

**Depression, isolation,
social support and
cardiovascular rehabilitation
in older adults**

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**EuroPrevent 2010
Prague**

some data to the
actual situation

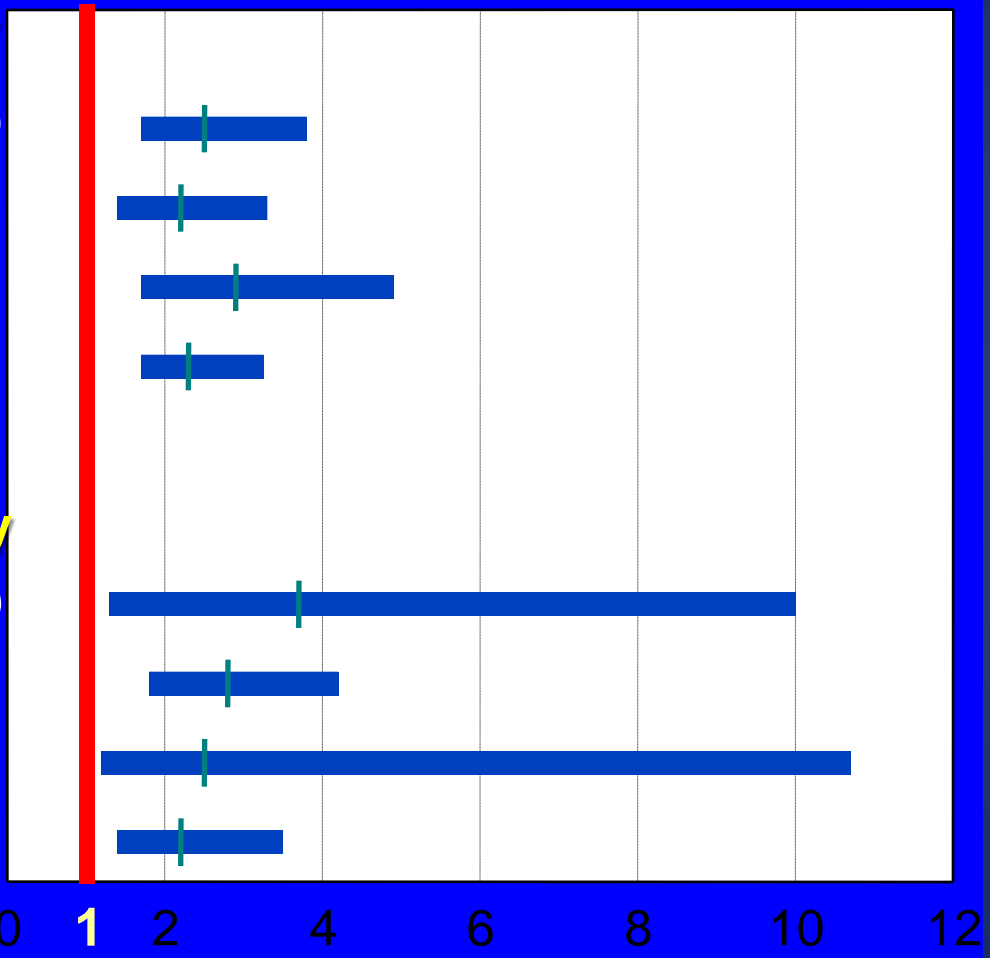
Depression increases mortality after myocardial infarction

Total mortality

- Major depression (5; 1779)
- depressive symptoms (5; 1470)
- Short follow-up (6; 1478)
- Long follow-up (6; 2501)

Cardiac mortality

- Major depression (1; 222)
- Depressive symptoms (6; 2665)
- Short follow-up (3; 1060)
- Long follow-up (5; 2116)

