EUROASPIRE II

European Action on Secondary and Primary Prevention through Intervention to Reduce Events

Euro Heart Survey Programme
European Society of Cardiology-ESC
Task Force Report

Prevention of coronary heart disease in clinical practice

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

†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

Prepared by David Wood, Guy De Backer, Ole Faergeman, Ian Graham, Giuseppe Mancia and Kalevi Pyörälä together with members of the Task Force
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
   - patients with early-onset CHD or atherosclerotic disease
   - healthy individuals at particularly high risk

4. Other individuals met in connection with ordinary clinical practice
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 secondary and primary prevention of CHD (2)

Other prophylactic drug therapies

- **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 thromboembolic events

- **Primary prevention**
  Aspirin (75 mg) in treated hypertensive patients and in men at particularly high CHD risk
Screen close relatives of

* Patients with premature CHD (men < 55 yr and women < 65 yr)

* Patients with suspected familial dyslipidaemias
To determine in patients with CHD whether the major risk factors for recurrent CHD are being effectively managed by lifestyle and, when appropriate, drug therapy.
Patients hospitalised because of

1) First elective or emergency **CABG**
2) First elective or emergency **PTCA**, no previous **CABG**
3) **AMI**, no previous **CABG** or **PTCA**
4) **Acute myocardial ischaemia**, no previous **CABG**, **PTCA** or **AMI**
Study population

- Consecutive patients, aged < 71 yrs, hospitalised in the period from 1st January 1997 to at least 6 months prior to the interview
- Interviews: September 1999 - February 2000
- Median time between index event and interview: 1.44 yrs (interquartile range 0.96 - 1.95 yrs)
## Participating centres

<table>
<thead>
<tr>
<th>Code</th>
<th>Country</th>
<th>Cities</th>
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<td>Ghent</td>
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Number of interviewed patients

by center

Total = 5,556 patients
<table>
<thead>
<tr>
<th>Center</th>
<th>% Smoking*</th>
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<td><strong>ALL</strong></td>
<td><strong>21</strong></td>
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</tbody>
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* self-reported and/or CO in breath > 10 ppm
Distribution of BMI at interview by center

EUROASPIRE

BEL/GHE

CZE/PP

FIN/KUO

FRA/LLRT

GER/MUNS

GRE/ATCI

HUN/BUD

IRE/DUB

ITA/TV

NET/ROT

POL/CRA

SLO/LJU

SPA/BAR

SWE/MAL

UK/HL

ALL

≥ 30 kg/m²

25–30 kg/m²

0 20 40 60 80 100

BEL/GHE

CZE/PP

FIN/KUO

FRA/LLRT

GER/MUNS

GRE/ATCI

HUN/BUD

IRE/DUB

ITA/TV

NET/ROT

POL/CRA

SLO/LJU

SPA/BAR

SWE/MAL

UK/HL

ALL

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% raised blood pressure* at interview
by center

EUROASPIRE

BEL/GHE 44
CZE/PP 42
FIN/KUO 50
FRA/LLRT 55
GER/MUNS 63
GRE/ATCI 48
HUN/BUD 37
IRE/DUB 48
ITA/TV 49
NET/ROT 52
POL/CRA 48
SLO/LJU 62
SPA/BAR 43
SWE/MAL 62
UK/HL 52
ALL 51

* systolic BP ≥ 140 mmHg and/or diastolic BP ≥ 90 mmHg

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Therapeutic control of blood pressure at interview

% reaching goal* at interview among those using BP lowering medication by center

* systolic BP < 140 mmHg and diastolic BP < 90 mmHg

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% total cholesterol ≥ 5 mmol/l at interview by center

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- BEL/GHE: 77%
- CZE/PP: 73%
- FIN/KUO: 43%
- FRA/LLRT: 60%
- GER/MUNS: 66%
- GRE/ATCI: 65%
- HUN/BUD: 60%
- IRE/DUB: 54%
- ITA/TV: 57%
- NET/ROT: 57%
- POL/CRA: 64%
- SLO/LJU: 68%
- SPA/BAR: 53%
- SWE/MAL: 40%
- UK/HL: 54%
- ALL: 58%

