

European Guidelines on Cardiovascular Disease Prevention in Clinical Practice (version 2012)

Training session national coordinators

5th Joint European Societies' Task Force on cardiovascular disease prevention in clinical practice

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European Society of Cardiology (ESC)

European Association for Cardiovascular Prevention & Rehabilitation (EACPR)



European Society of Hypertension (ESH)

International Society of Behavioural Medicine (ISBM)



European Heart Network (EHN)

European Association for the Study of Diabetes (EASD)



European Atherosclerosis Society (EAS)

International Diabetes Federation Europe (IDF-Europe)



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

European Stroke Initiative (EUSI)



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

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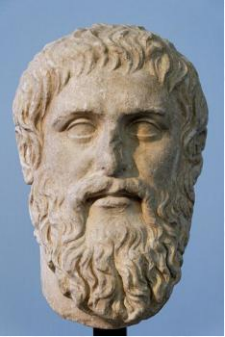
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1. What is CVD prevention
2. Why is CVD prevention needed
3. Who needs CVD prevention
4. How is CVD prevention applied
5. Where should CVD prevention be offered

Shorter, more adapted to clinical needs, practical

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”

A Dictionary of Epidemiology. 4th ed New York: Oxford University Press; 2001.

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, 43% are due to CVD in women and 36% 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 populationstudies

- **Conventional ESC method**
 - Evidence levels: A, B and C
 - Recommendation: I, IIa, IIb och III
 - RCT greatest weight
 - Population studies undervaluated
- **GRADE**
 - Recommendation: strong or weak
 - Strong: one should offer this treatment
 - Weak: one might wish to consider other options

For whom is CVD prevention needed

Recommendations regarding risk estimation	Class	Level	GRADE
Total risk estimation using multiple risk factors (such as SCORE) is recommended for asymptomatic adults without evidence of CVD	I	C	Strong
High-risk individuals can be detected on the basis of established CVD, diabetes type 2 or type 1 with end-organ damage, moderate to severe renal disease, very high levels of individual risk factors or a high SCORE risk	I	C	Strong

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 riskfactors and/or target organ damage (such as microalbuminuria: 30–300 mg/24 h)

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

A calculated SCORE $\geq 10\%$.

Joep Perk, Linnaeus University, Kalmar, Sweden

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 riskfactors or target organ damage.

Moderate chronic kidney disease (CKD) (glomerular filtration rate (GFR) 30-59 mL/min/1.73 m²).

A calculated SCORE of $\geq 5\%$ 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.

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Risk age, a new concept



www.heartscore.org: include HDL

www.escardio.org/guidelines

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Some major recommendations

European Heart Journal
doi:10.1093/eurheartj/ehs092

Recommendations regarding smoking	Class	Level	GRADE
All smoking is a strong and independent risk factor for CVD and has to be avoided.	I	B	strong
Exposure to passive smoking increases risk of CVD and has to be avoided.	I	B	strong
Young people have to be encouraged not to take up smoking.	I	C	strong
All smokers should be given advice to quit and be offered assistance.	I	A	strong

Recommendations regarding nutrition	Class	Level	GRADE
A healthy diet is recommended as being the cornerstone of CVD prevention	I	B	strong

- Saturated fatty acids to account for <10% of total energy intake, through replacement by polyunsaturated fatty acids.
- Trans unsaturated fatty acids: as little as possible, preferably no intake from processed food, and <1% of total energy intake from natural origin
- <5 g of salt per day.
- 30–45 g of fibre per day, from wholegrain products, fruits and vegetables.
- 200 g of fruit per day (2-3 servings).
- 200 g of vegetables per day (2-3 servings).
- Fish at least twice a week, one of which to be oily fish.
- Consumption of alcoholic beverages should be limited to 2 glasses per day (20 g/d of alcohol) for men and 1 glass per day (10 g/d of alcohol) for women.