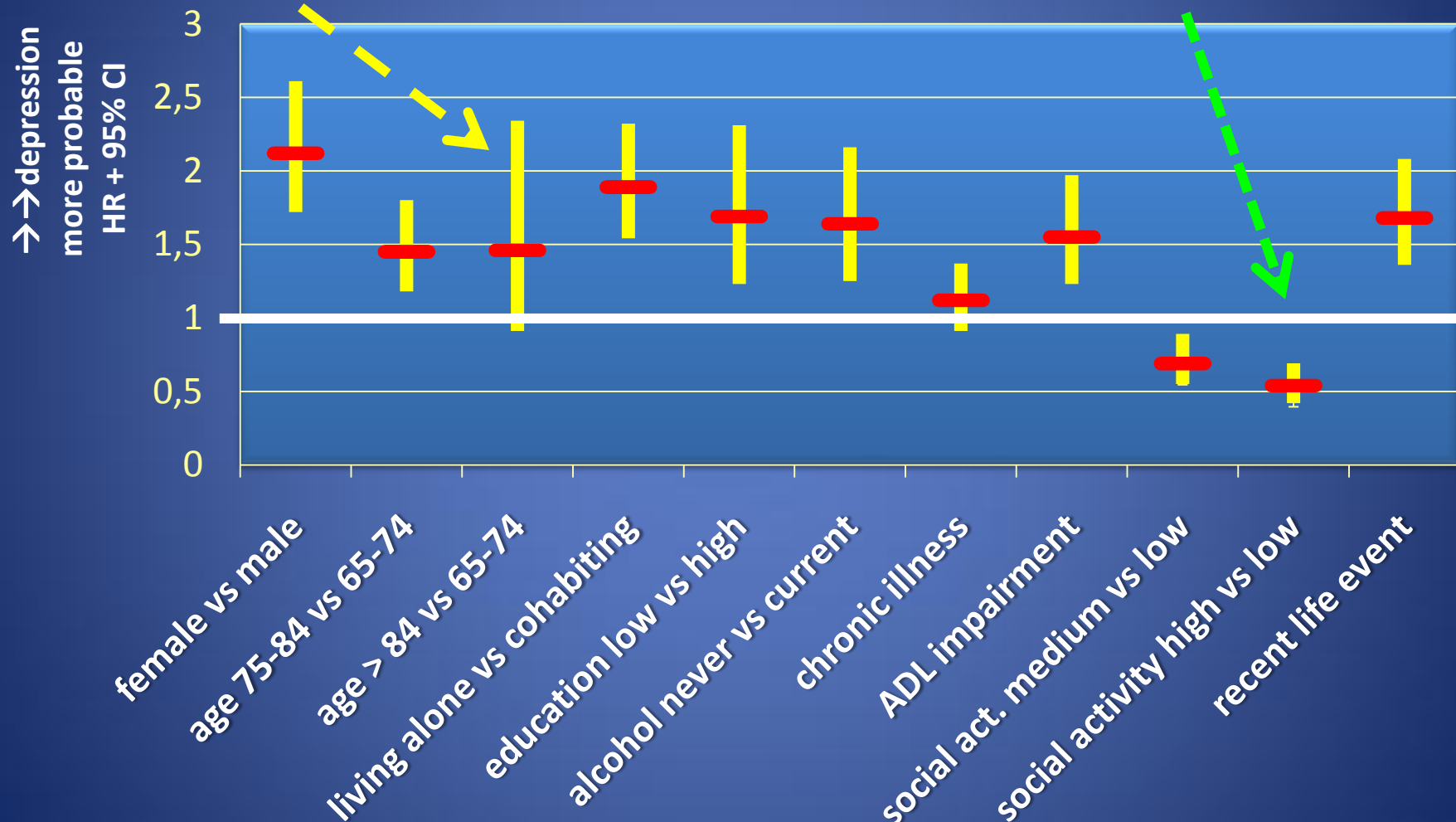


Risk lower ← ← ← → → → Risk higher

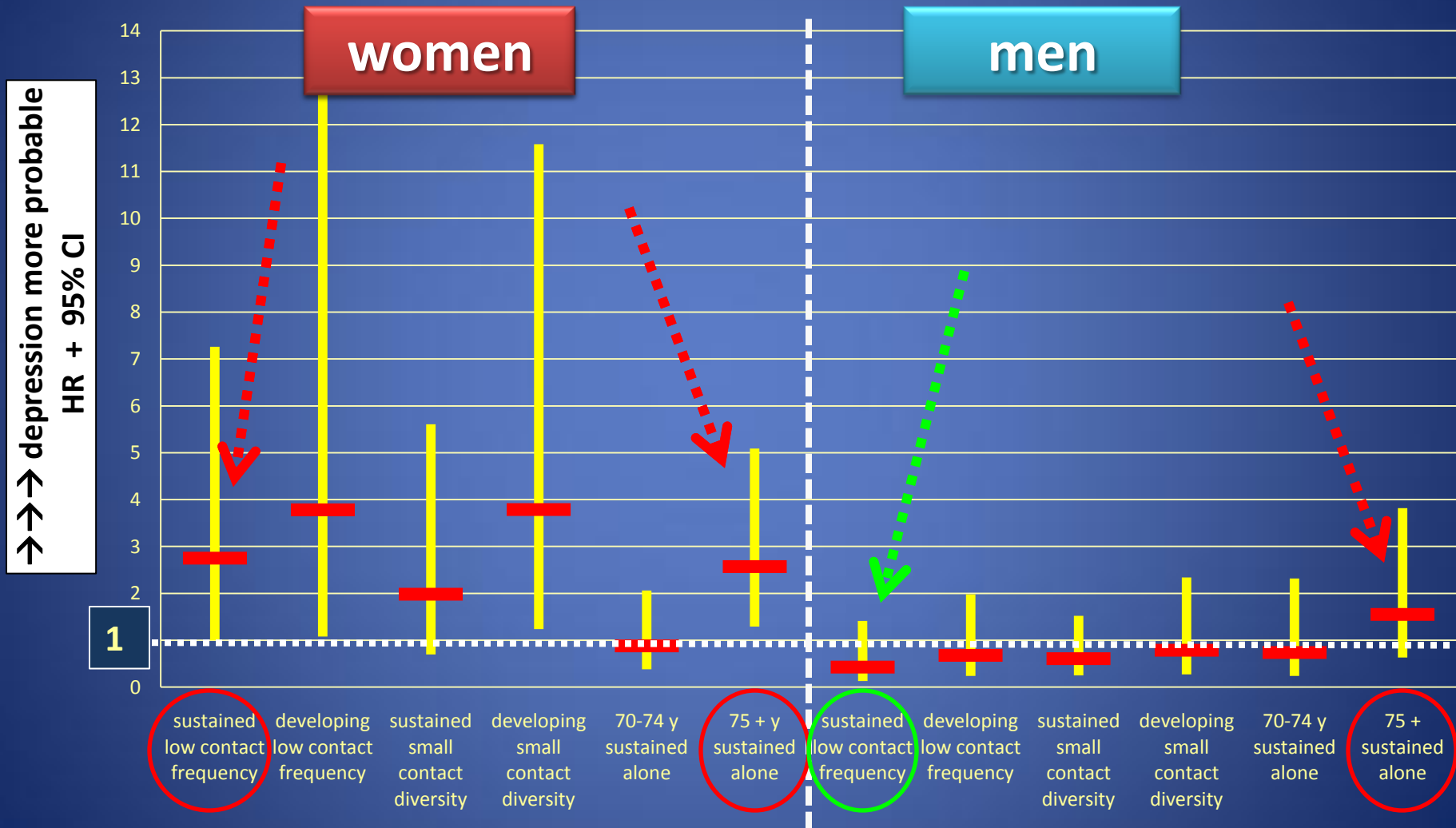
About what we all know: disease and symptoms „trigger“ depression

	BDI \geq 14 (%)	BDI < 14 (%)	OR (95% - CI)
AMI in history	16.3	11.8	1.46 (1.04-2.05)
hypercholesterinemia	59.3	48.2	1.57 (1.22-2.01)
diabetes	34.0	25.1	1.54 (1.18-1.99)
smokers	42.3	34.7	1.38 (1.08-1.77)
angina pectoris 12 months follow-up	18.3	9.7	2.08 (1.50-2.90)
no dyspnoe 12 months follow-up	62.7	78.4	0.46 (0.36-0.60)
dyspnoe NYHA II 12 months follow-up	30.7	18.8	1.91 (1.46-2.51)
dyspnoe NYHA III 12 months follow-up	6.3	2.8	1.91 (1.46-2.51)
heart failure during 12 mo follow-up	35.8	19.0	2.39 (1.83-3.12)

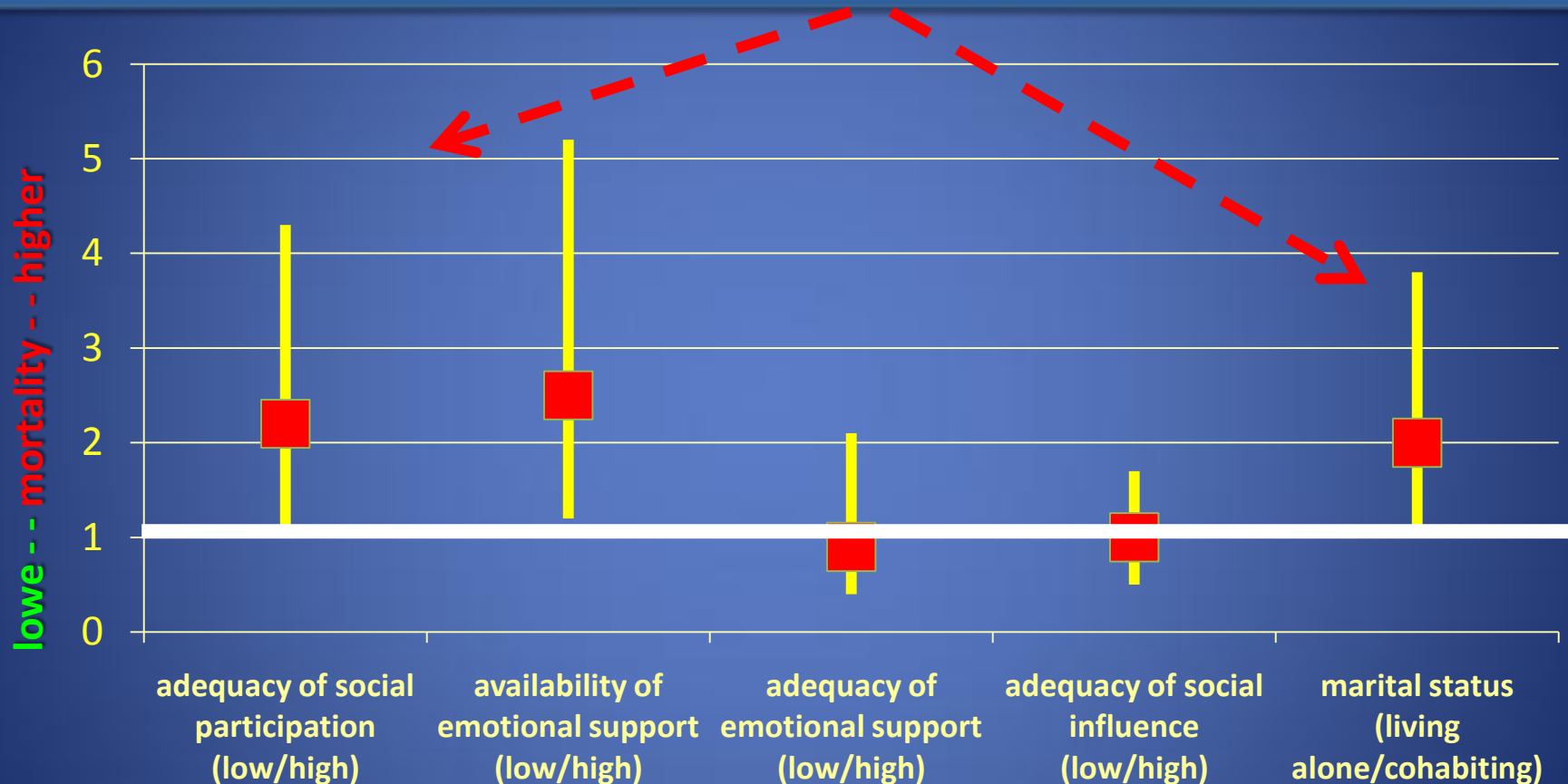
But → **living alone** also is associated with a higher prevalence of **depressive symptoms in older people** -
 in contrast: **high social activity may protect**



