

AN ALL-PERVADING ENEMY: ENVIRONMENTAL CAUSES OF DISEASE THROUGH THE AGES

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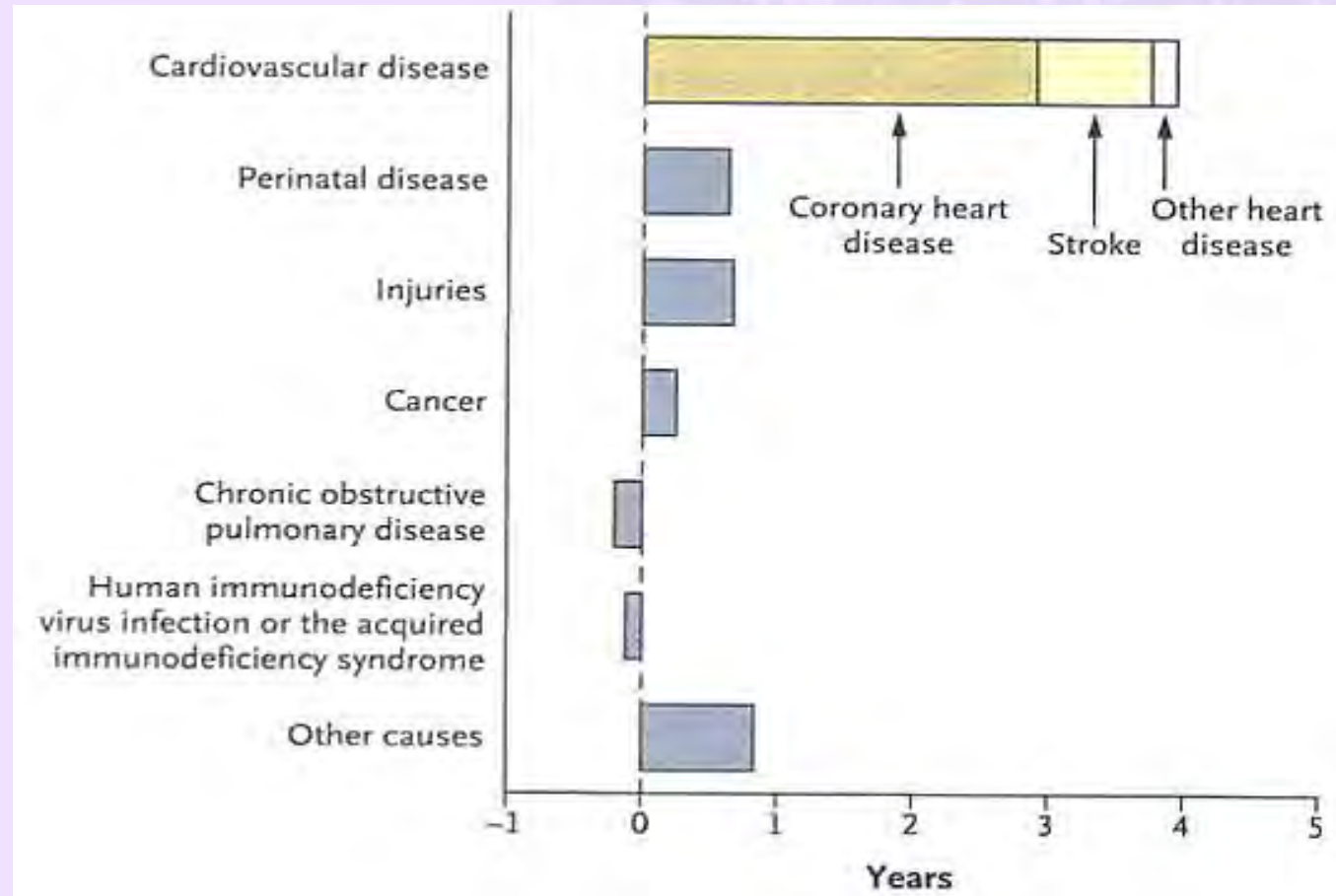
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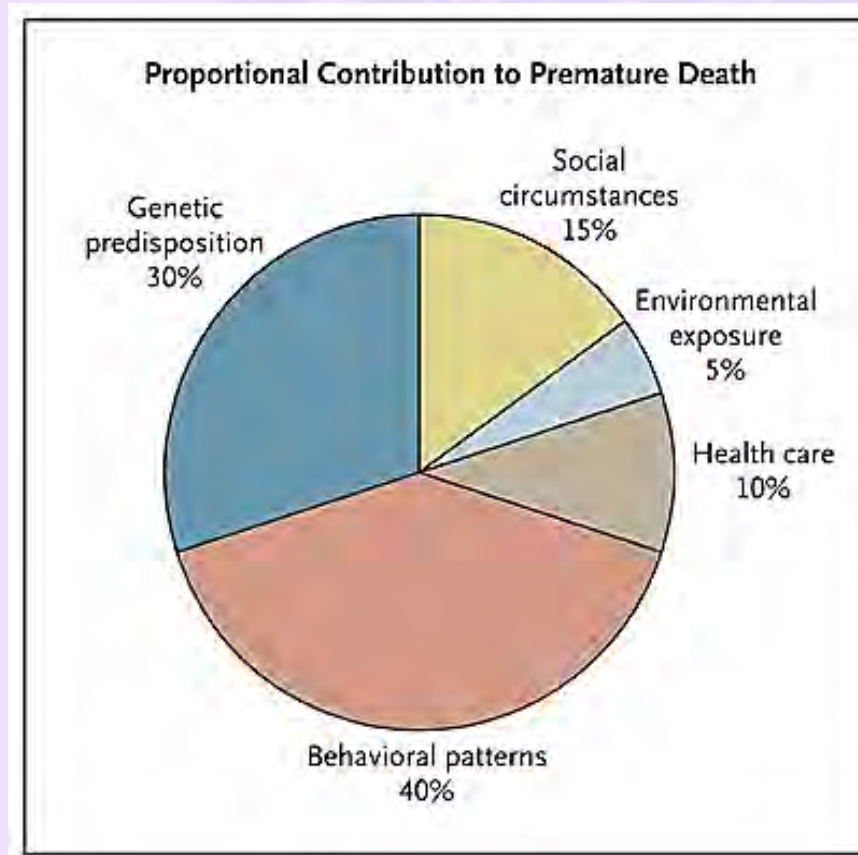
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The fight against cardiovascular disease accounted for 3.8 years gain of life expectations in the last 30 years



