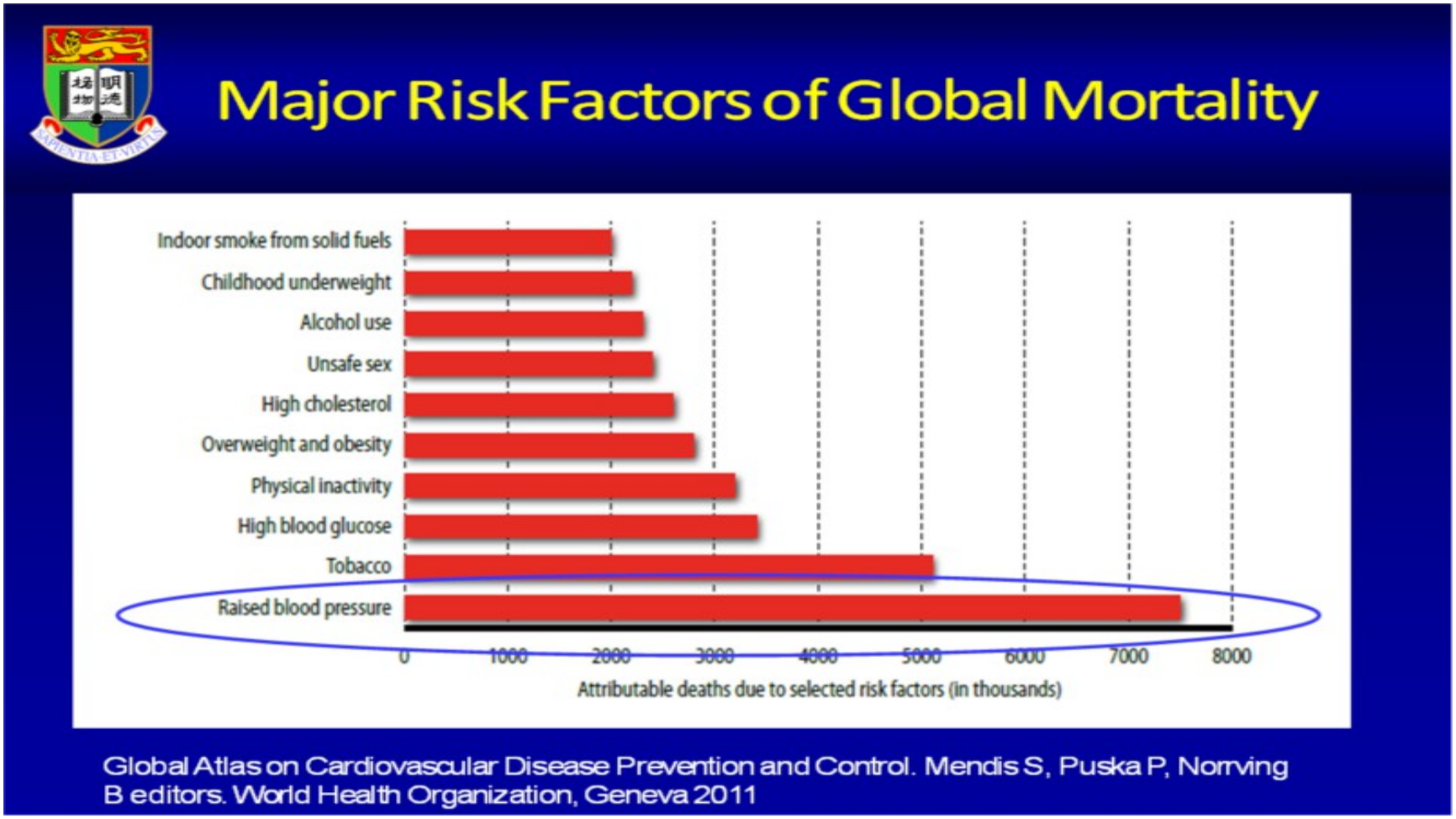
Артериална хипертония и други сърдечно-съдови рискови фактори

Доц. Иван Груев д.м

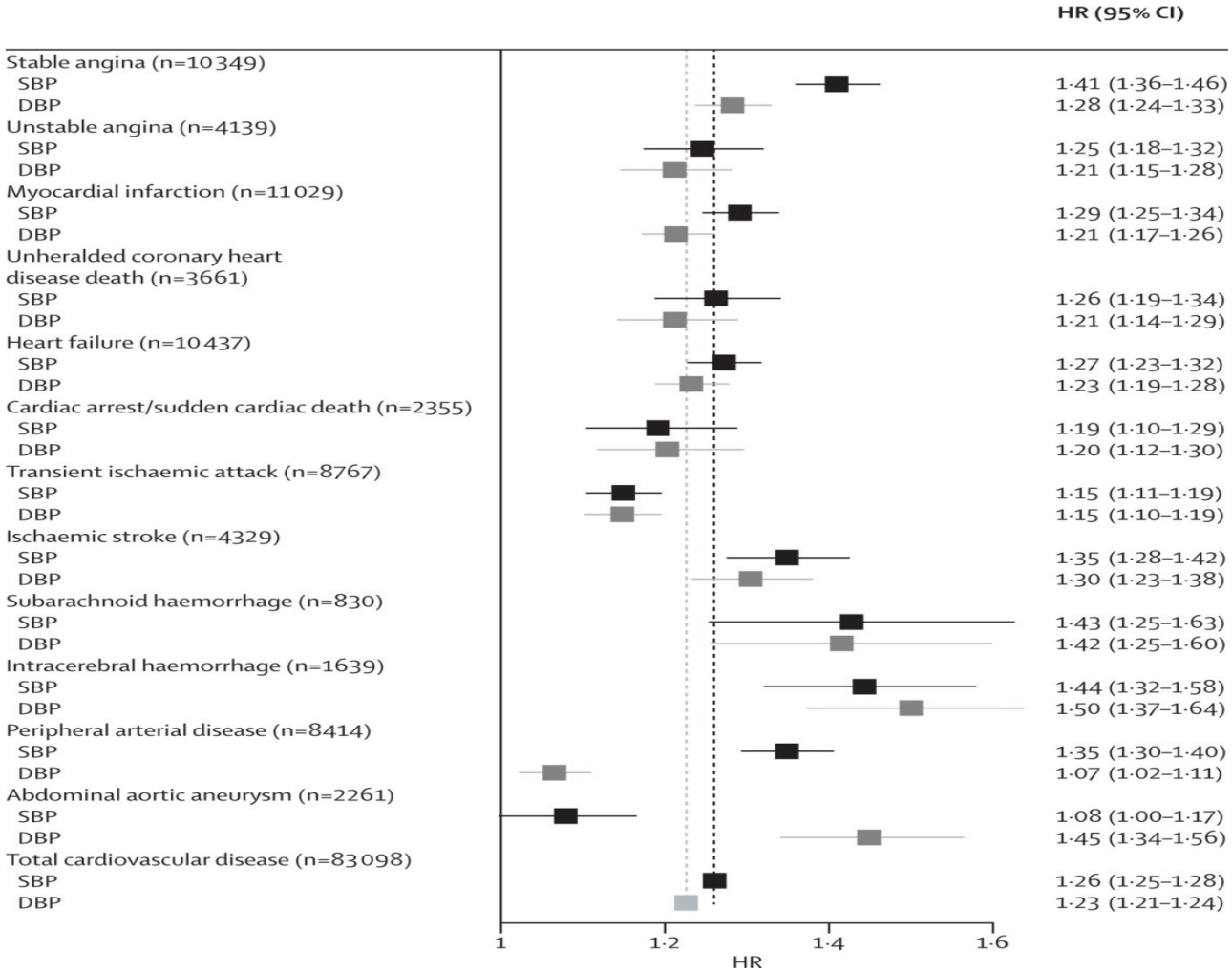
НМТБ “Цар Борис III”
Член на УС на ДКБ

Тихият убиец е най-опасен!