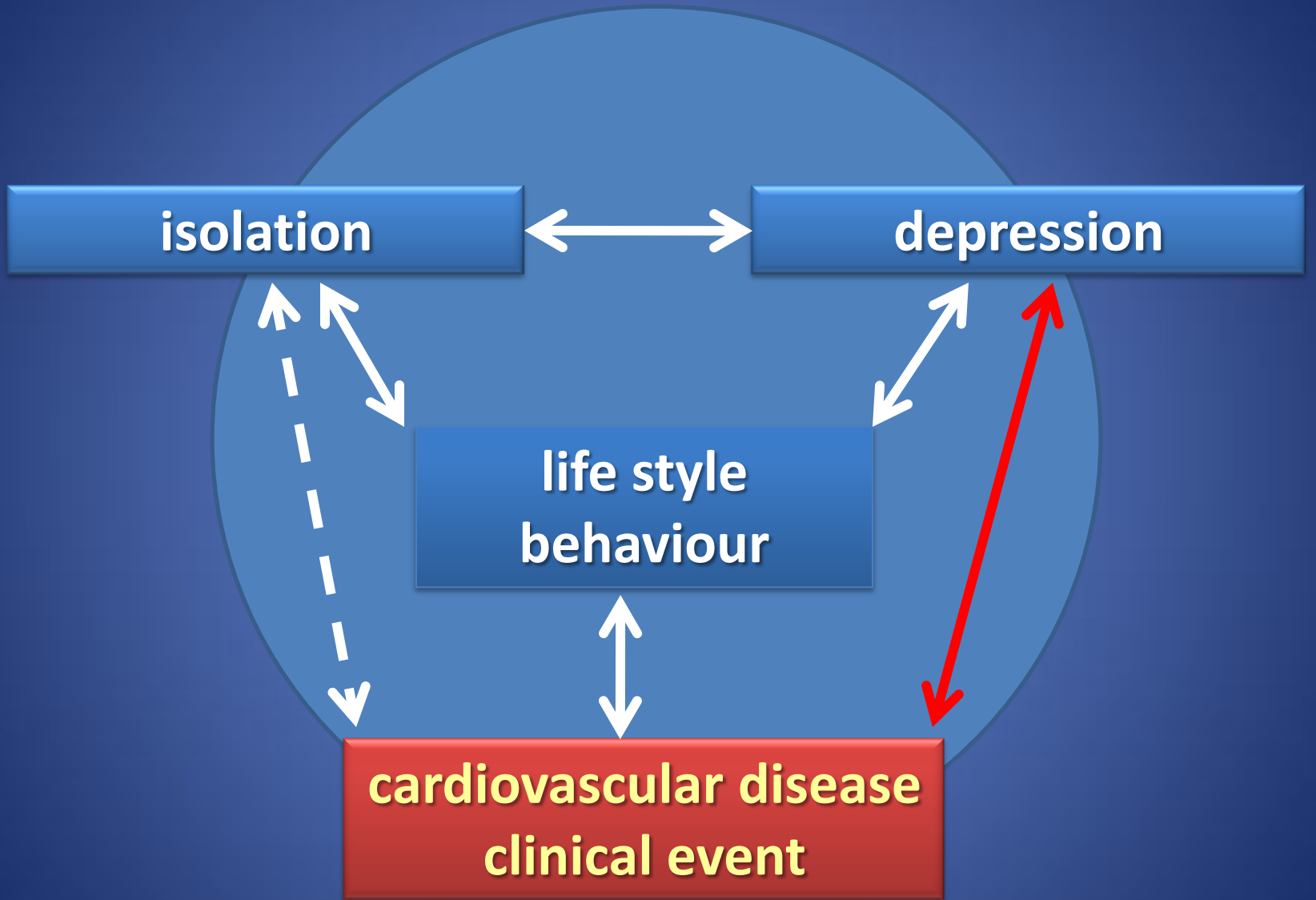
The effect of **social contact** on the **development of depression** in older people depends on **gender and age**



Lack of **social network** and social support increases **all-cause mortality in elderly men**

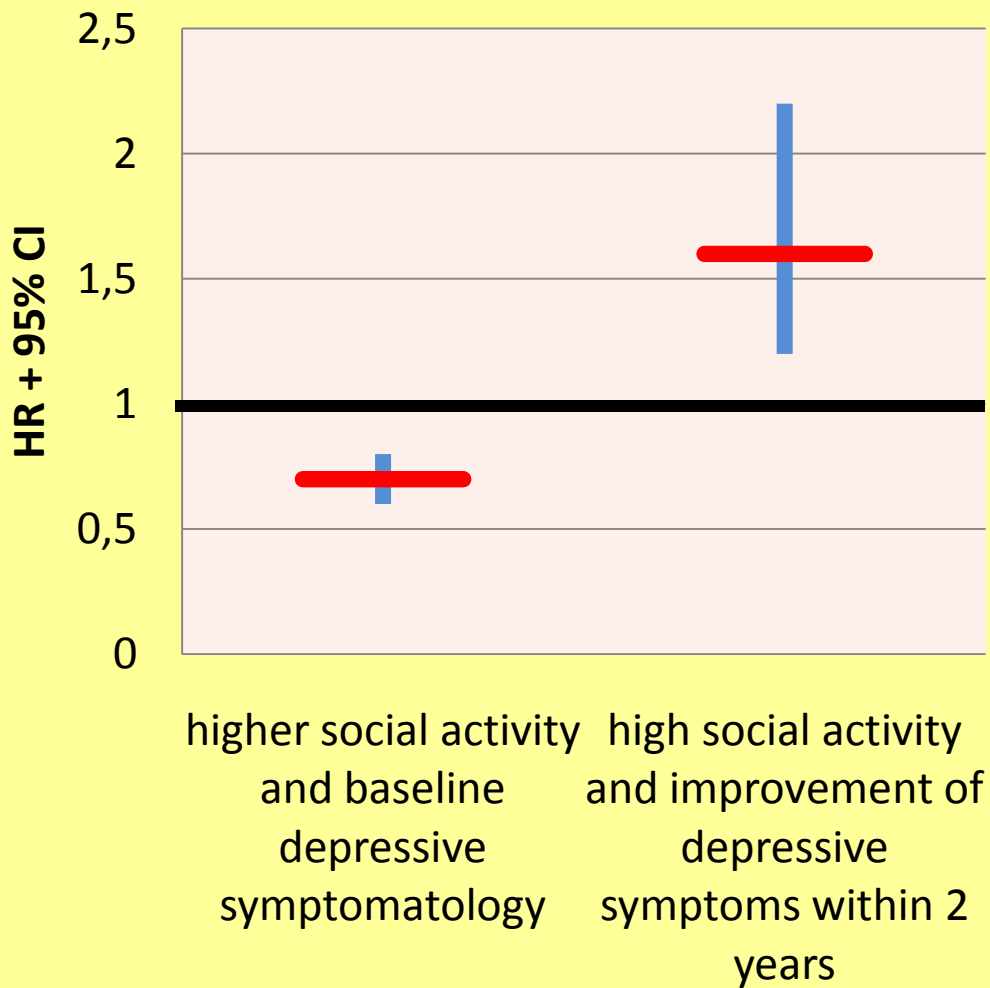


Analysis of 485 men, born in 1914 in Malmö, Sweden; cross-sectional sample in 1969 and in 1982,



