers.

Avoidance of alcohol

- Chronic, heavy alcohol use has been associated with adverse cardiac outcome including IHD and haemorrhagic strokes.

- Detrimental effects of alcohol in terms of CVD outweigh the beneficial effect

DM ,BP and Lipid control

- Control of HT - one of the most cost-effective measures to prevent heart attacks and strokes.

- Initiate the statin therapy among high risk groups

- Regular screening among risk groups

Obesity / Over weight

- Overweight and obesity lead to;
  adverse metabolic effects on blood pressure,
  cholesterol, triglycerides and esterol and insulin sensitivity.

Summary

- More than one third of adult males in the country are tobacco users. One out of three people have raised blood pressure, and a third of women are overweight. Consumption of salt is two to three times higher than recommended.

- Tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets all increase the risk of dying from a NCD.

- Detection, screening and treatment of NCDs, as well as palliative care, are key components of the response to NCDs.

THANK YOU