

Task Force Report

Prevention of coronary heart disease in clinical practice

Recommendations of the Second Joint Task Force of European and other Societies on Prevention of CHD.

European Society of Cardiology, European Atherosclerosis Society, European Society of Hypertension, International Society of Behavioural Medicine, European Society of General Practice/Family Medicine, European Heart Network.

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CONTENT

- **Summary**
- **Background**
- **Estimation and management
of CHD risk**
- **Clinical implementation**

Recommendations of the Second Joint Task Force of European and other Societies on Prevention of CHD

BACKGROUND

- **Introduction**
- **Concept of risk**
- **Scientific basis for risk factor modification**
- **Strategies of CHD prevention**
- **Priorities in CHD prevention in clinical practice**

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Estimation and management of CHD risk

- **General principles of CHD risk estimation**
- **Objectives of CHD prevention**
- **Estimation of risk**
- **Management of risk**

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Clinical implementation

- **Clinical opportunities for coronary prevention**
- **Preventive cardiology**
- **Secondary prevention**
- **Early detection of arterial disease in the healthy population**
- **Screening for risk of developing CHD**
- **Role of professional National Societies in CHD prevention**

Priorities of Coronary Heart Disease Prevention in Clinical Practice

1. **Patients with established CHD or other atherosclerotic disease.**
2. **Healthy individuals who are at high risk of developing CHD or other atherosclerotic disease, because of risk factors - including smoking, raised blood pressure, lipids (raised total cholesterol and LDL-cholesterol, low HDL-cholesterol and raised triglycerides) raised blood glucose, family history of premature coronary disease - or who have severe hypercholesterolaemia, or other forms of dyslipidaemia, hypertension or diabetes.**
3. **Close relatives of**
 - ② **patients with early-onset CHD or other atherosclerotic disease**
 - ② **healthy individuals at particularly high risk.**
4. **Other individuals met in connection with ordinary clinical practice.**

Lifestyles & Characteristics Associated with Increased Risk of Future Coronary Heart Disease Events

Lifestyles

Diet high in saturated fat, cholesterol and calories

Tobacco smoking

Excess alcohol consumption

Physical inactivity

Biochemical or physiological characteristics (modifiable)

Elevated blood pressure

Elevated plasma total cholesterol (LDL-cholesterol)

Low plasma HDL-cholesterol

Elevated plasma triglycerides

Hyperglycaemia/Diabetes

Obesity

Thrombogenic factors

Personal characteristics (non-modifiable)

Age

Sex




Family history of CHD or other atherosclerotic disease at early age (in men <55 years, in woman <65 years)

Personal history of CHD or other atherosclerotic disease

CHD prevention strategies and absolute multifactorial risk

- **Aetiology of CHD is multifactorial.**
- **Absolute CHD risk can be estimated by taking into account individual and multiplicative effects of the major risk factors.**
- **The intensity of the prevention strategy must be guided by degree of absolute multifactorial risk.**