some aspects to the
therapeutic options

Higher social activity may improve depression in older people



→ Montpellier district France

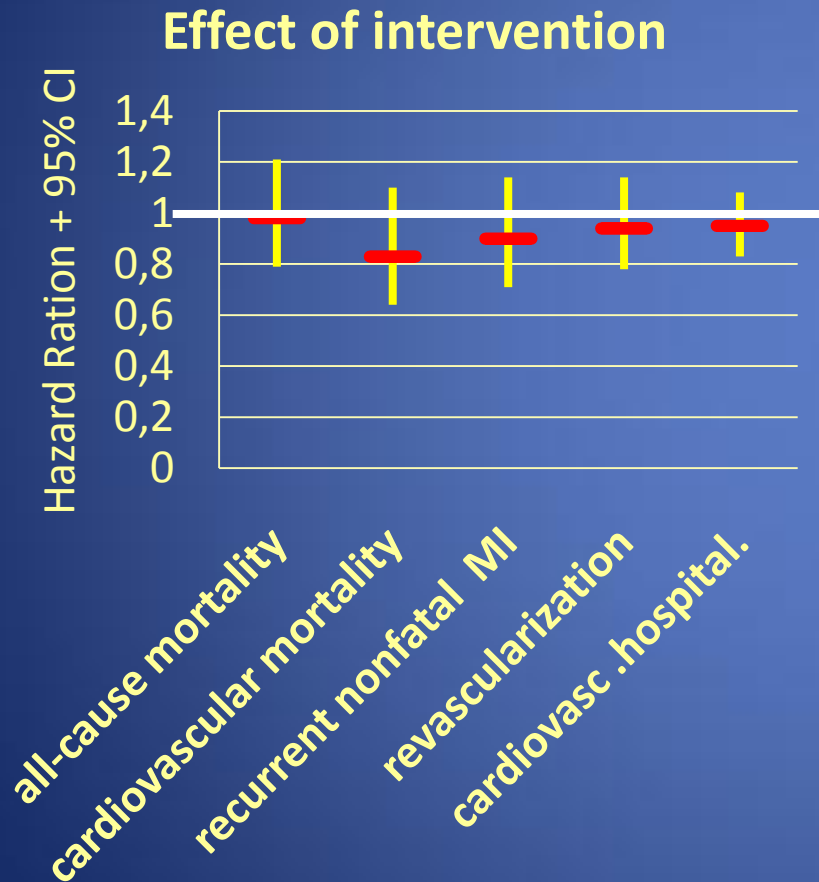
→ Community residents ≥ 65 years randomly selected between March 1999 – Febr 2001

→ n = 1,849

Male = 780 (depressive 21.7%)

Female = 1,069 (depressive 37.0%)

Effects of treating depression and low perceived social support on clinical events after myocardial infarction (ENRICHD)

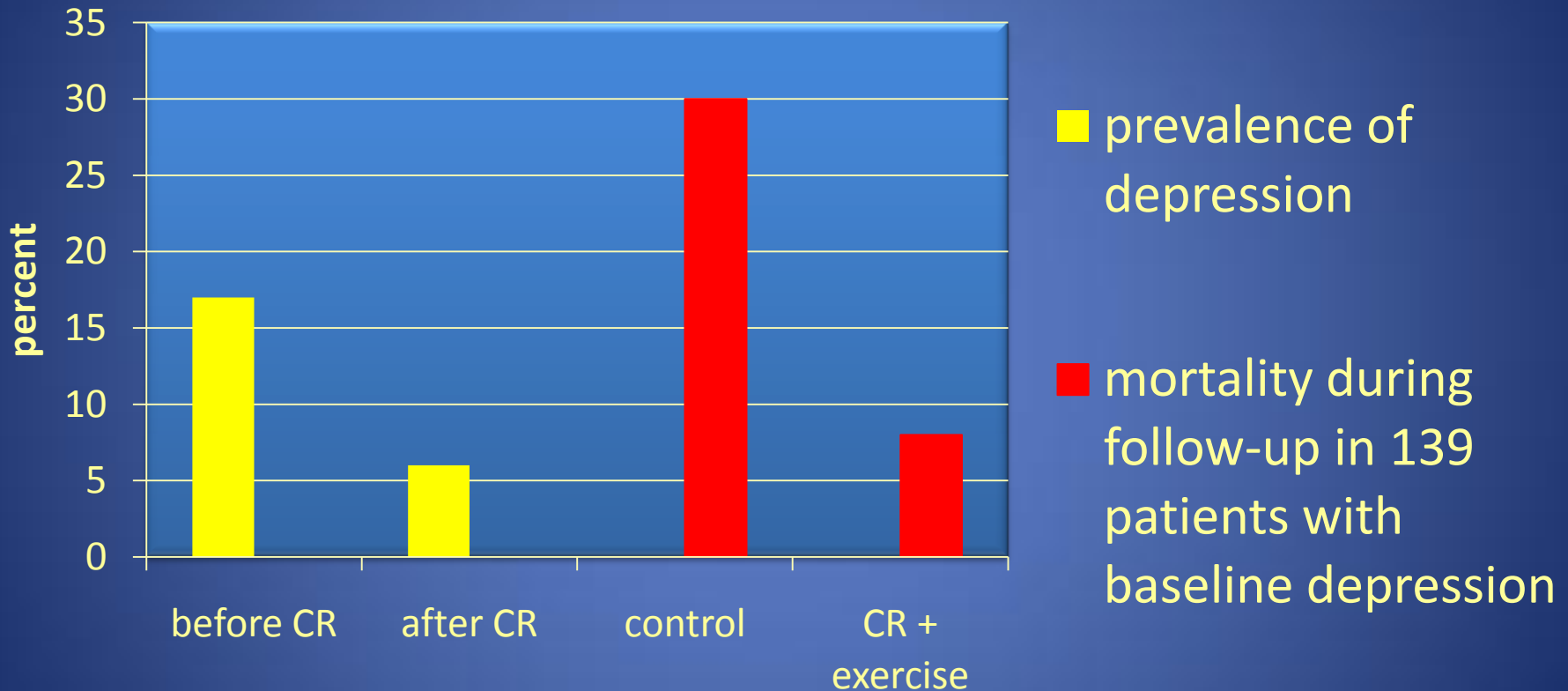


- Interventions randomized to usual care:
 - Cognitive behaviour therapy at least 6 months as soon as possible after MI
 - Social support interventions
 - + sertraline, if indicated in patients with high depression scores
- Treatment n=1,243; control n=1,238