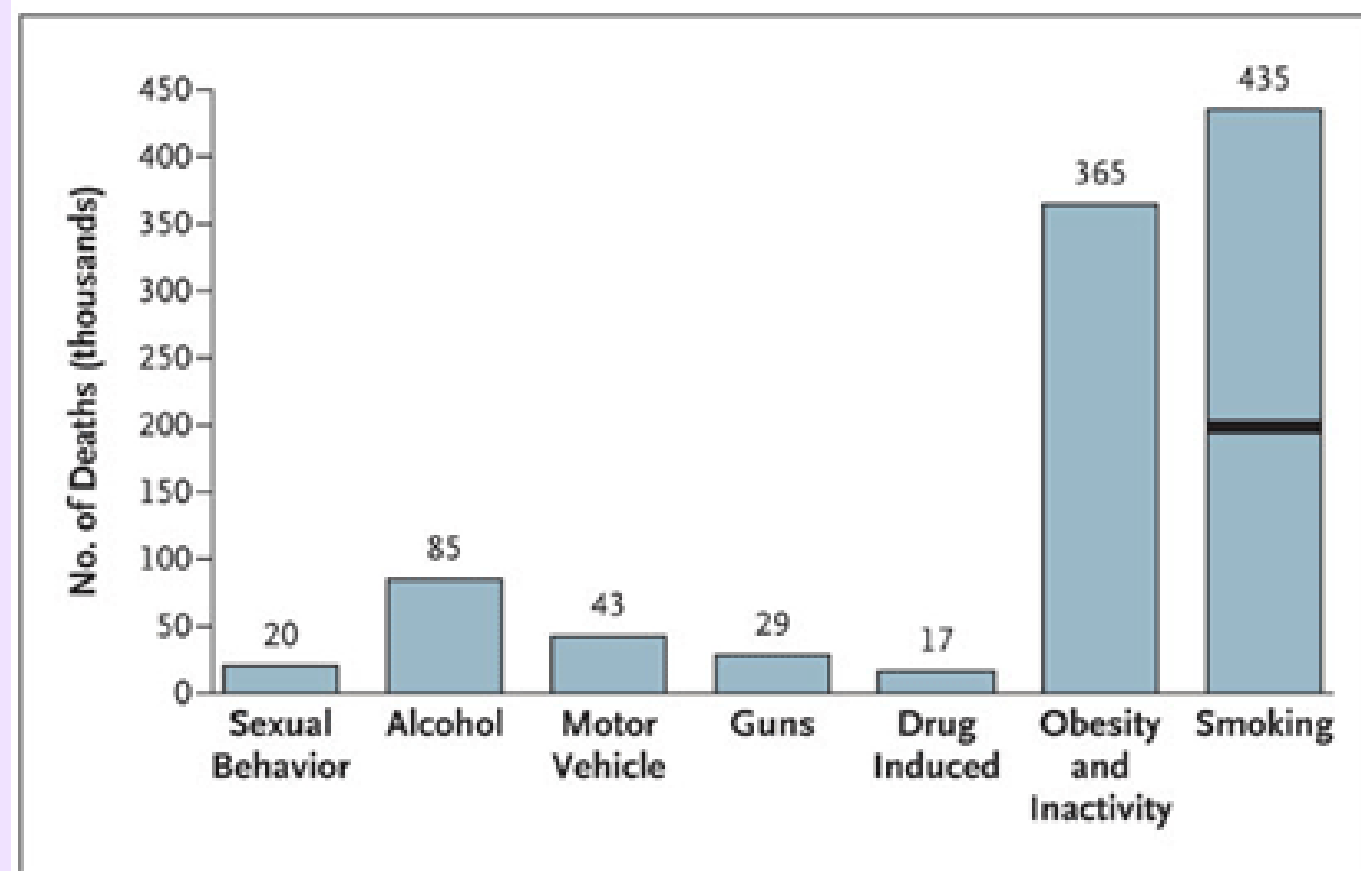
(from Lenfant C, N Engl J Med 2003;349:868-74)