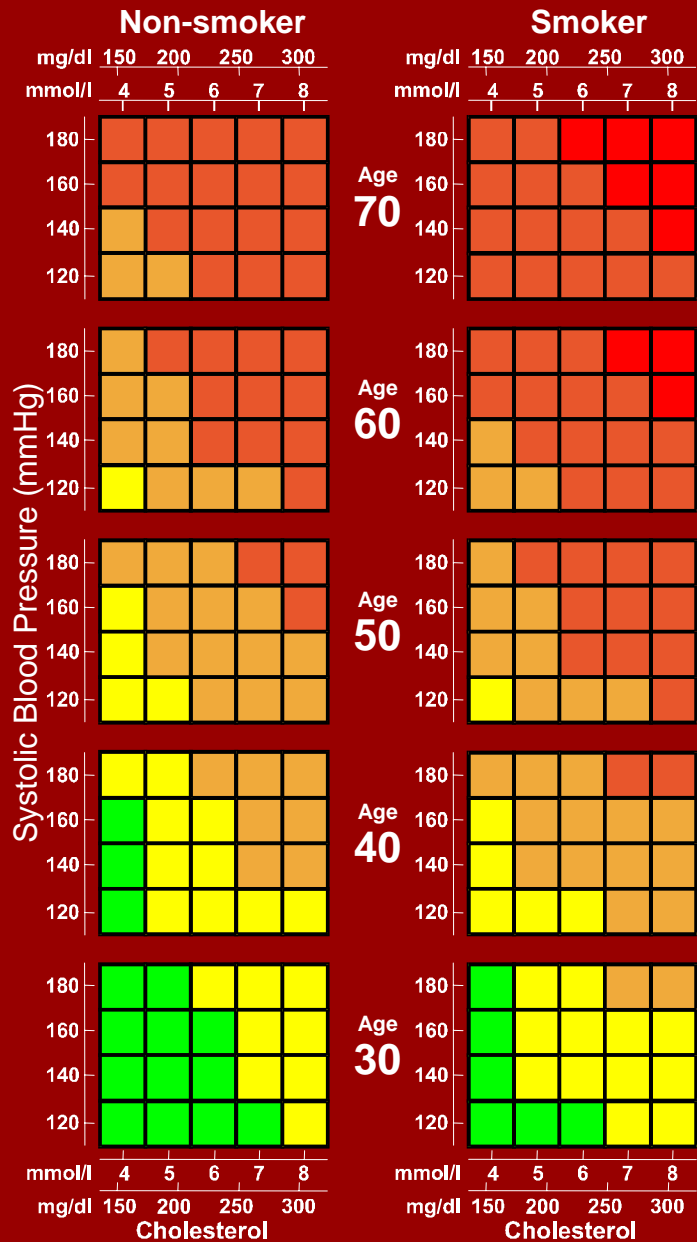
Using the Coronary Risk Chart

-  To estimate a person's absolute 10 year risk of a CHD event, find the table for their gender, smoking status and age and then the cell nearest to their SBP and total cholesterol.
-  The effect of lifetime exposure to risk factors can be seen by following the table upwards.
-  High risk individuals are defined as those whose 10 year CHD risk exceeds 20% or will exceed 20% if projected to age 60 years.