→ Improvement of depression and social isolation

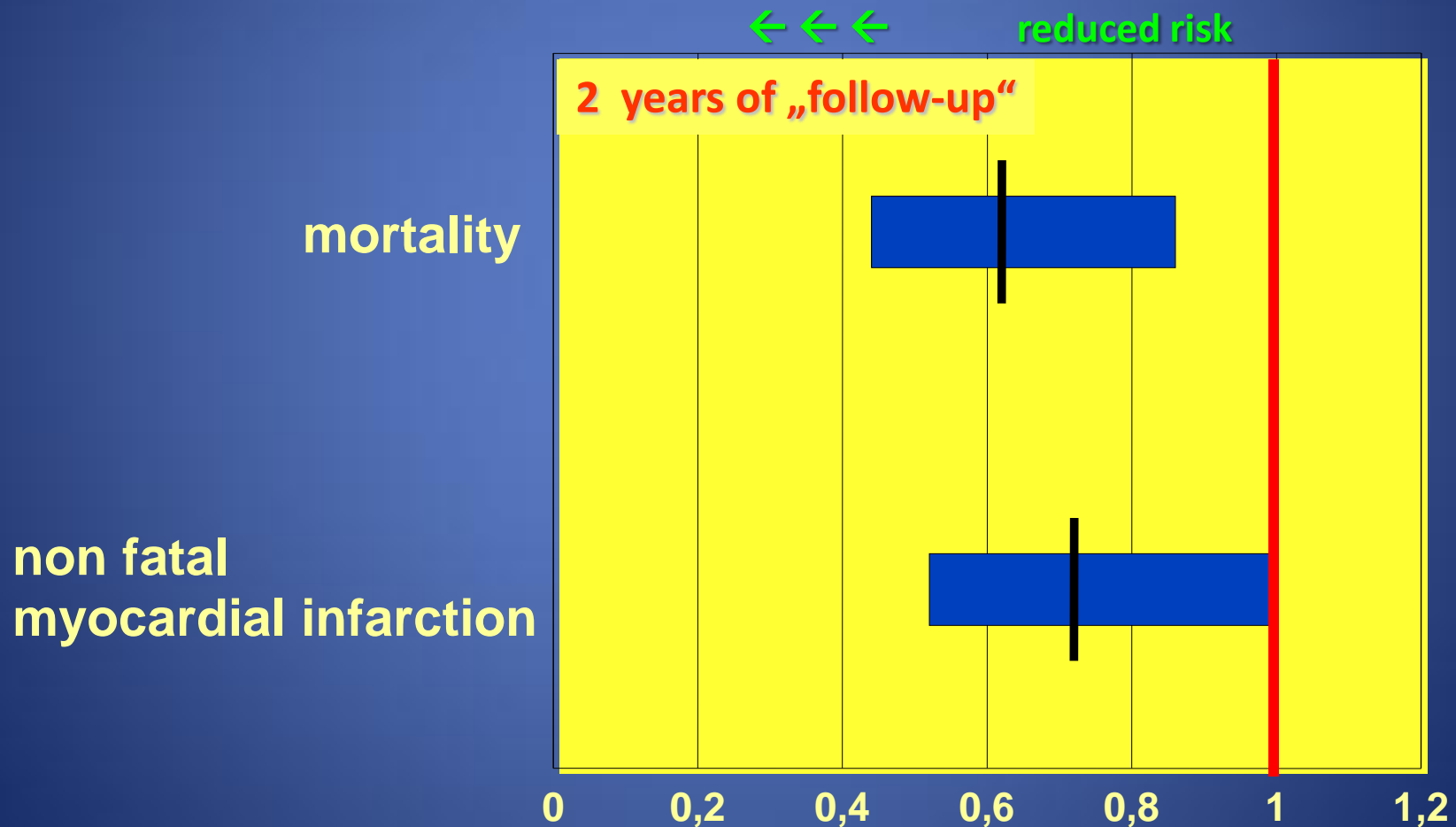
→ No effect on clinical events

But → cardiac rehabilitation (CR) may reduce not only depression but also mortality

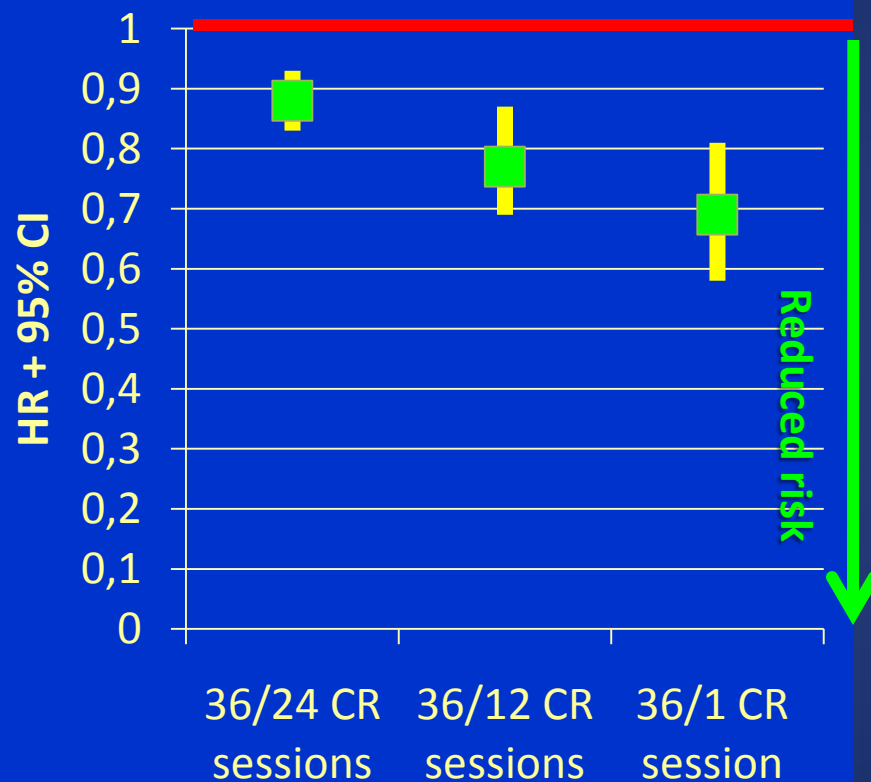


- Coronary patients, n = 522, 381 men, 141 woman, age 64 ± 10 years, 2000-2005
- Control group, n = 179 not completing CR
- Mean follow-up $1,296 \pm 551$ days

Physical exercise following myocardial infarction
improves **prognosis** in patients
with **depression** and/or **low social support**

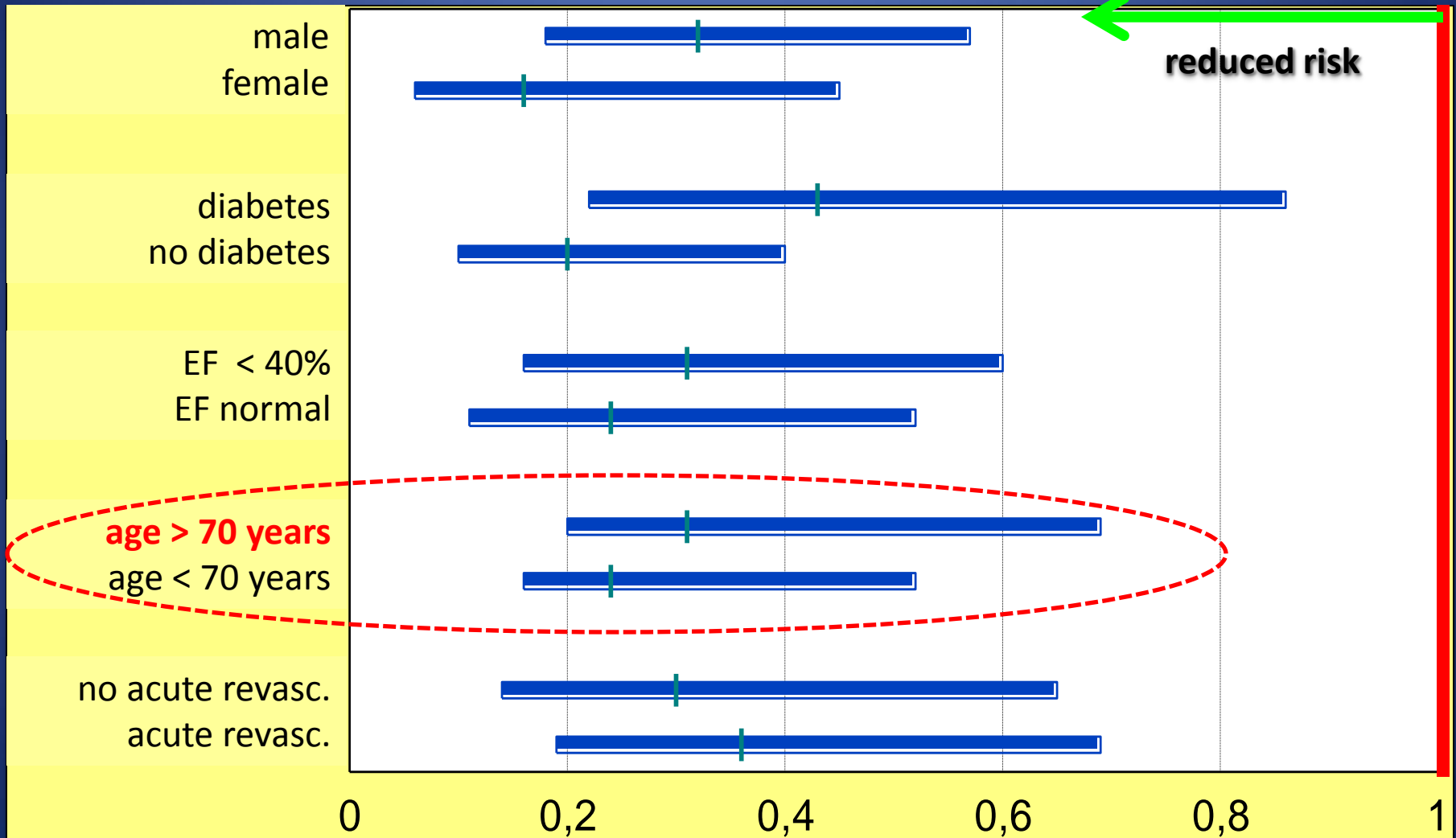


Cardiac rehabilitation (CR) and long-term risks of death and myocardial infarction among elderly



30,161 patients with at least 1 CR session between Jan 2000 – Dec 2005; age 70-78; male 63.8%; CR indication: CABG, MI, stable angina, others; **follow-up 4 years after index date**