Factors accounting for premature death. Behaviour plays the major role.



(from Schroeder SA, N Engl J Med 2007;357:1221-8)

Behavioural risk factors for death: Smoking and obesity rank first



(from Schroeder SA, N Engl J Med 2007;357:1221-8)

In the time interval 1980-2000 the number of deaths by coronary artery disease decreased by 44%. Control of systolic blood pressure, smoking and physical activity were the protagonists, whereas death due to obesity and diabetes increased

	Number	%
Smoking	39,925	12%
Systolic blood pressure	68,800	20%
Cholesterol	82,830	24%
Physical inactivity	17,445	5%
Body mass index	- 25,905	-8%
Diabetes	- 33,465	-10%
Total	149,635	44%

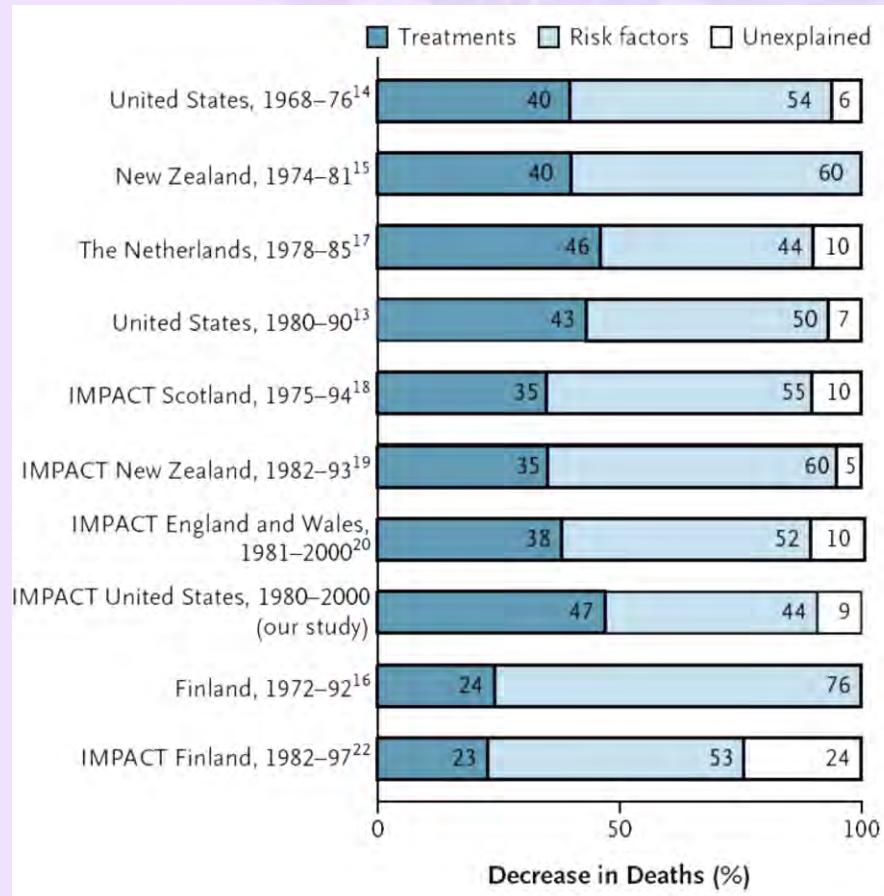
(from Ford ES et al., N Engl J Med 2007;356:2388-98)