THE LANCET

Blood pressure and incidence of twelve cardiovascular diseases: lifetime risks, healthy life-years lost, and age-specific associations in 1·25 million people



Rapsomaniki E. et al. Lancet 2014; 383: 1899 – 1911.

Финансовата тежест също е голяма

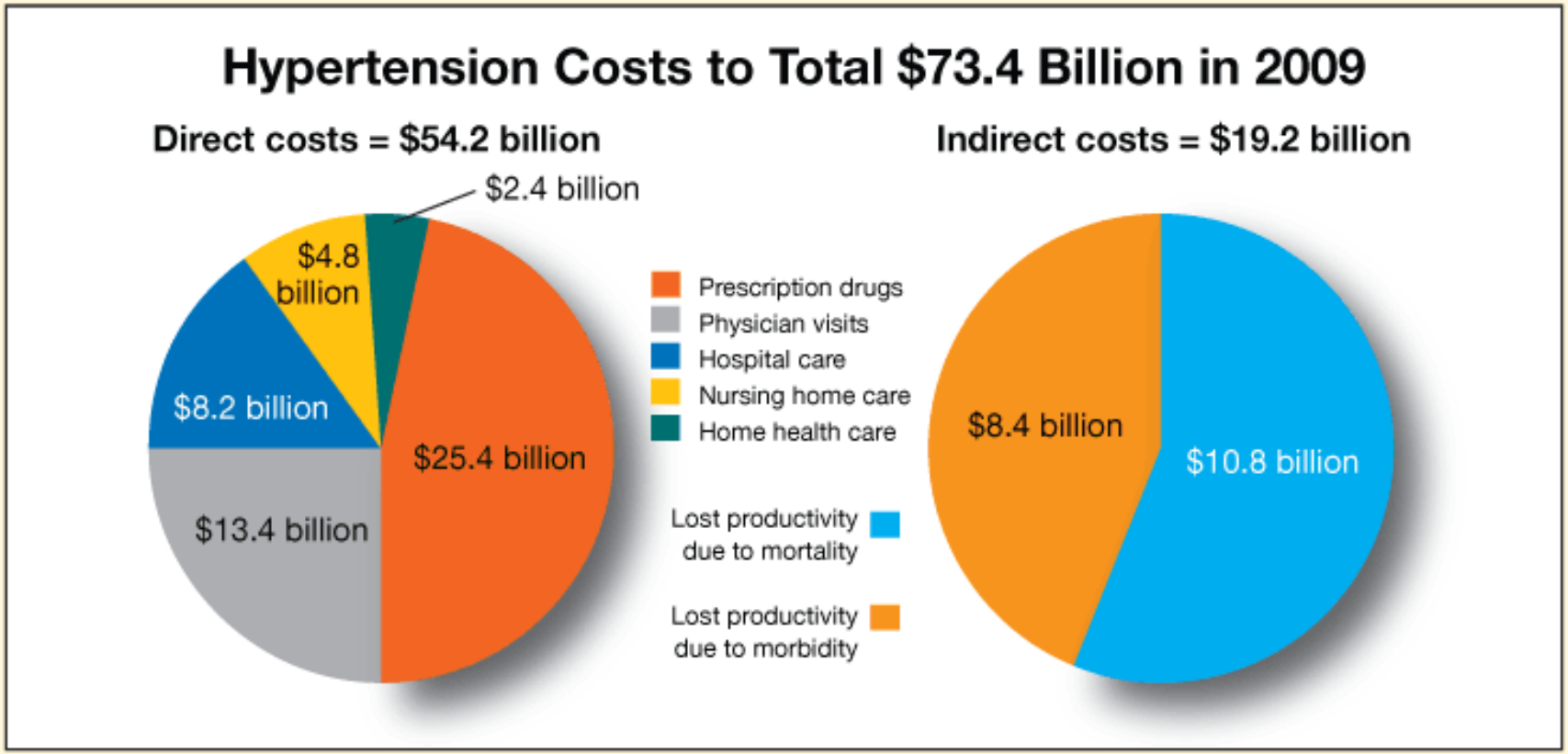
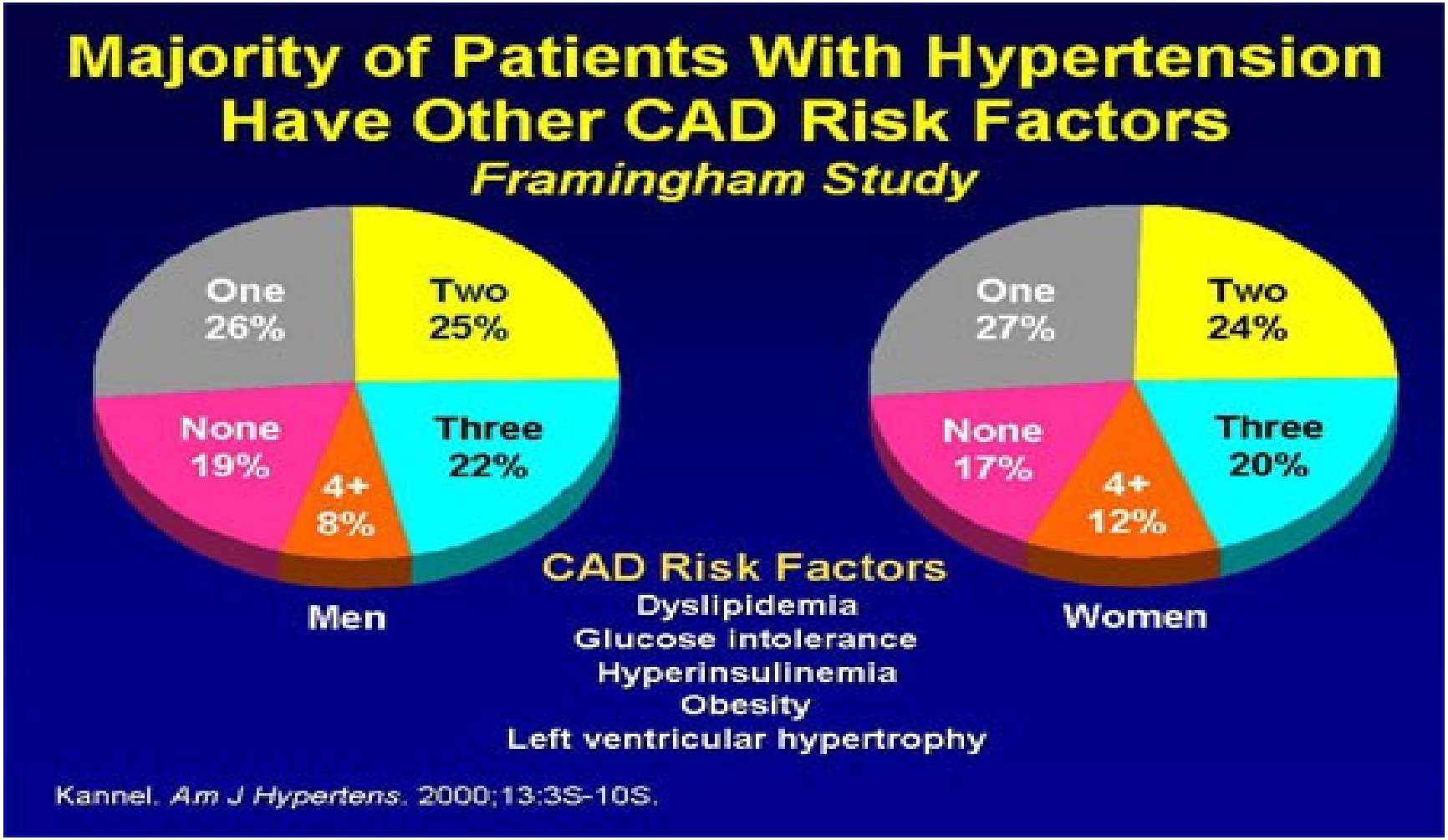
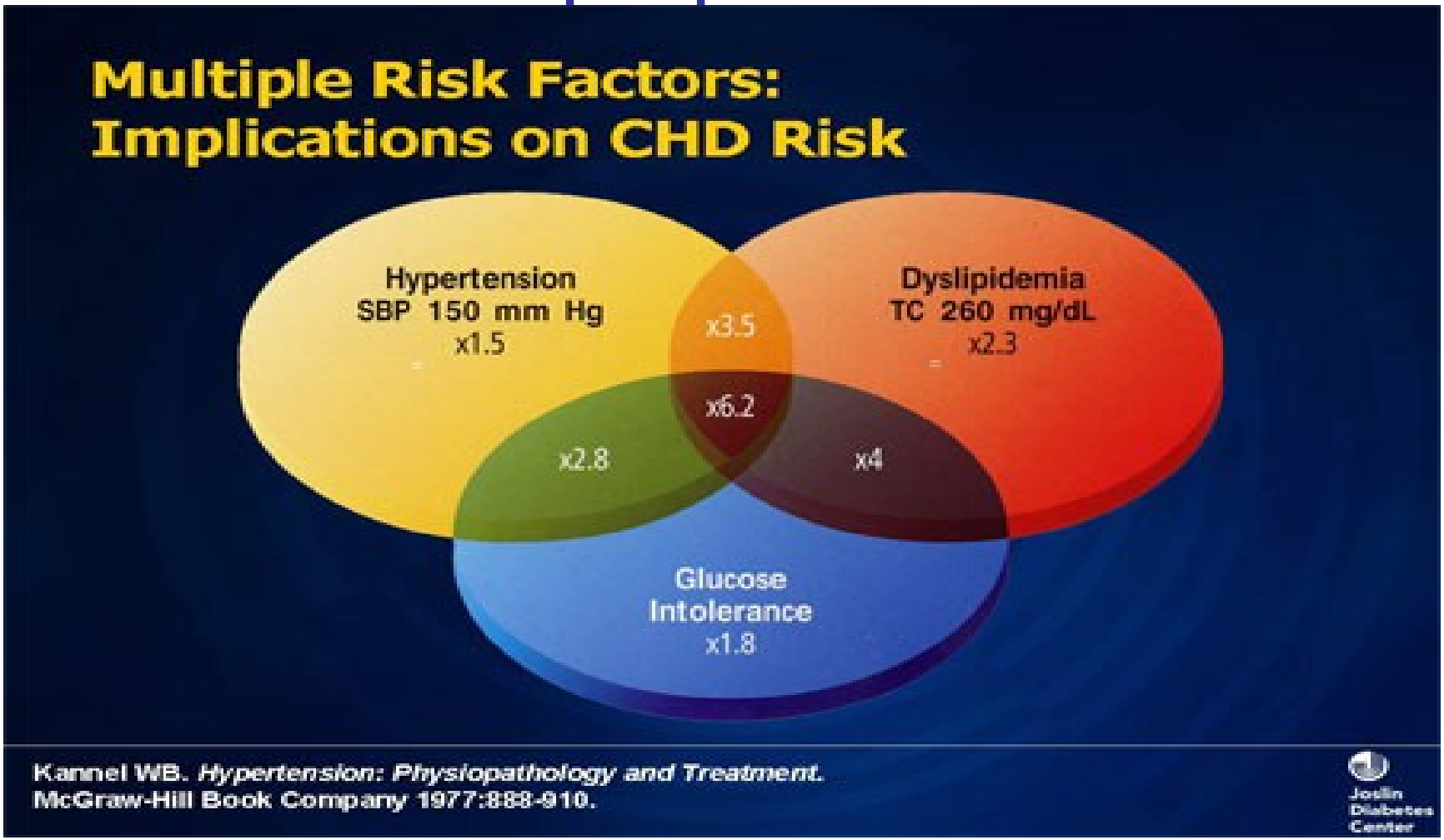