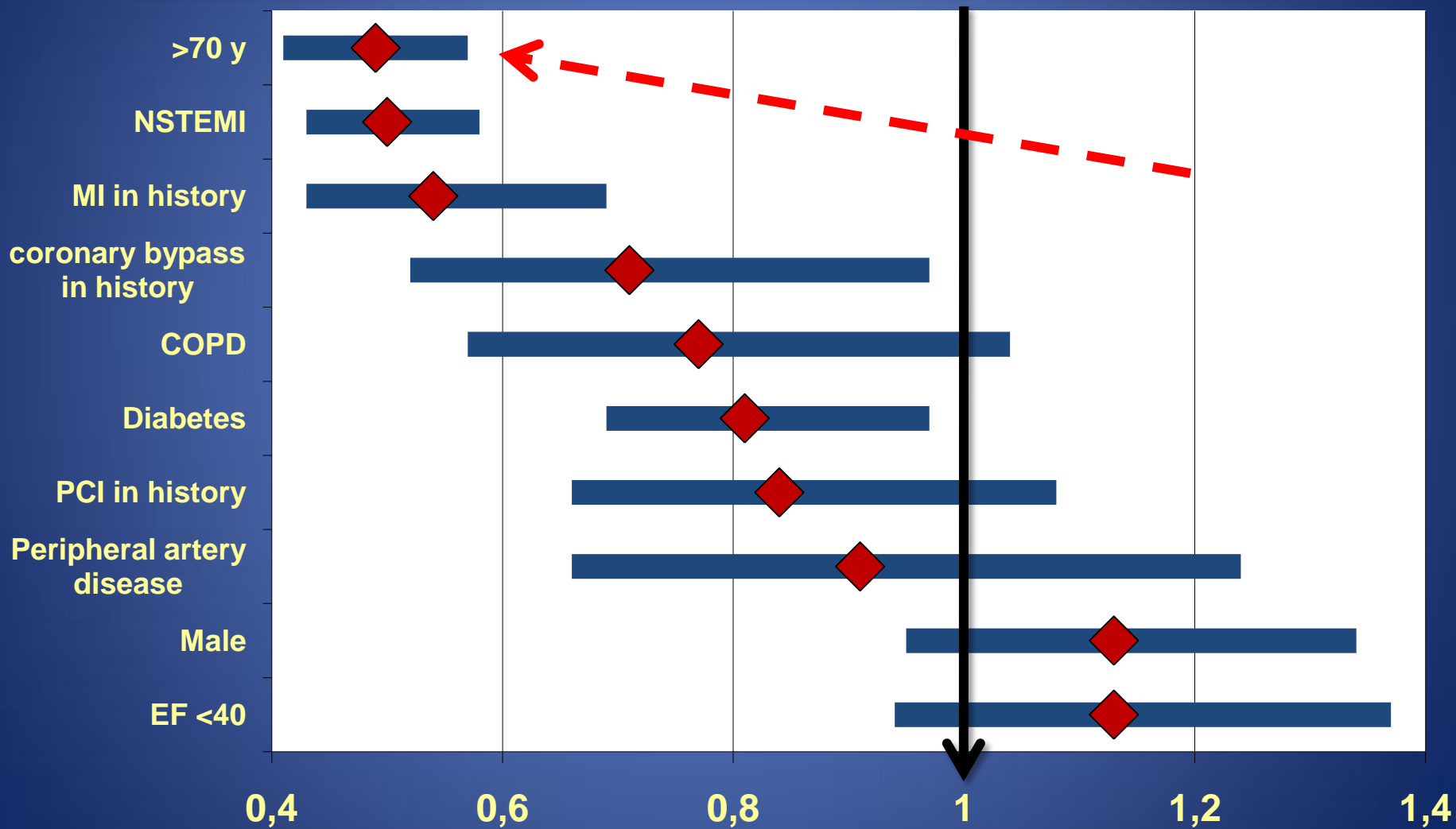
The association of reduced mortality with the attendance to CR also can be demonstrated in old patients



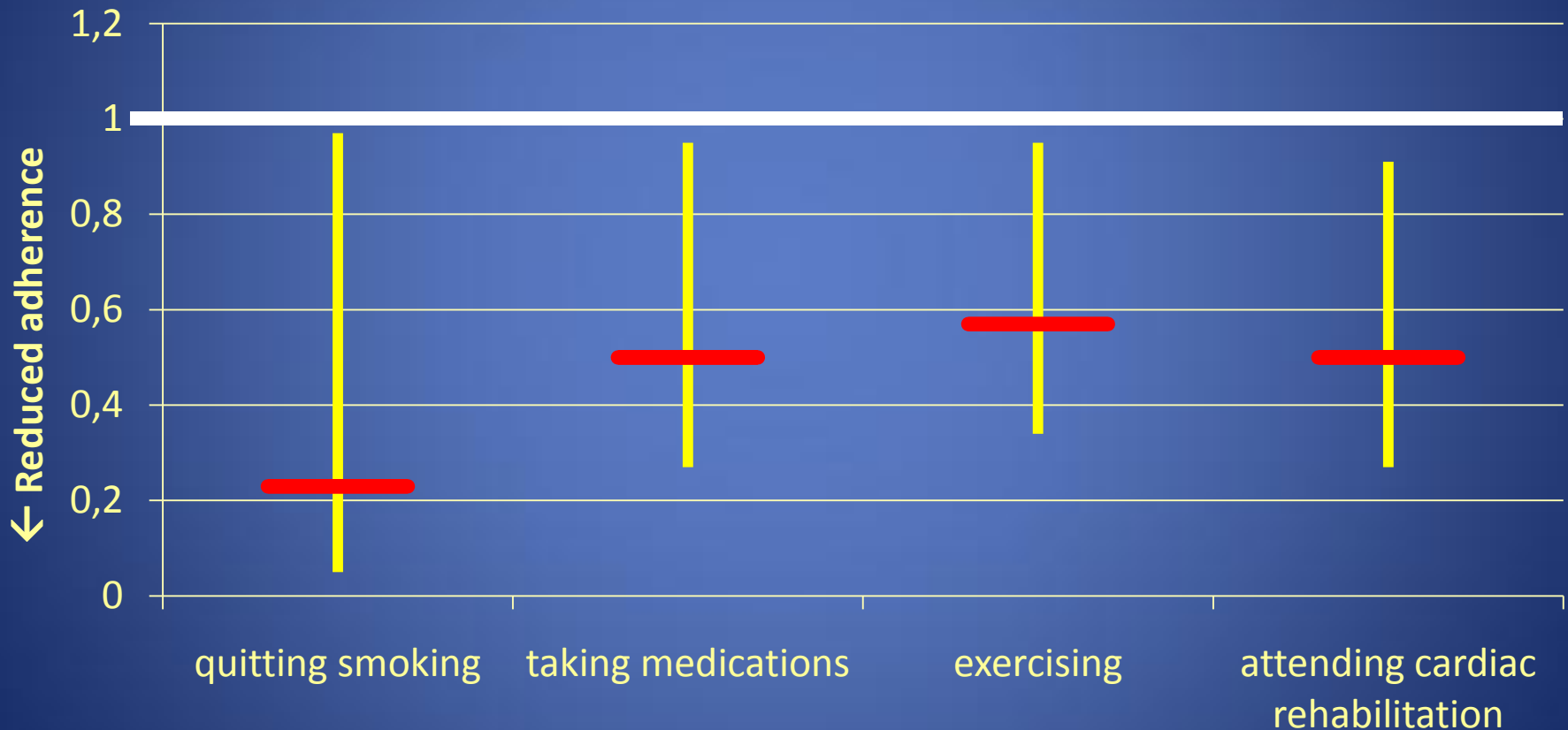
Subgroup analysis of the OMEGA-study; observation period 4-12 months after acute MI

Rauch B et al. for the OMEGA Study Group 2010

But, **advanced age** appears to be an independent predictor **not to attend CR** in patients after AMI