The success of medical/surgical treatment accounted for a decrease of cardiovascular death by 47%: less mortality of acute myocardial infarction (10%), medical and surgical treatment of chronic ischemic heart disease (17%), heart failure treatment (9%), hypertensive therapy (7%), primary and secondary prevention of coronary artery disease including lipid reduction

	Number	%
Acute myocardial infarction – Unstable angina	35,145	10%
Secondary prevention after myocardial infarction	28,565	8%
Chronic angina	17,730	5%
Secondary prevention after CABG or PTCA	7,435	3%
Heart failure	30,235	9%
Hypertension	23,845	7%
Statin for lipid reduction, primary prevention	16,580	5%
TOTAL	159,330	47%

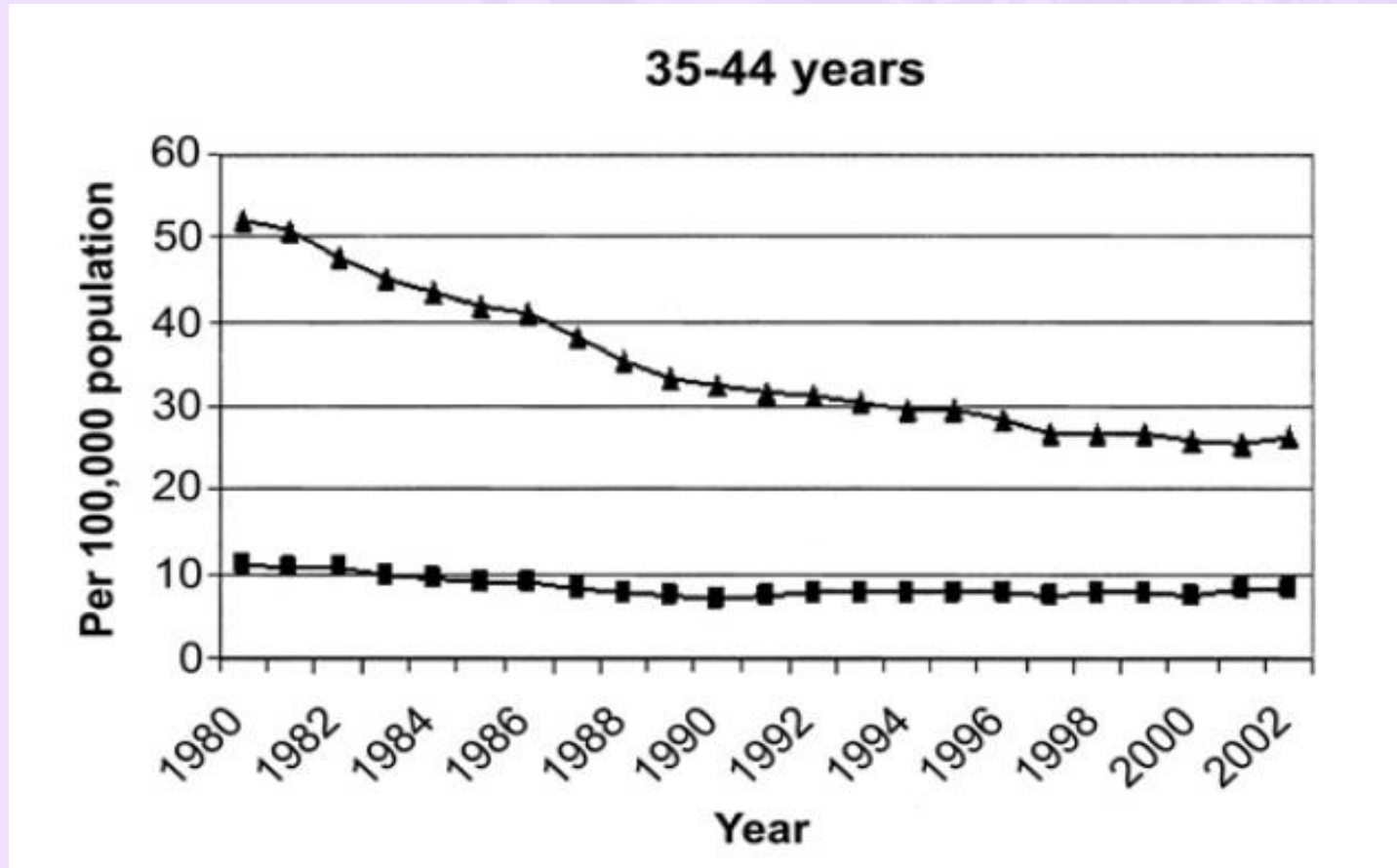
(from Ford ES et al., N Engl J Med 2007;356:2388-98)