MEN

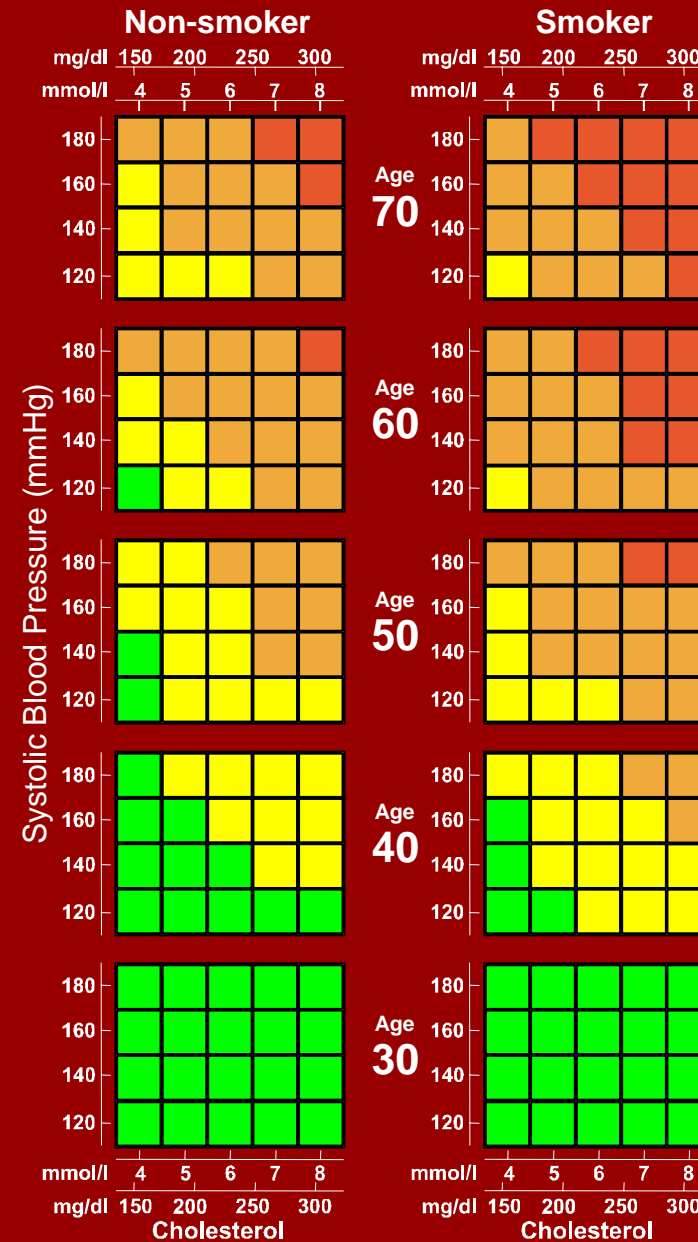
Coronary Heart Disease Risk Chart

WOMEN



10 Year Risk Level

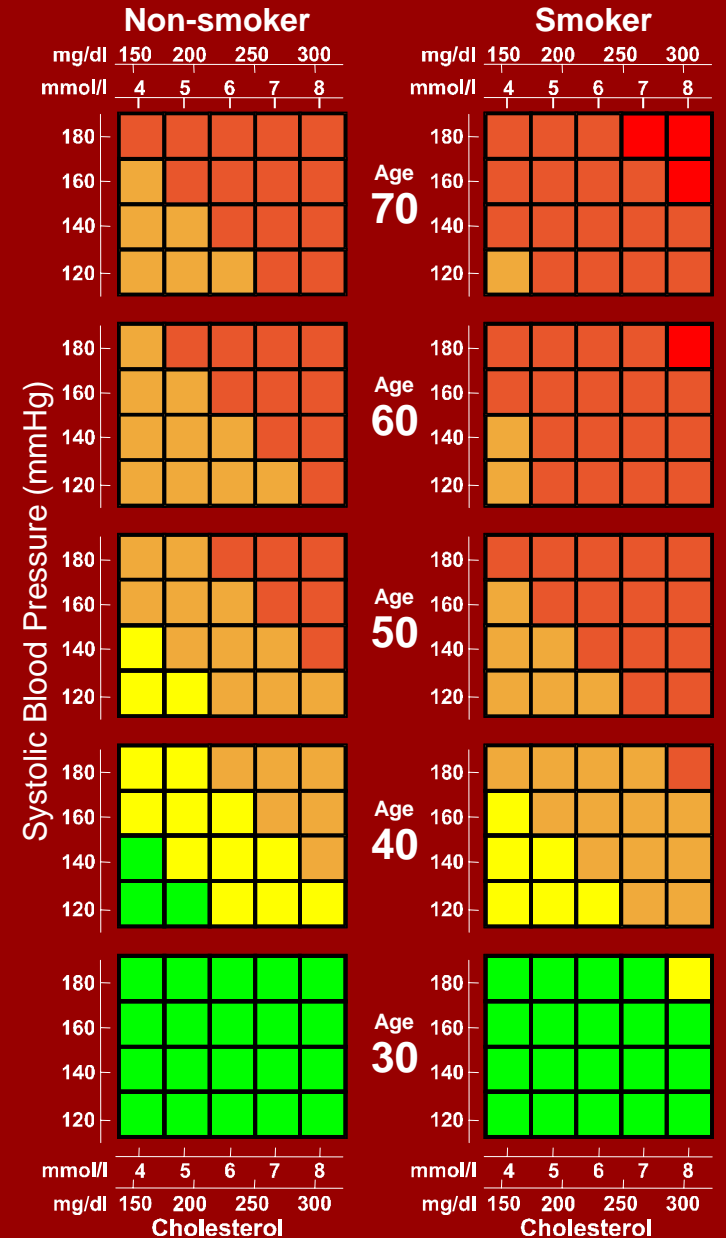
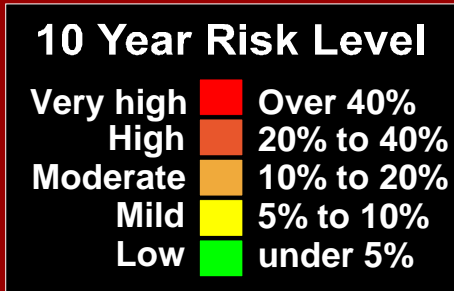
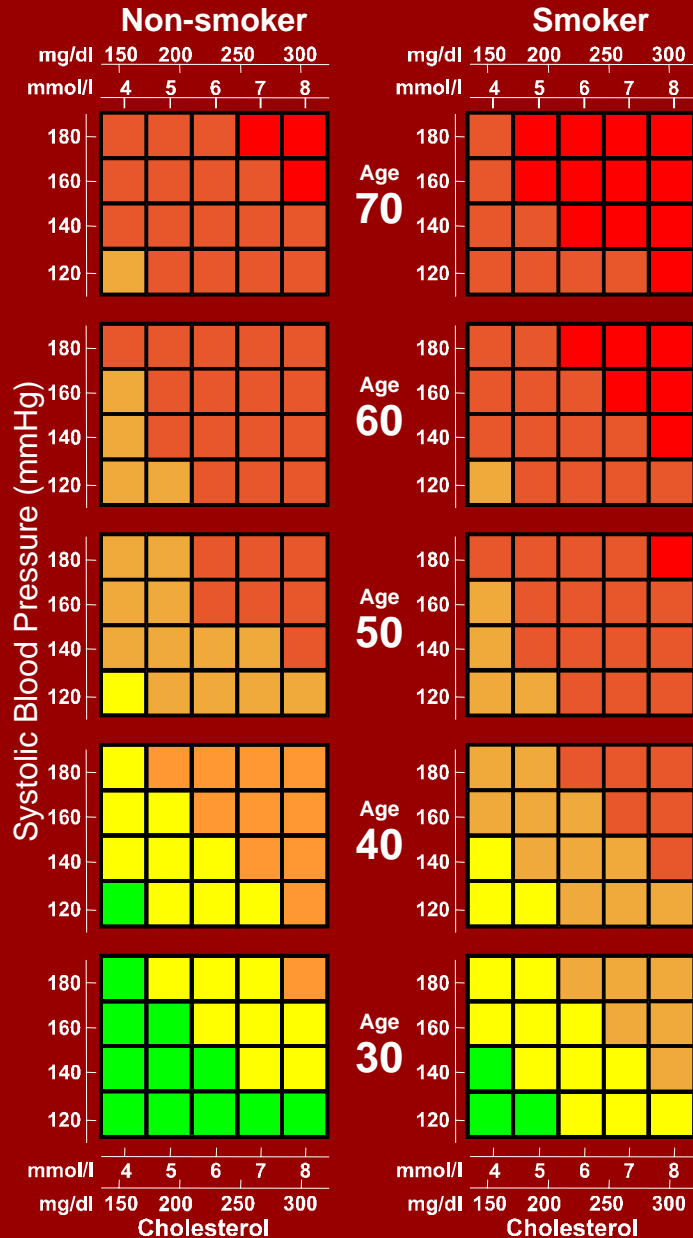
- Very high ■ Over 40%
- High ■ 20% to 40%
- Moderate ■ 10% to 20%
- Mild ■ 5% to 10%
- Low ■ under 5%