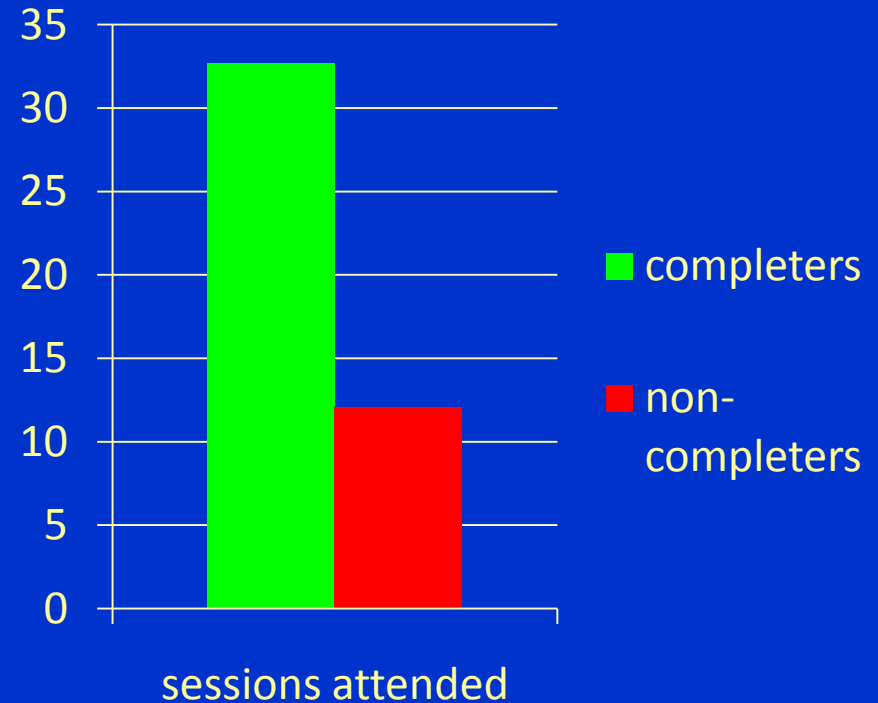
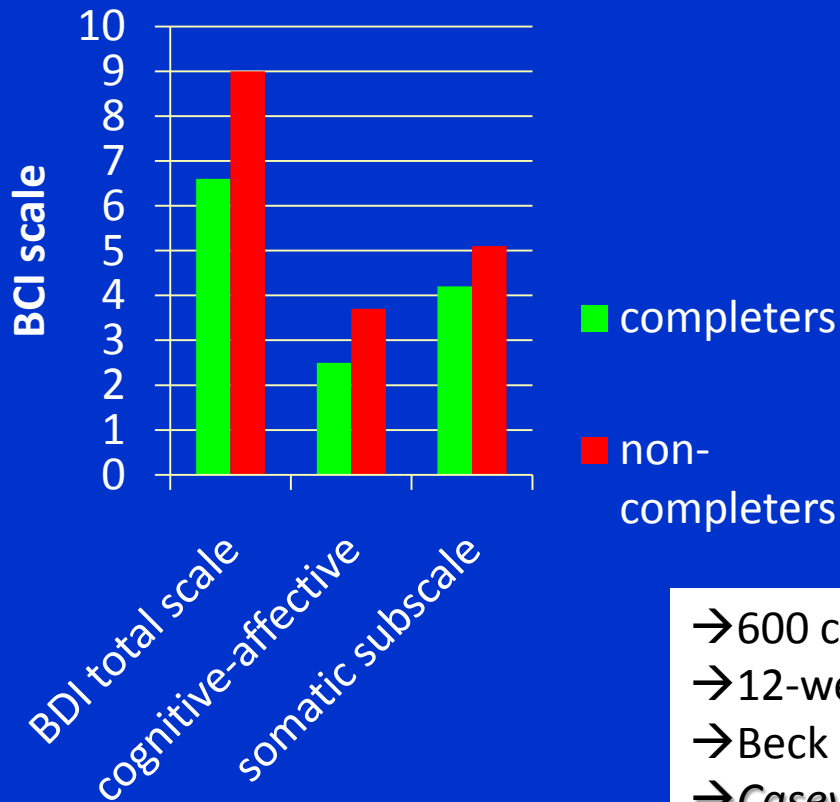
Moreover, persistent depression **reduces adherence to secondary prevention** after acute coronary syndromes



N = 492 patients after ACS, 3 months follow-up; Kronish IM et al., J Gen Intern Med 2006

Finally, depressive patients show **reduced compliance to CR**

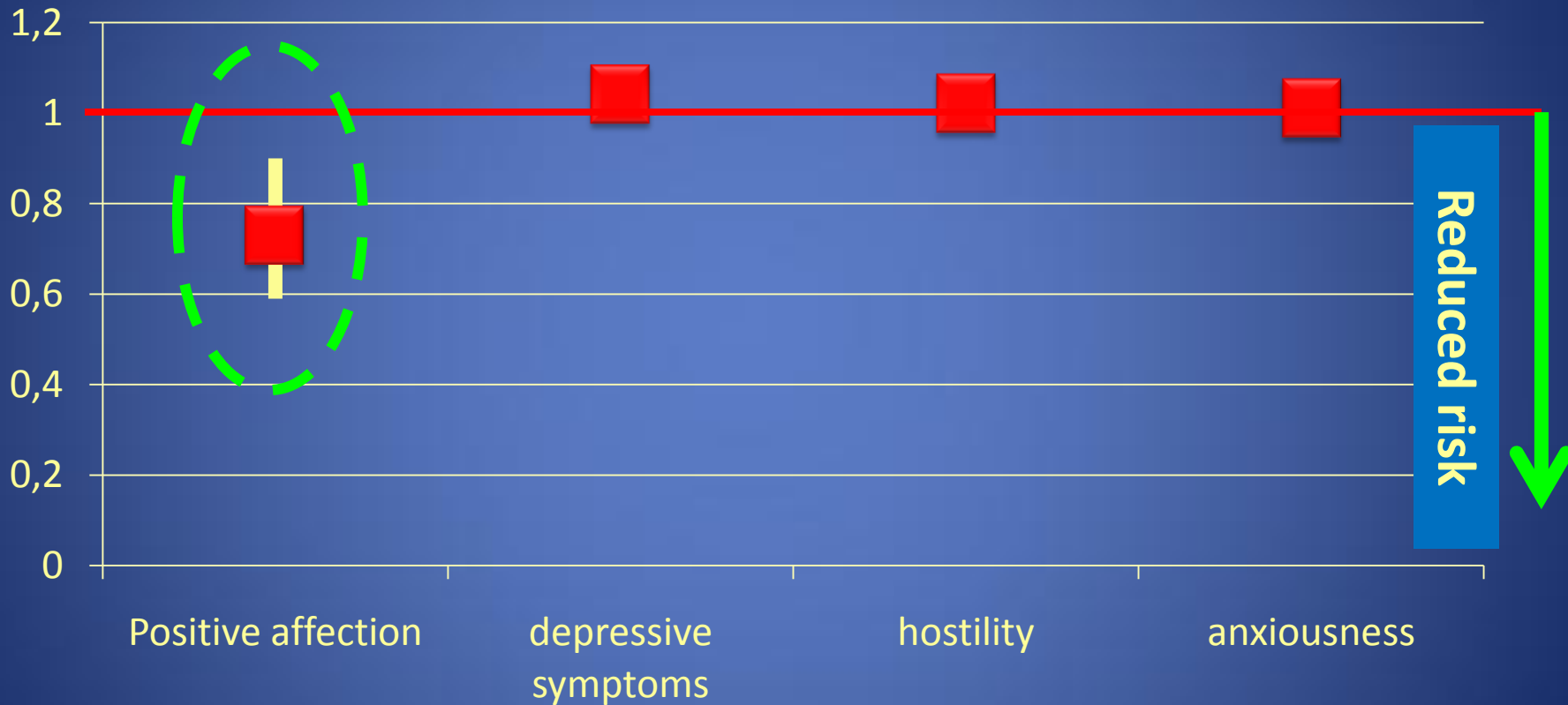
Non-completers show an elevated BDI-score, if compared to completers



- 600 cardiac patients, 70% men, average age 66 years
- 12-week phase II cardiac rehabilitation
- Beck Depression Inventory (BDI)
- Casey et al., J Behav Med 2008