Figure 3. In 2009, total costs associated with hypertension are projected to climb to $73.4 billion, up from $69.4 billion in 2008 and $66.4 billion in 2007. Source: American Heart Association. Heart Disease and Stroke Statistics—2009 Update.

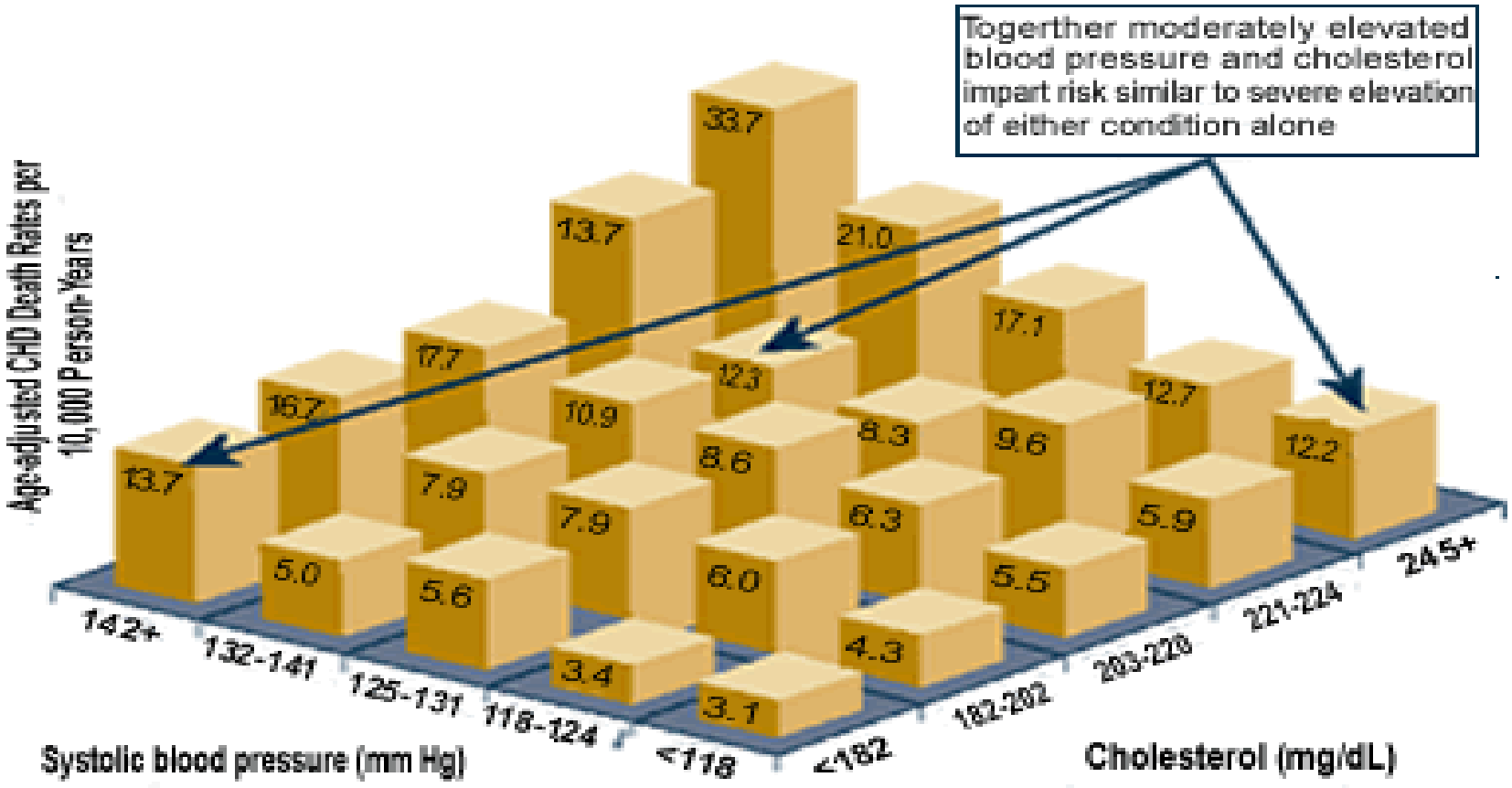
Никое зло не идва само



Рискът нараства в геометрична прогресия

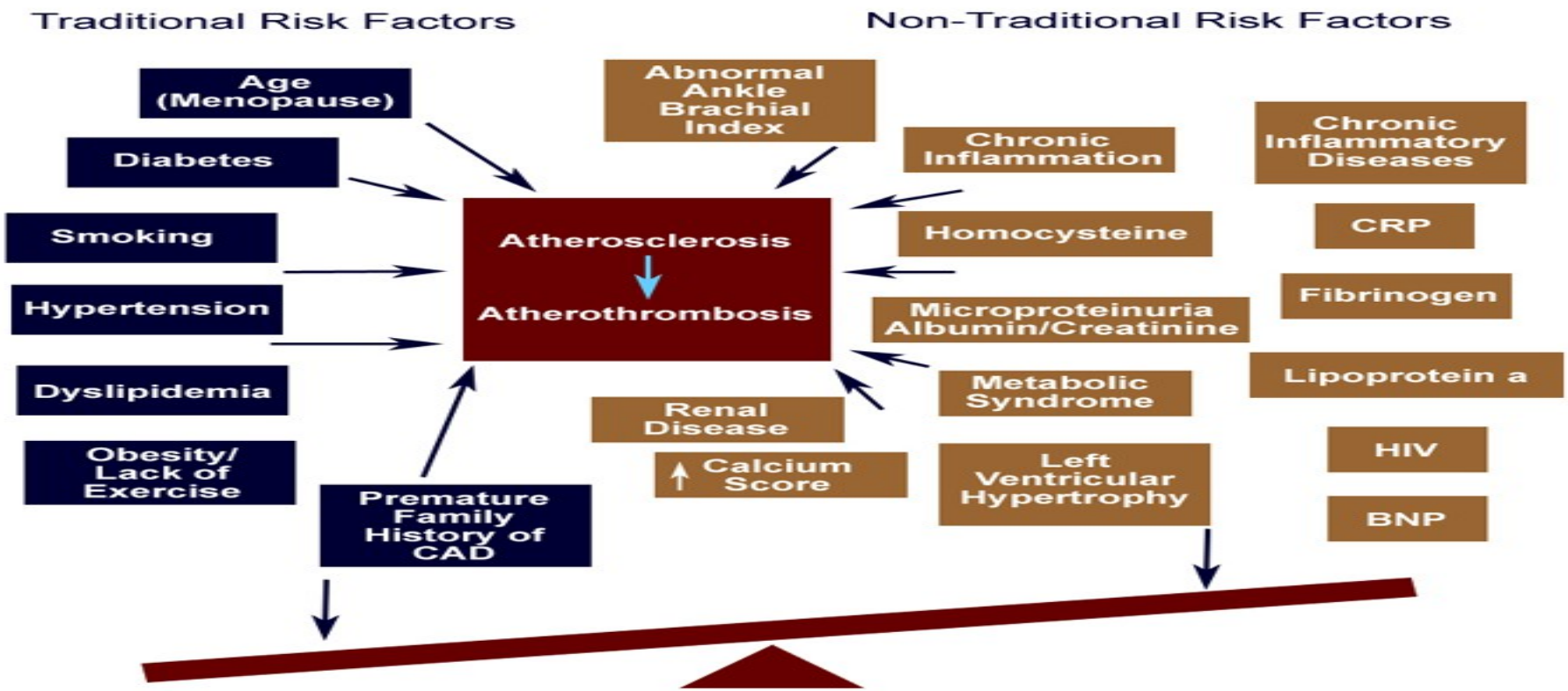


Заедно дори лекото повишение на АН и холестерола покачва риска колкото значимото повишение на някой от рисковите фактори



Adapted from Neaton et al. Arch Intern Med. 1992;152:59

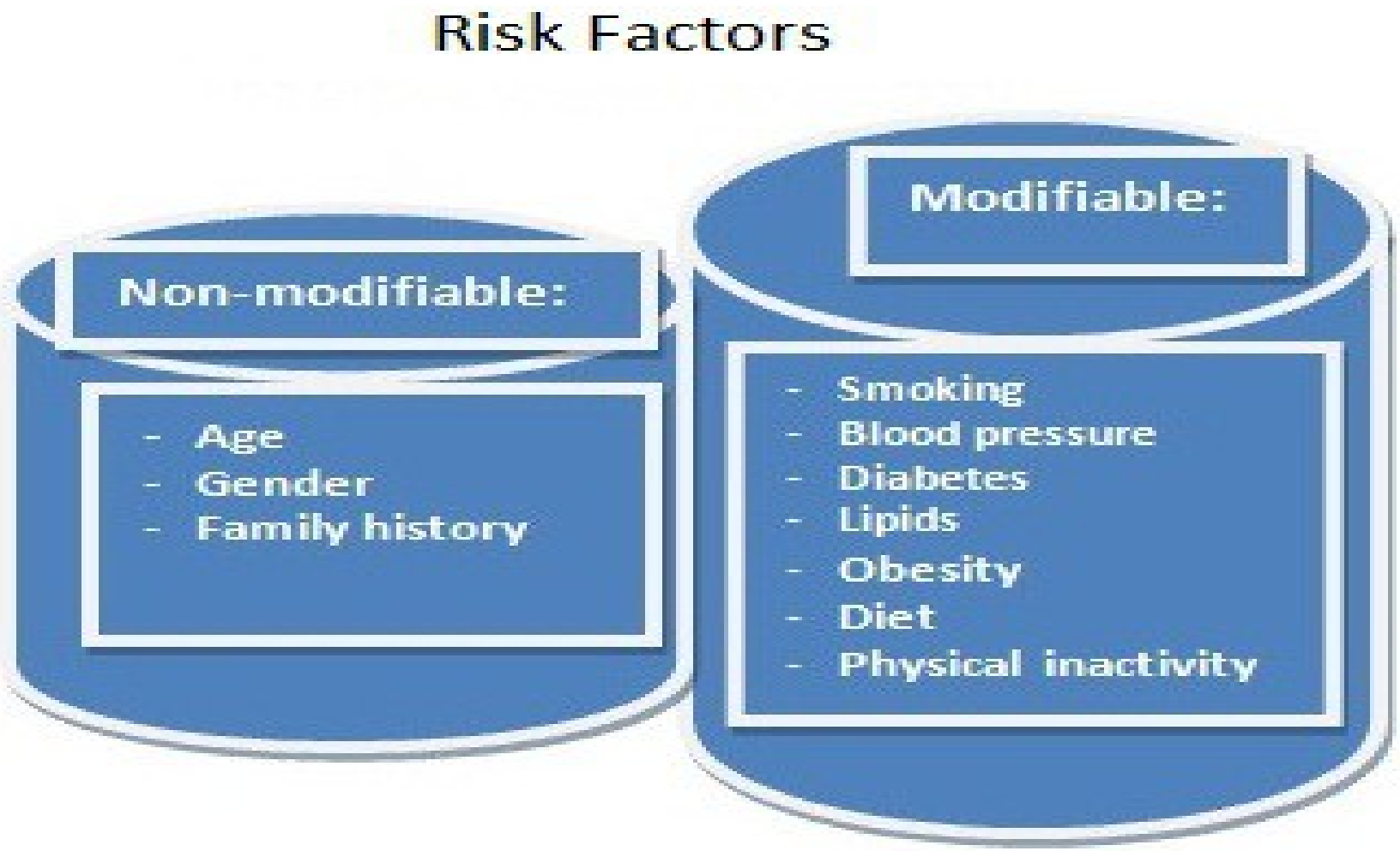
Традиционни и нетрадиционни рискови фактори