MEN with DIABETES

Coronary Heart Disease Risk Chart

WOMEN with DIABETES



Using the Coronary Risk Chart



CHD risk is higher than indicated in the chart for those with:

- ! Familial hyperlipidaemia**
- ! Diabetes mellitus**
- ! Family history of premature cardiovascular disease**
- ! Low HDL cholesterol <1.0 mmol/l (40 mg/dl)**
- ! Raised triglyceride level >2.0 mmol/l (180 mg/dl)**
- ! As the person approaches the next age category**



To find a person's relative risk compare their risk category with that for other people of the same age.



The effect of changing smoking status, blood pressure or cholesterol can be read from the chart.

Ideal goals for CHD prevention in the general population

- **A healthy diet**
- **Regular physical activity**
- **Avoidance of all forms of tobacco**
- **Total cholesterol < 5.0 mmol/l (190 mg/dl)**
- **Blood pressure < 130/80 mmHg**
- **Body mass index < 25 kg/m²**

Goals for primary and secondary prevention of CHD (1)

Lifestyle :

- * Stop smoking**
- * Make healthy food choices**
- * Be physically active**

Other risk factors :

- * Blood pressure < 140/90 mmHg**
- * Total cholesterol < 5.0 mmol/l (190 mg/dl)**
- * LDL cholesterol < 3.0 mmol/l (115 mg/dl)**
- * Good glucose control in diabetes**

To be achieved by changes in lifestyle and, if needed, by drug treatment

Goals for primary and secondary prevention of CHD (2)

Other prophylactic drug therapies :

- * **Primary prevention :**
 - aspirin (75 mg) in treated hypertensive patients and in men at particularly high CHD risk**

- * **Secondary prevention :**
 - aspirin in virtually all patients**
 - beta-blockers after myocardial infarction**
 - ACE inhibitors in patients with heart failure/LV dysfunction**
 - anticoagulants in patients at high risk of thrombo-embolic events**

Goals for primary and secondary prevention of CHD (3)