Overall decrease in death (prevented or postponed) in USA was due almost equally by medical/surgical treatment (40%) and control of risk factor (54%) whereas in Finland the intervention on risk factors (76%) prevailed vs treatment (24%)



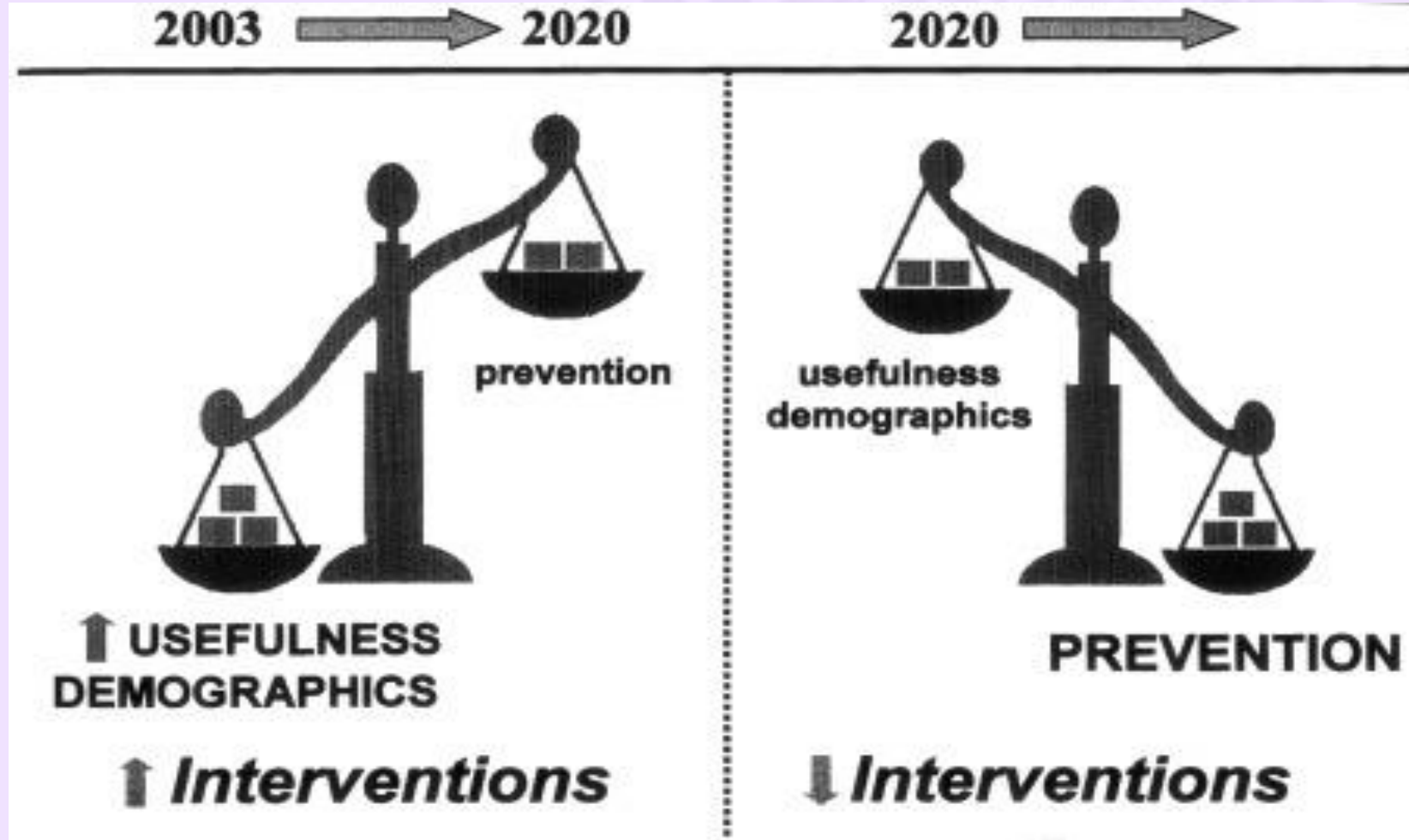
(from Ford ES et al., N Engl J Med 2007;356:2388-98)

After 2000, there is a trend of increase in coronary artery disease interval, both in male and female



(from Ford ES and Capwell S, J Am Coll Cardiol 2007;50:2128-32)

Prediction of the impact of intervention vs prevention in the next decades



(from Braunwald E, J Am Coll Cardiol 2003;42:2031-41)

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