Major Risk Factors for Coronary Artery Disease

- -Age (men ≥ 45 years; women ≥ 55 years)
- -Family history of premature coronary artery disease (CAD in male first-degree relative < 65 years)
- -Hypertension (BP > 140/90 mmHg or on antihypertensive medications)
- -Cigarette Smoking
- -Diabetes
- -Hypercholesterolemia
- -Low HDL cholesterol (< 40 mg/dl)
- -Hypertriglyceridemia (> 200 mg/dl)
- -Obesity

Модифицируеми и немодифицируеми РФ



Дефиниция на превенцията

Координиран набор от действия на обществено и индивидуално ниво, целящи да елиминират или минимализират ефекта на ССЗ и свързаната с тях инвалидност.
Основите на превенцията се коренят в СС епидемиология и медицината на доказателствата.

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.

www.escardio.org/guidelines

European Heart Journal 2012:33;1635–1701
European Journal of Preventive Cardiology 2012;19: 4:585-667

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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.

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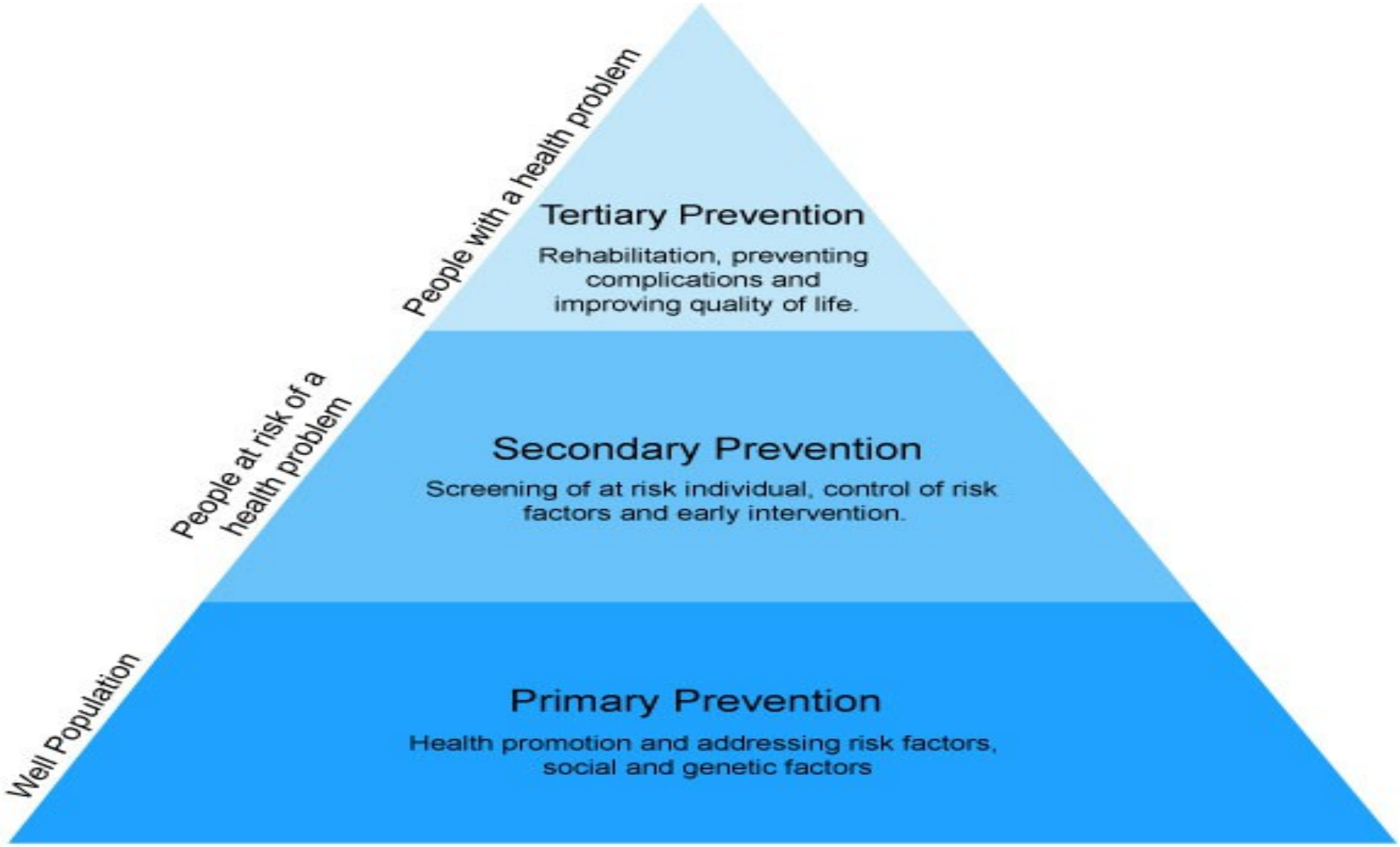
Континуум на превенцията



Клинична теория на превенцията

- СС риск е неприемлив!
- Бъдещите СС събития са предвидими
- Има възможности за клинична намеса за предотвратяване на тези събития
- Ползата от превантивните интервенции надвишава риска
- Асимптоматичните пациенти са обект на превантивни интервенции.
- Превенцията пести средства!

Две важни стъпки-оценка на риска и интервенция

Practicing Clinical Prevention

Two Steps

Assess Risk

Identify risks
Stratify into at-risk populations
Determine acceptability of risk

Intervene

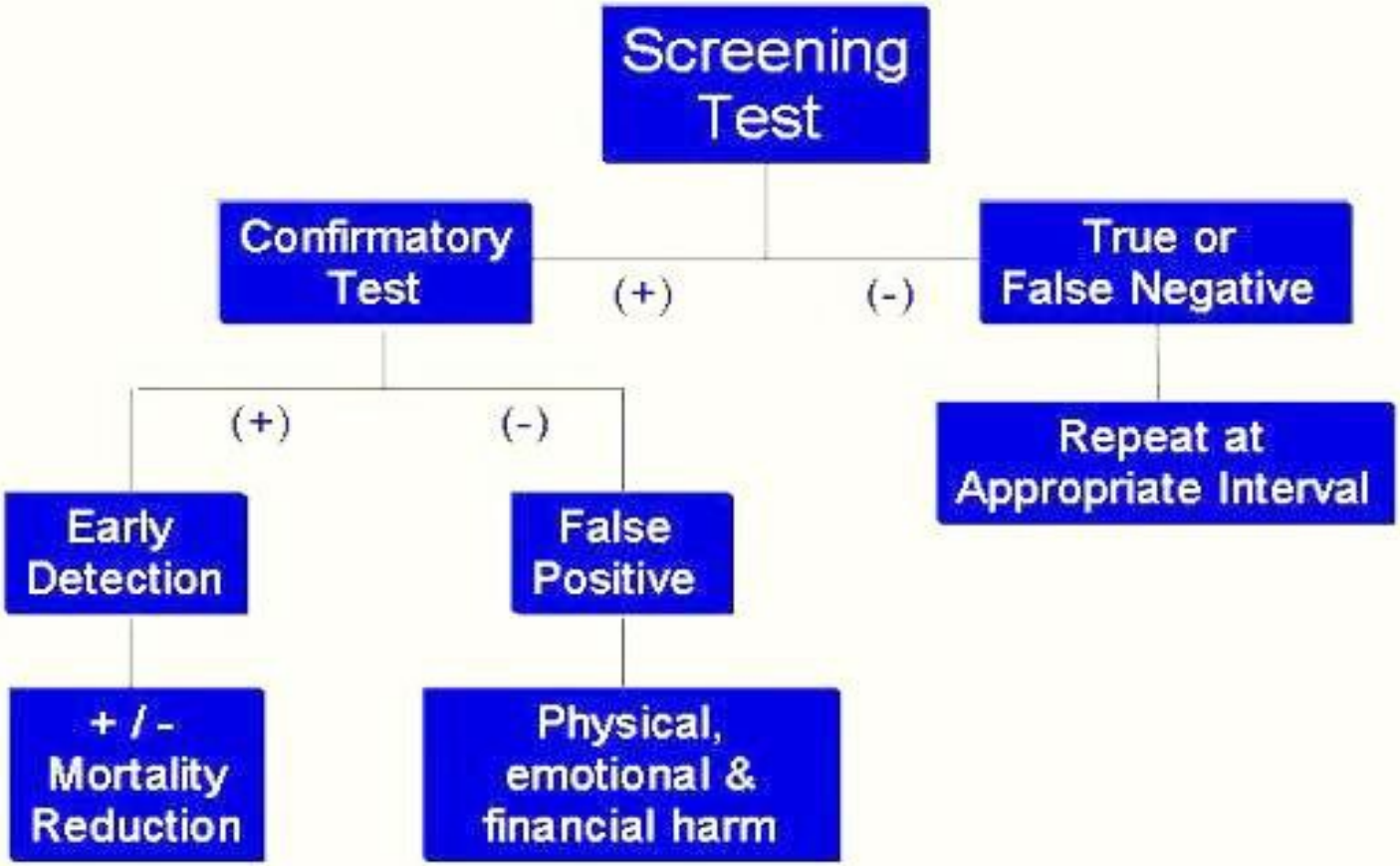
Determine outcome of interest
Select preventive service
Weigh adverse effects