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Therapeutic control of total cholesterol at interview

% reaching goal* at interview among those using lipid-lowering medication

by center

BEL/GHE 39
CZE/PP 31
FIN/KJO 70
FRA/LLRT 44
GER/MUNS 41
GRE/ATCI 42
HUN/BUD 48
IRE/DUB 55
ITA/TV 49
NET/ROT 66
POL/CRA 49
SLO/LJU 41
SPA/BAR 52
SWE/MAL 65
UK/HL 54
ALL 51

* total cholesterol < 5 mmol/l

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% self-reported diabetes at interview by center

- BEL/GHE: 14%
- CZE/PP: 22%
- FIN/KUO: 19%
- FRA/LLRT: 28%
- GER/MUNS: 14%
- GRE/ATCI: 21%
- HUN/BUD: 21%
- IRE/DUB: 9%
- ITA/TV: 22%
- NET/ROT: 13%
- POL/CRA: 15%
- SLO/LJU: 24%
- SPA/BAR: 35%
- SWE/MAL: 14%
- UK/HL: 21%
- ALL: 20%
% aspirin/other anti-platelets at interview by center

BEL/GHE: 90%
CZE/PP: 88%
FIN/KUO: 82%
FRA/LLRT: 86%
GER/MUNS: 86%
GRE/ATCI: 92%
HUN/BUD: 75%
IRE/DUB: 93%
ITA/TV: 92%
NET/ROT: 81%
POL/CRA: 87%
SLO/LJU: 82%
SPA/BAR: 86%
SWE/MAL: 92%
UK/HL: 81%
ALL: 86%
% beta-blockers at interview by center

EUROASPIRE

BEL/GHE
CZE/PP
FIN/KUO
FRA/LLRT
GER/MUNS
GRE/ATCI
HUN/BUD
IRE/DUB
ITA/TV
NET/ROT
POL/CRA
SLO/LJU
SPA/BAR
SWE/MAL
UK/HL
ALL

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% ACE inhibitors at interview

by center

EUROASPIRE

BEL/GHE: 30
CZE/PP: 47
FIN/KUO: 24
FRA/LLRT: 39
GER/MUNS: 45
GRE/ATCI: 32
HUN/BUD: 57
IRE/DUB: 27
ITA/TV: 52
NET/ROT: 38
POL/CRA: 48
SLO/LJU: 59
SPA/BAR: 22
SWE/MAL: 19
UK/HL: 27
ALL: 38

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% lipid-lowering drugs at interview

by center

EUROASPIRE

BEL/GHE 49
CZE/PP 57
FIN/KUO 64
FRA/LURT 68
GER/MUNS 68
GRE/ATCI 47
HUN/BUD 51
IRE/DUB 62
ITA/TV 60
NET/ROT 76
POL/CRA 42
SLO/LJU 58
SPA/BAR 65
SWE/MAL 77
UK/HL 69
ALL 61
% anti-coagulants at interview by center

- BEL/GHE: 3%
- CZE/PP: 4%
- FIN/KUO: 11%
- FRA/LLRT: 3%
- GER/MUNS: 5%
- GRE/ATCI: 4%
- HUN/BUD: 11%
- IRE/DUB: 4%
- ITA/TV: 1%
- NET/ROT: 16%
- POL/CRA: 6%
- SLO/LJU: 9%
- SPA/BAR: 6%
- SWE/MAL: 9%
- UK/HL: 4%
- ALL: 7%
Conclusions

- A high prevalence of unhealthy lifestyles, modifiable risk factors and inadequate use of prophylactic drug therapies is found in coronary patients across Europe.

- Considerable potential to raise the standard of preventive cardiology exists throughout Europe in order to reduce coronary morbidity and mortality.
EUROASPIRE II

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