NOTE THE POSITIVE: „Don`t worry, be happy“

10-years incidence of coronary events



Davidson KW, Eur Heart J 2009;
Canadian Nova Scotia Health Survey,
follow-up 1995-2005, 145 CHD events, 14.916 person years

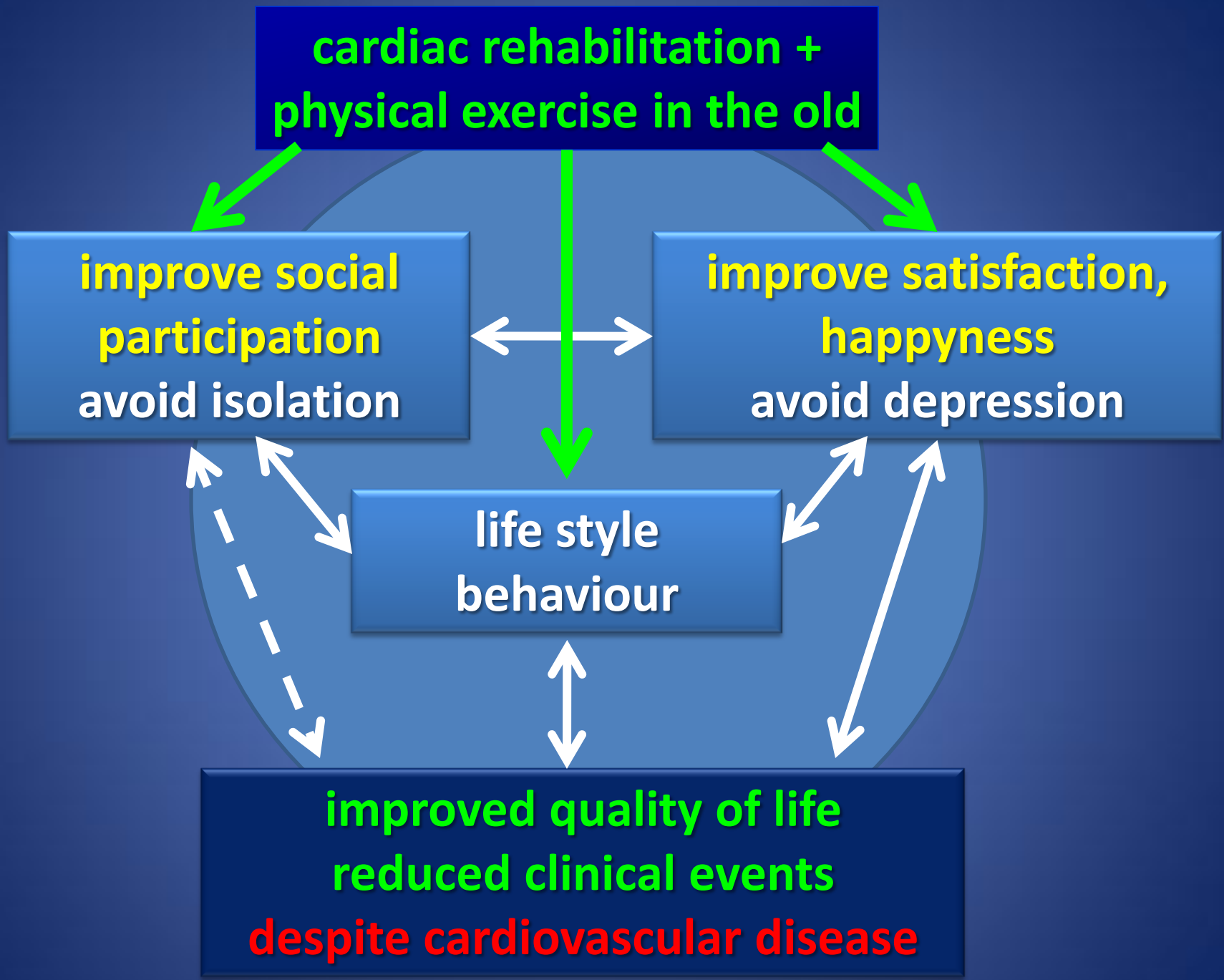
**cardiac rehabilitation +
physical exercise in the old**

**improve social
participation**
avoid isolation

**improve satisfaction,
happyness**
avoid depression

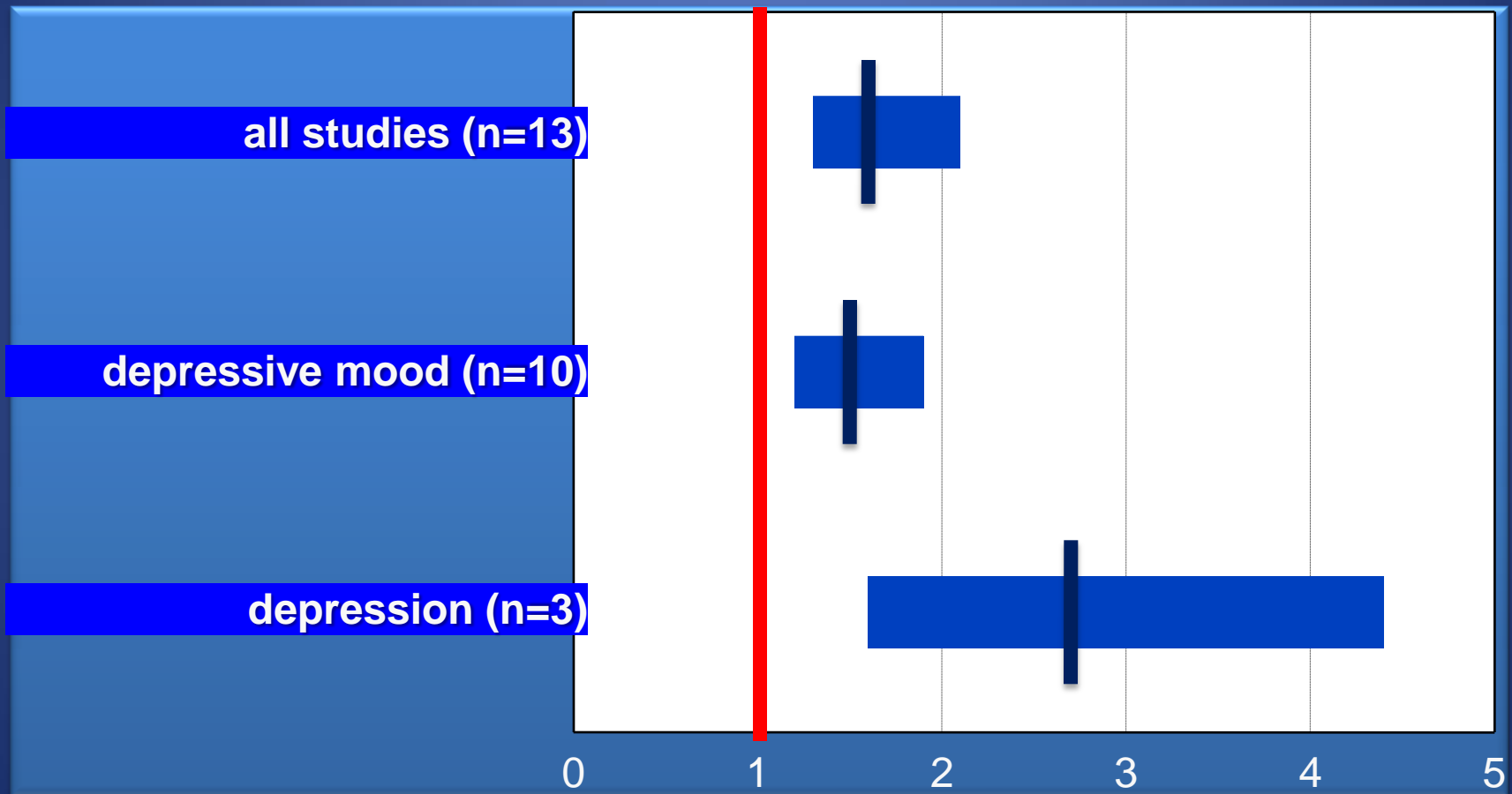
life style
behaviour

**improved quality of life
reduced clinical events
despite cardiovascular disease**



Thank you

Depression increases CHD-risk in initially healthy people



risk lower ← ← ← → → → risk higher