(c) 2007, Richard Glickman-Simon, M.D.

Оценка на риска- скрининг

- **Заболяването, обект на скрининга:**
- -трябва да има сигнификантна смъртност и заболеваемост
- -да има познат ход и прогноза
- - има резултат от пре-клинични интервенции.
- -има широко разпространение след скрираната популация.
- **Скрининг-тестът :**
- - трябва да е ниско-рисков
- -да е приемлив за пациентите
- -Да е с висока сензитивност и специфичност
- -да е с разумна цена

The Screening Cascade

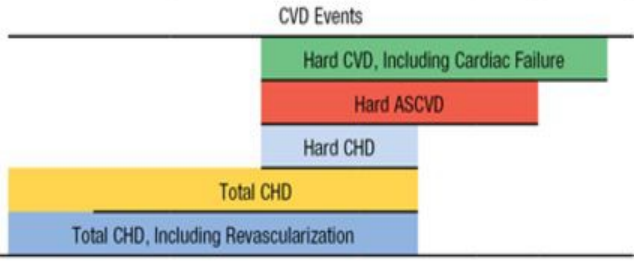


(c) 2007, Richard Glickman-Simon, M.D.

Тъмната страна на превенцията

- Превенцията изисква средства
- За разлика от лечението, асоциираният риск е неприемлив
- Търсенето на високорисковите пациенти пропуска голяма част от заболелите
- Интервенциите в нискорискови популации носят риск от потенциална вреда

Как да оценяваме риска?



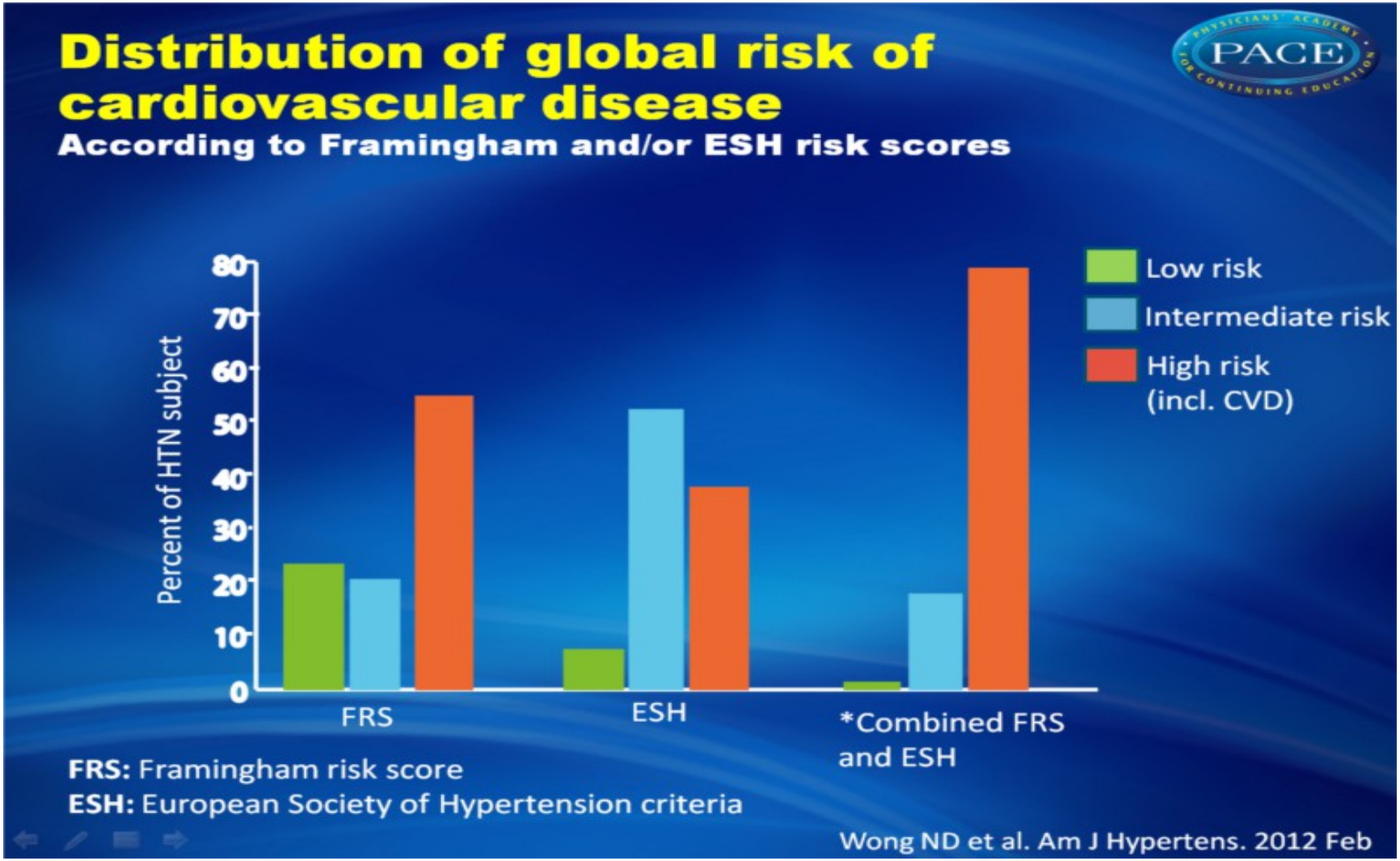
Risk Score				Risk Factors/Covariates Included																								
Study Group	Study and Region	Data Source	Publication Year	Age	Sex	Total Chol	LDL Chol	HDL Chol	CRP	Systolic BP	BP Rx	Diabetes	HbA1c*	Smoking	Family Hx CVD†	Body Mass Index	Social	Region	Coronary Revasc	Angina Pectoris	Unstable Angina	Myocardial Infarct	CHD Death	Stroke	Stroke Death	Cardiac Failure	TIA
Framingham CHD[57]	Framingham MA, USA	EAF, EAM	1998	x	x	x	x	x		x		x		x						x	x	x	x				
ATP III[24]	Framingham MA, USA	EAF, EAM	2001	x	x	x		x		x	x			x								x	x				
Framingham Global[58]	Framingham MA, USA	EAF, EAM	2008	x	x	x		x		x	x	x		x								x	x	x	x	x	
PRO-CAM[59]	Muenster, Germany	EM	2002	x			x	x		x		x		x	x							x	x				
QRISK[60]	QRESEARCH, United Kingdom	EF, EM	2007	x	x	x		x		x	x			x	x	x	x‡	x	x	x	x	x	x	x	x		x
Reynolds Men[61]	Phys Health Study USA	EAF	2008	x		x		x	x	x				x	x				x			x	x	x	x		
Reynolds Women[62]	Women's Health Study USA	EAM	2007	x		x		x	x	x			x	x	x				x			x	x	x	x		
EURO-SCORE[63]	12 cohorts Europe	EF, EM	2003	x	x	x		x		x				x				x					x		x		
Pooled Cohort (current)	CARDIA, Framingham, ARIC, CHS,USA	EAF, EAM AAF, AAM		x	x	x		x		x	x	x		x								x	x	x	x		