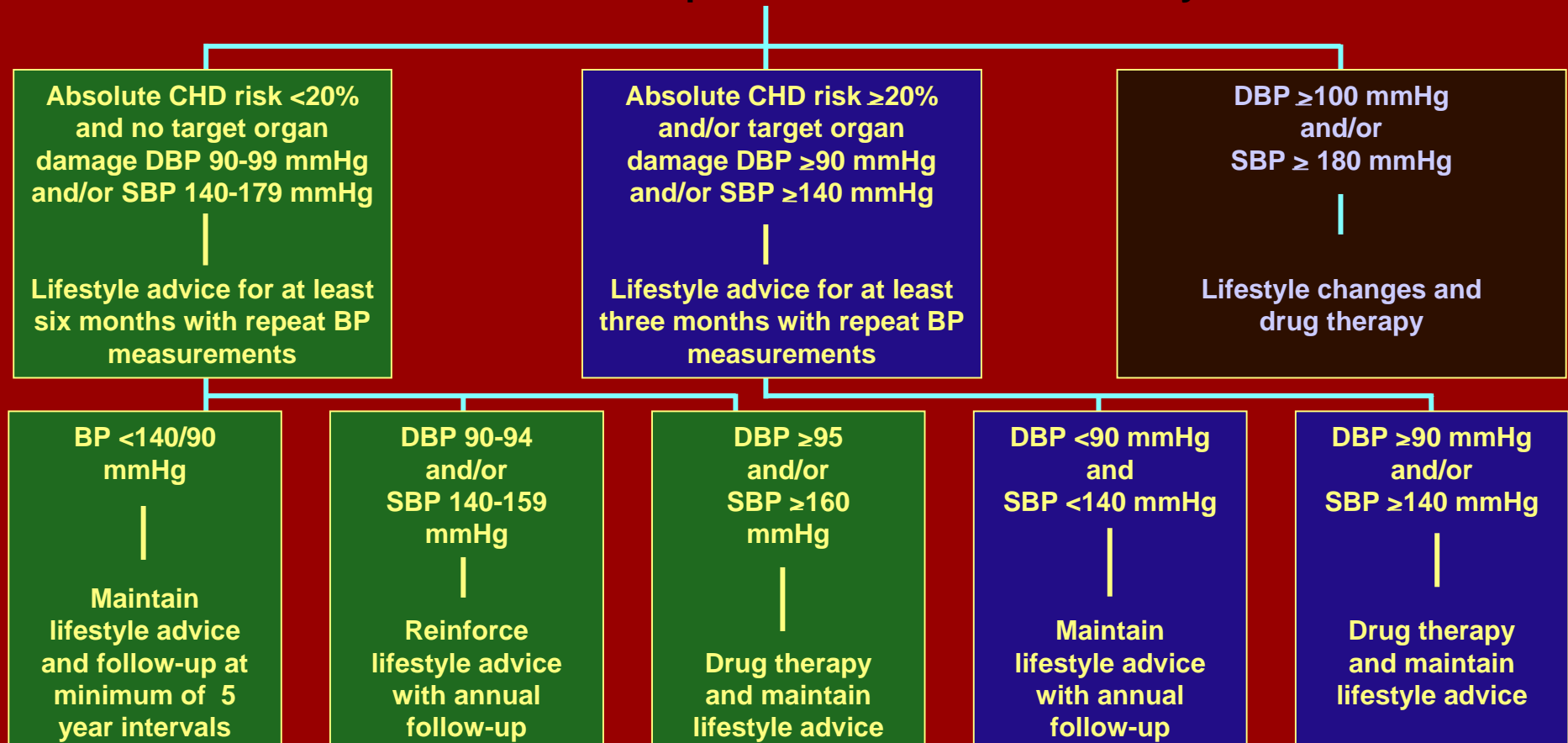
Screen close relatives:

- * of patients with premature CHD
(men < 55 yr and women < 65 yr)**
- * of patients with suspected familial
dyslipidemias**

