The 2012 European Guidelines on Cardiovascular Disease Prevention in Clinical Practice

Session guidelines overview

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On behalf of:

The 5th Joint European Societies’ Task Force on Cardiovascular Disease Prevention in Clinical Practice

European Society of Cardiologue (ESC)

European Association for Cardiovascular Prevention & Rehabilitation (EAPCR)

European Society of General Practice/Family Medicine (ESGP/FM/Wonca)

European Arterosclerosis Society (EAS)

European Society of Hypertension (ESH)

European Association for the Study of Diabetes (EASD)

International Society of Behavioural Medicine (ISBM)

International Diabetes Federation Europe (IDF-Europe)

European Heart Network (EHN)

European Stroke Organization (ESO)

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The 5th Joint Task Force of the European Society of Cardiology and other Societies on CVD Prevention in Clinical Practice

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The Plato model, 424-347 f. C.

1. What is CVD prevention
2. Why is CVD prevention needed
3. Who needs CVD prevention
4. How is CVD prevention applied
5. Where should CVD prevention be offered

Shorter, more adapted to clinical needs, practical

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What is CVD prevention

“A coordinated set of actions, at public and individual level, aimed at eradicating, eliminating or minimizing the impact of cardiovascular diseases and their related disability.

The bases of prevention are rooted in cardiovascular epidemiology and evidence-based medicine”

Why is CVD prevention needed

Atherosclerotic CVD, especially CHD, remains the leading cause of premature death worldwide.

CVD affects both men and women; of all deaths that occur before the age of 75 years in Europe, 42% are due to CVD in women and 38% in men.

Prevention works: over 50% of the reductions seen in CHD mortality relate to changes in risk factors, and 40% to improved treatments.
New: GRADE, focus on population studies

- **Conventional ESC method**
  - Evidence levels: A, B and C
  - Recommendation: I, IIa, IIb och III
  - RCT greatest weight
  - Population studies undervalidated

- **GRADE**
  - Recommendation: strong or weak
  - Strong: one should offer this treatment
  - Weak: one might wish to consider other options
Major new key messages since the 2007 prevention guidelines

- Four levels of CVD risk: very high, high, moderate, low risk
- Risk factor screening should be considered in adult men ≥40 years and in women ≥50 years of age or if postmenopausal
- More European populations are now at lower CVD risk
- The risk-age concept.
- The importance of psychosocial risk factors.
- Limited role of novel risk biomarkers.
- No exposure to passive smoking.
- The role of specific diet patterns.
- Multimodal behavioural intervention effective.
Major new key messages (continued)

- **Blood pressure:**
  - Lifestyle measures needed for hypertensive patients,
  - All major antihypertensives equal for clinical use,
  - Target blood pressure <140/90 mmHg,
  - Threshold values for ambulatory and home measurement.

- **Diabetes mellitus:**
  - Target HbA$_1c$ for CVD prevention: <7.0% (<53 mmol/mol),
  - Target blood pressure <140/80 mmHg.

- **Blood lipids:**
  - Target LDL-cholesterol:
    - <1.8 mmol/L for very high risk patients,
    - <2.5 mmol/L for high risk patients,
    - <3.0 mmol/L for all others.
Very high risk

Subjects with any of the following:

Documented CVD by invasive or non-invasive testing (such as coronary angiography, nuclear imaging, stress echocardiography, carotid plaque on ultrasound), previous myocardial infarction, ACS, coronary revascularization (PCI, CABG) and other arterial revascularization procedures, ischaemic stroke, peripheral artery disease

Diabetes mellitus (type 1 or type 2) with one or more CV risk factors and/or target organ damage (such as microalbuminuria: 30–300 mg/24 h)

Severe chronic kidney disease (CKD) (estimated glomerular filtration rate (eGFR) <30 mL/min/1.73 m²).

A calculated SCORE ≥10%.
Other risk groups

**High risk**
Markedly elevated single risk factors such as familial dyslipidaemias and severe hypertension.
Diabetes mellitus (type 1 or type 2) but without CV risk factors or target organ damage.
Moderate chronic kidney disease (CKD) (estimated glomerular filtration rate (eGFR) 30-59 mL/min/1.73 m²).
A calculated SCORE of ≥5% and <10% for 10-year risk of fatal CVD.

**Moderate risk**
Subjects are considered to be at moderate risk when their SCORE is ≥1 and <5% at 10 years. Many middle-aged subjects belong to this category.

**Low risk**
The low-risk category applies to individuals with a SCORE <1% and free of qualifiers that would put them at moderate risk.
Risk age, a new concept

The risk of this 40 year old male smoker with risk factors is the same (3%) as that of a 60 year old man with ideal risk factor levels - therefore his risk age is 60 years.

www.heartscore.org: include HDL

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Where should CVD prevention programmes be offered?

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<table>
<thead>
<tr>
<th>Recommendations on programme provision</th>
<th>Class&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Level&lt;sup&gt;b&lt;/sup&gt;</th>
<th>GRADE</th>
</tr>
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<tbody>
<tr>
<td>Actions to prevent CVD should be incorporated into everyone’s daily lives, starting in early childhood and continuing throughout adulthood and senescence.</td>
<td>II&lt;sup&gt;a&lt;/sup&gt;</td>
<td>B</td>
<td>Strong</td>
</tr>
<tr>
<td>Nurse-coordinated prevention programmes should be well integrated into healthcare systems.</td>
<td>II&lt;sup&gt;a&lt;/sup&gt;</td>
<td>B</td>
<td>Strong</td>
</tr>
<tr>
<td>All patients with CVD must be discharged from hospital with clear guideline-orientated treatment recommendations to minimize adverse events.</td>
<td>I</td>
<td>B</td>
<td>Strong</td>
</tr>
<tr>
<td>All patients requiring hospitalization or invasive intervention after an acute ischaemic event should participate in a cardiac rehabilitation programme to improve prognosis by modifying lifestyle habits and increasing treatment adherence</td>
<td>II&lt;sup&gt;a&lt;/sup&gt;</td>
<td>B</td>
<td>Strong</td>
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Key messages

- The physician in **general practice** is the key person to initiate, coordinate and provide long-term follow-up for CVD prevention
- The **practising cardiologist** should be the advisor in cases where there is uncertainty over the use of preventive medication or when usual preventive options are difficult to apply
- Patients with cardiac disease may participate in **self-help programmes** to increase or maintain awareness of the need for risk factor management
- **Non-governmental organisations** are important partners to health care workers in promoting preventive cardiology
- The **European Heart Health Charter** marks the start of a new era of political engagement in preventive cardiology
Available at www.escardio.org under practice guidelines: CME questions, slideset, key messages

To be launched at ESC Munich, August 2012
• Pocket version
• One page summary for GP’s, national versions recommended

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