*Only among those with diabetes.
†Definitions of a positive family history vary.
‡Measure of social deprivation.

Goff D C et al. Circulation. 2014;129:S49-S73

AAF indicates African-American females; AAM, African-American males; ARIC, Atherosclerosis Risk in Communities study; ASCVD, atherosclerotic cardiovascular disease; BP, blood pressure; CARDIA, Coronary Artery Risk Development in Young Adults study; CHD, coronary heart disease; Chol, cholesterol; CHS, Cardiovascular Health Study; CRP, C-reactive protein; CVD, cardiovascular disease; EAF, European-American females; EAM, European-American males; EF, European females; EM, European males; EURO-SCORE, European System for Cardiac Operative Risk Evaluation; HbA1c, hemoglobin A1c; HDL, high-density lipoprotein; Hx, history; LDL, low-density lipoprotein; Revasc, revascularization; Rx, medication; and TIA, transient ischemic attack.

Сравнение на рисковите калкулатори



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) (estimated glomerular filtration rate [eGFR] < 30 mL/min/1.73 m^2).
  - A calculated SCORE ≥10%.

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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) (estimated glomerular filtration rate [eGFR] 30-59 mL/min/1.73 m^2),
  - 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.

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10 year risk of fatal CVD in high risk regions of Europe

Age	Systolic blood pressure (mmHg)	Women Non-smoker 4	5	6	7	8	Women Smoker 4	5	6	7	8	Men Non-smoker 4	5	6	7	8	Men Smoker 4	5	6	7	8
65	180	7	8	9	10	12	13	15	17	19	22	14	16	19	22	26	26	30	35	41	47
	160	5	5	6	7	8	9	10	12	13	16	9	11	13	15	16	18	21	25	29	34
	140	3	3	4	5	6	6	7	8	9	11	6	8	9	11	13	13	15	17	20	24
	120	2	2	3	3	4	4	5	5	6	7	4	5	6	7	9	9	10	12	14	17
60	180	4	4	5	6	7	8	9	10	11	13	9	11	13	15	18	18	21	24	28	33
	160	3	3	3	4	5	5	6	7	8	9	6	7	9	10	12	12	14	17	20	24
	140	2	2	2	3	3	3	4	5	5	6	4	5	6	7	9	8	10	12	14	17
	120	1	1	2	2	2	2	3	3	4	4	3	3	4	5	6	6	7	8	10	12
55	180	2	2	3	3	4	4	5	5	6	7	6	7	8	10	12	12	13	16	19	22
	160	1	2	2	2	3	3	3	4	4	5	4	5	6	7	8	8	9	11	13	16
	140	1	1	1	1	2	2	2	2	3	3	3	3	4	5	6	5	6	8	9	11
	120	1	1	1	1	1	1	1	2	2	2	2	2	3	3	4	4	4	5	6	8
50	180	1	1	1	2	2	2	2	3	3	4	4	4	5	6	7	7	8	10	12	14
	160	1	1	1	1	1	1	2	2	2	3	2	3	3	4	5	5	6	7	8	10
	140	0	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	4	5	6	7
	120	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	3	3	4	5
40	180	0	0	0	0	0	0	0	0	1	1	1	1	1	2	2	2	2	3	3	4
	160	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	2	2	3
	140	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	2
	120	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

Total cholesterol (mmol/L)

150 200 250 300 mg/dl

SCORE

- 15% and over
- 10%-14%
- 5%-9%
- 3%-4%
- 2%
- 1%
- < 1%

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Relative risk chart

- This chart may be used to show younger people at low absolute risk that, relative to others in their age group, their risk may be many times higher than necessary.
- This may help to motivate decisions about avoidance of smoking, healthy nutrition and exercise, as well as flagging those who may become candidates for medication.

Systolic blood pressure (mmHg)	Non-smoker					Smoker				
	4	5	6	7	8	4	5	6	7	8
180	3	3	4	5	6	6	7	8	10	12
160	2	3	3	4	4	4	5	6	7	8
140	1	2	2	2	3	3	3	4	5	6
120	1	1	1	2	2	2	2	3	3	4

Cholesterol (mmol/L)

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Risk age, a new concept

Age	Women		Men	
	Non-smoker	Smoker	Non-smoker	Smoker
65	180: 7 8 9 10 12 160: 5 5 6 7 8 140: 3 3 4 5 6 120: 2 2 3 3 4	180: 13 15 17 19 22 160: 9 10 12 13 16 140: 6 7 8 9 11 120: 4 5 5 6 7	180: 14 16 19 22 26 160: 9 11 13 15 16 140: 6 8 9 11 13 120: 4 5 6 7 9	180: 26 30 35 41 47 160: 18 21 25 29 34 140: 13 15 17 20 24 120: 9 10 12 14 17
60	180: 4 4 5 6 7 160: 3 3 3 4 5 140: 2 2 2 3 3 120: 1 1 2 2 2	180: 8 9 10 11 13 160: 5 6 7 8 9 140: 3 4 5 5 6 120: 2 3 3 4 4	180: 9 11 13 15 18 160: 6 7 9 10 12 140: 4 5 6 7 9 120: 3 3 4 5 6	180: 18 21 24 28 33 160: 12 14 17 20 24 140: 8 10 12 14 17 120: 6 7 8 10 12
55	180: 2 2 3 3 4 160: 1 2 2 2 3 140: 1 1 1 1 2 120: 1 1 1 1 1	180: 4 5 5 6 7 160: 3 3 4 4 5 140: 2 2 2 3 3 120: 1 1 2 2 2	180: 6 7 8 10 12 160: 4 5 6 7 8 140: 3 3 4 5 6 120: 2 2 3 3 4	180: 12 13 16 19 22 160: 8 9 11 13 16 140: 5 6 8 9 11 120: 4 4 5 6 8
50	180: 1 1 1 2 2 160: 1 1 1 1 1 140: 0 1 1 1 1 120: 0 0 1 1 1	180: 2 2 3 3 4 160: 1 2 2 2 3 140: 1 1 1 1 2 120: 1 1 1 1 1	180: 4 4 5 6 7 160: 2 3 3 4 5 140: 2 2 2 3 3 120: 1 1 2 2 2	180: 7 8 10 12 14 160: 5 6 7 8 10 140: 3 4 5 6 7 120: 2 3 3 4 5
40	180: 0 0 0 0 0 160: 0 0 0 0 0 140: 0 0 0 0 0 120: 0 0 0 0 0	180: 0 0 0 1 1 160: 0 0 0 0 0 140: 0 0 0 0 0 120: 0 0 0 0 0	180: 1 1 1 2 2 160: 1 1 1 1 1 140: 0 1 1 1 1 120: 0 0 1 1 1	180: 2 2 3 3 4 160: 1 2 2 2 3 140: 1 1 1 2 2 120: 1 1 1 1 1

Systolic blood pressure (mm Hg)

Total cholesterol (mmol/L): 4 5 6 7 8

150 200 250 300 mg/dl

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.