Primary Prevention Guide to Blood Pressure Management

Estimate absolute CHD risk* using the Coronary Risk Chart

Use initial office blood pressure to estimate coronary risk

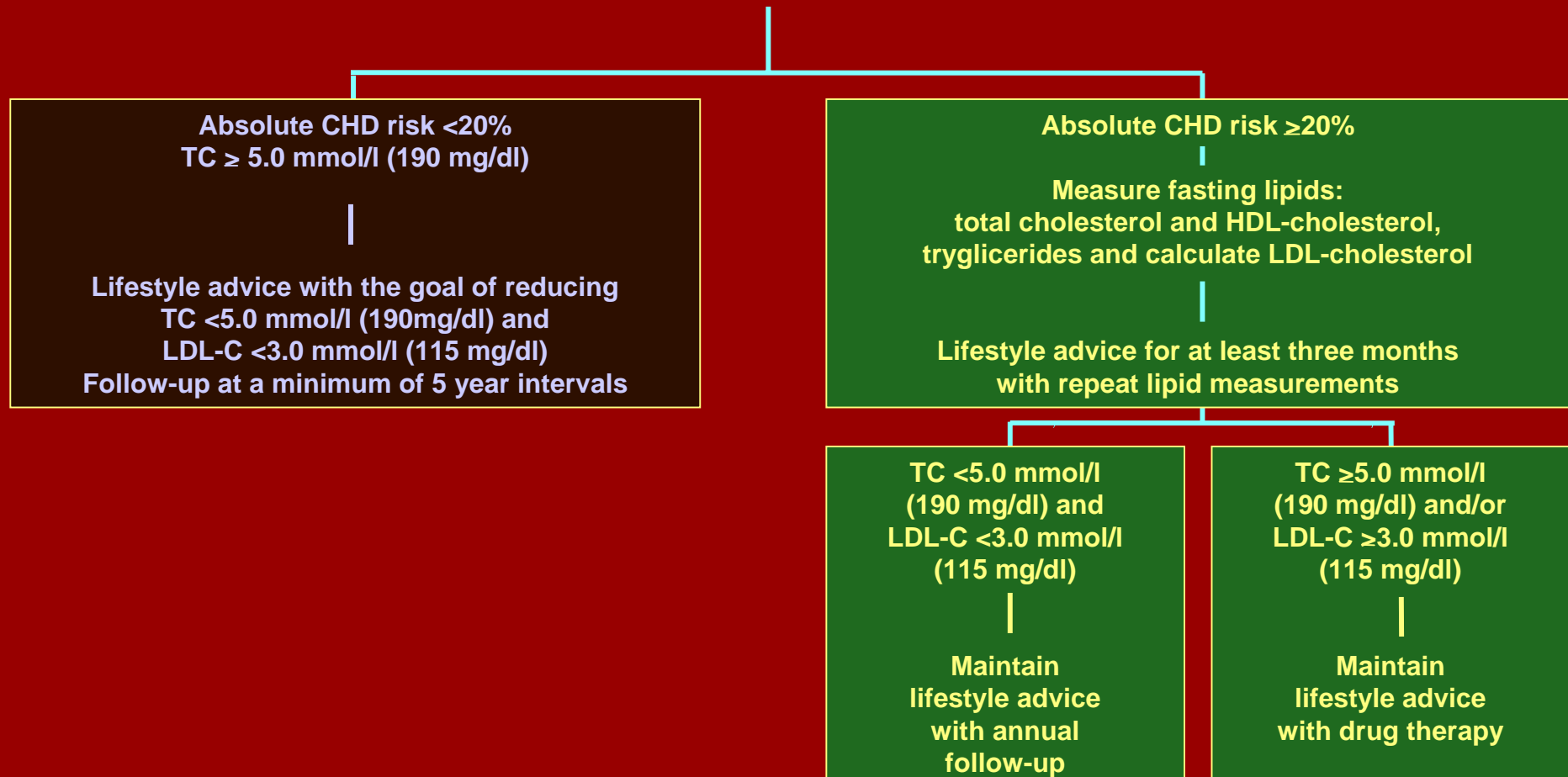


* High CHD risk $\geq 20\%$ over 10 years or will exceed 20% if projected to age 60 years

Primary Prevention Guide to Lipid Management

Estimate absolute CHD risk* using the Coronary Risk Chart

Use initial total cholesterol to estimate coronary risk



* High CHD risk ≥ 20% over 10 years or will exceed 20% if projected to age 60 years

Good glucose control in diabetic patients

		Type 1	Type 2
Blood glucose			
* Fasting	mmol/l	5.1-6.5	3.5-5.5
	mg/dl	91-120	65-100
* Postprandial (peak)	mmol/l	7.6-9.0	5.5-7.0
	mg/dl	136-160	100-125
* Pre-bed	mmol/l	6.0-7.5	-
	mg/dl	110-135	-
HbA1c % Hb		6.2-7.5	<6.5