Recommendations regarding physical activity	Class	Level	GRADE
<p>Healthy adults of all ages have to spend 2.5-5 hours a week on physical activity or aerobic exercise training of at least moderate intensity, or 1-2.5 hours a week on vigorous intense exercise.</p> <p>Sedentary subjects should be strongly encouraged to start light-intensity exercise programmes.</p>	I	A	strong

Recommendations on blood pressure	Class	Level	GRADE
Lifestyle measures such as weight control, increased physical activity, alcohol moderation, sodium restriction, and increased consumption of fruits, vegetables, and low-fat dairy products are recommended in all patients with hypertension and in individuals with high normal BP.	I	B	strong
All major antihypertensive drug classes (i.e. diuretics, ACE inhibitors, calcium antagonists, angiotensin receptor antagonists and beta-blockers) do not differ significantly in their BP-lowering efficacy and thus should be recommended for the initiation and maintenance of antihypertensive treatment	I	A	strong
Systolic BP should be lowered to <140 mmHg (and DBP <90 mmHg) in all hypertensive patients.	IIa	A	strong

Recommendations on diabetes mellitus	Class	Level	GRADE
The target HbA _{1c} for the prevention of CVD in diabetes of < 7.0% (<53 mmol/mol) is recommended.	I	A	Strong
Statins are recommended to reduce cardiovascular risk in diabetes.	I	A	Strong
BP targets in diabetes are recommend to be <140/80 mmHg	I	A	Strong

Very high risk: target levels LDL

Subjects with any of the following:

Documented CVD, previous myocardial infarction, ACS, coronary and other arterial revascularization procedures, ischaemic stroke, peripheral artery disease.

Diabetes mellitus (type 1 or type 2) with one or more CV riskfactors and/or target organ damage

Severe chronic kidney disease

A calculated SCORE $\geq 10\%$.

The LDL-C goal is < 1.8 mmol/L and/or $\geq 50\%$ LDL-C reduction when target level cannot be reached.

Other risk groups, target levels

High risk

Markedly elevated single risk factors such as familial dyslipidaemias and severe hypertension.

Diabetes mellitus (type 1 or type 2) but without CV riskfactors or target organ damage.

Moderate chronic kidney disease

SCORE: $\geq 5\%$ and $< 10\%$ for 10-year risk of fatal CVD.

Moderate risk

SCORE: ≥ 1 and $< 5\%$

In patients at HIGH CV risk an LDL-C goal < 2.5 mmol/L should be considered.

In subjects at MODERATE risk an LDL-C goal < 3.0 mmol/L should be considered.

Recommendations on patients' adherence	Class^a	Level^b	GRADE
Physicians must assess adherence to medication, and identify reasons for non-adherence in order to tailor further interventions to the individual needs of the patient or person at risk	I	A	Strong
In clinical practice, reducing dosage demands to the lowest acceptable level is recommended. In addition, repetitive monitoring and feedback should be implemented. If feasible, multisession or combined behavioural interventions should be offered in case of persistent non-adherence	IIa	A	Strong

Where should CVD prevention programmes be offered?

European Heart Journal
doi:10.1093/eurheartj/ehs092

Recommendations on programme provision	Class^a	Level^b	GRADE
Actions to prevent CVD should be incorporated into everyone's daily lives, starting in early childhood and continuing throughout adulthood and senescence.	IIa	B	Strong
Nurse-coordinated prevention programmes should be well integrated into healthcare systems.	IIa	B	Strong
All patients with CVD must be discharged from hospital with clear guideline-orientated treatment recommendations to minimize adverse events.	I	B	Strong
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	IIa	B	Strong

Key messages

- **Risk factor screening** including the lipid profile may be considered in adult men ≥ 40 years old and in women ≥ 50 years of age or postmenopausal
- 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
- The practising cardiologist should regularly review the discharge recommendations of the hospital after a cardiac event or intervention
- 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

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Thank you!