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See also: www.heartscore.org: HDL charts now included

www.escardio.org/guidelines

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Дали SCORE е идеалното средство?

- Клиничен случай
- 55 годишна пациентка от 10 г с Ревматоиден артрит , лекувана с methothrexate и кортикостероиди в периодите на екзацербация
- Пациентката е непушачка, но има силно намален физ. активност, поради ставните пробелми.

- Нейният GP регистрирал АН 150/95

- Фамилна обремененост: майка с РА и АХ, починала от МИ на 63 г.

Лаборатория

- Hb – 112 g/l, Ht – 35,5%, SR 55 мм , CRP 8 mg/l,glucose – 6.1 mmol/l, creatinine – 81 µmol/l (44-131 µmol/l), uric acid - 406 mmol/l (208-416 mmol/l), K^+ - 4,1 mmol/l, Na^+ 142 mmol/l, total cholesterol – 5,2 mmol/l, LDL-хол – 3,6 mmol/l, HDL 0.9 mmol/l, triglycerides – 2,2 mmol/l, чернодробнви ензими и урина- в норма

Риск според SCORE

Female, 55 years old, on smoker, BP 150/95 mmHg, total chol. – 5,2 mmol/l

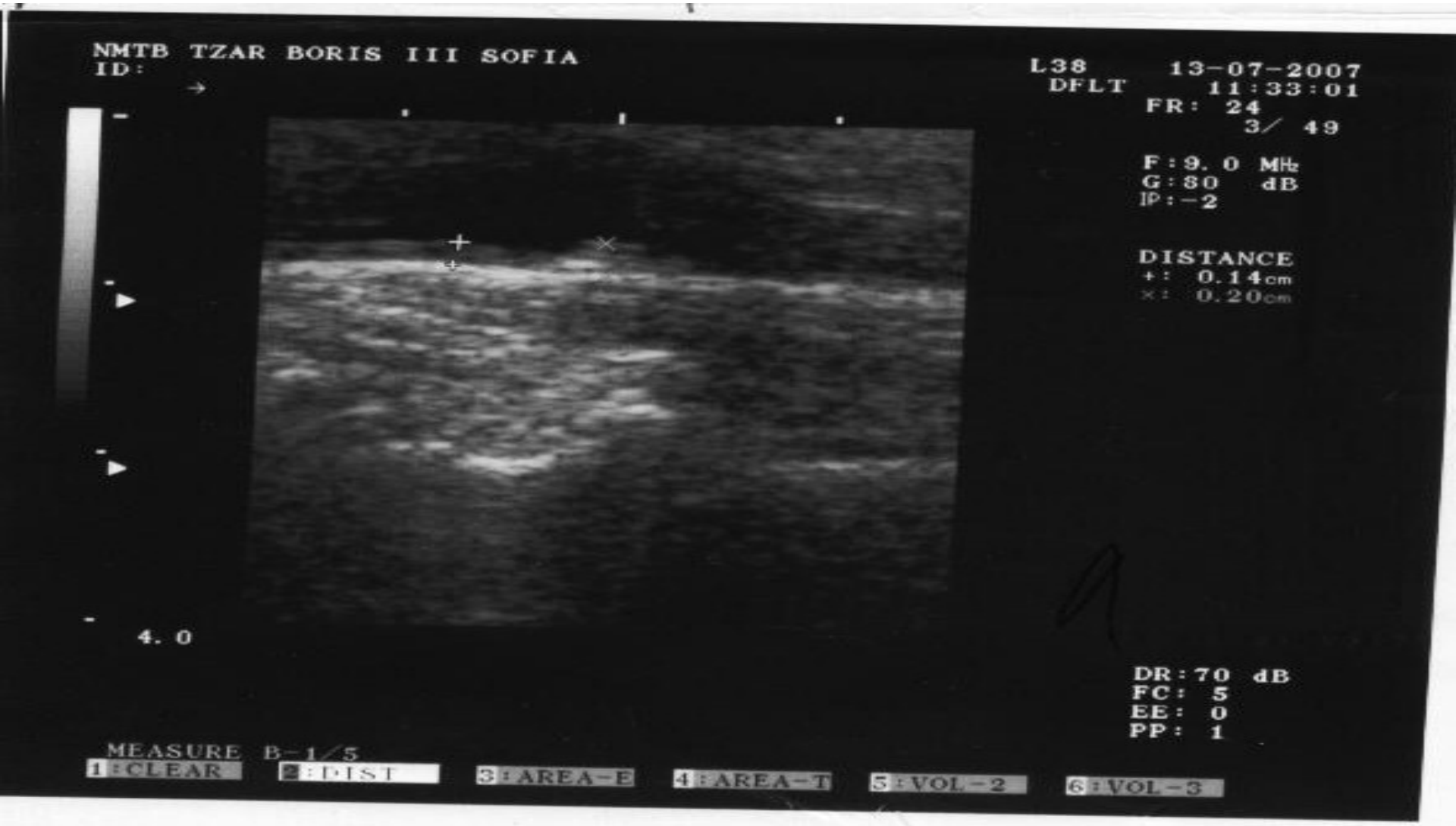
Риск 1%

Women											Men									
	Non-smoker					Smoker						Non-smoker					Smoker				
Systolic blood pressure	4	5	6	7	8	4	5	6	7	8	Age	4	5	6	7	8	4	5	6	7	8
180	7	8	9	10	12	13	15	17	19	22	65	14	16	19	22	26	26	30	35	41	47
160	5	5	6	7	8	9	10	12	13	16		9	11	13	15	16	18	21	25	29	34
140	3	3	4	5	6	6	7	8	9	11		6	8	9	11	13	13	15	17	20	24
120	2	2	3	3	4	4	5	5	6	7		4	5	6	7	9	9	10	12	14	17
180	4	4	5	6	7	8	9	10	11	13	60	9	11	13	15	18	18	21	24	28	33
160	3	3	3	4	5	5	6	7	8	9		6	7	9	10	12	12	14	17	20	24
140	2	2	2	3	3	3	4	5	5	6		4	5	6	7	9	8	10	12	14	17
120	1	1	2	2	2	2	3	3	4	4		3	3	4	5	6	6	7	8	10	12
180	2	2	3	3	4	4	5	5	6	7	55	6	7	8	10	12	12	13	16	19	22
160	1	2	2	2	3	3	3	4	4	5		4	5	6	7	8	8	9	11	13	16
140	1	1	1	1	2	2	2	2	3	3		3	3	4	5	6	5	6	8	9	11
120	1	1	1	1	1	1	1	2	2	2		2	2	3	3	4	4	4	5	6	8
180	1	1	1	2	2	2	2	3	3	4	50	4	4	5	6	7	7	8	10	12	14
160	1	1	1	1	1	1	2	2	2	3		2	3	3	4	5	5	6	7	8	10
140	0	1	1	1	1	1	1	1	1	2		2	2	2	3	3	3	4	5	6	7
120	0	0	1	1	1	1	1	1	1	1		1	1	2	2	2	2	3	3	4	5
180	0	0	0	0	0	0	0	0	1	1	40	1	1	1	2	2	2	2	3	3	4
160	0	0	0	0	0	0	0	0	0	0		1	1	1	1	1	1	2	2	2	3
140	0	0	0	0	0	0	0	0	0	0		0	1	1	1	1	1	1	1	2	2
120	0	0	0	0	0	0	0	0	0	0		0	0	1	1	1	1	1	1	1	1

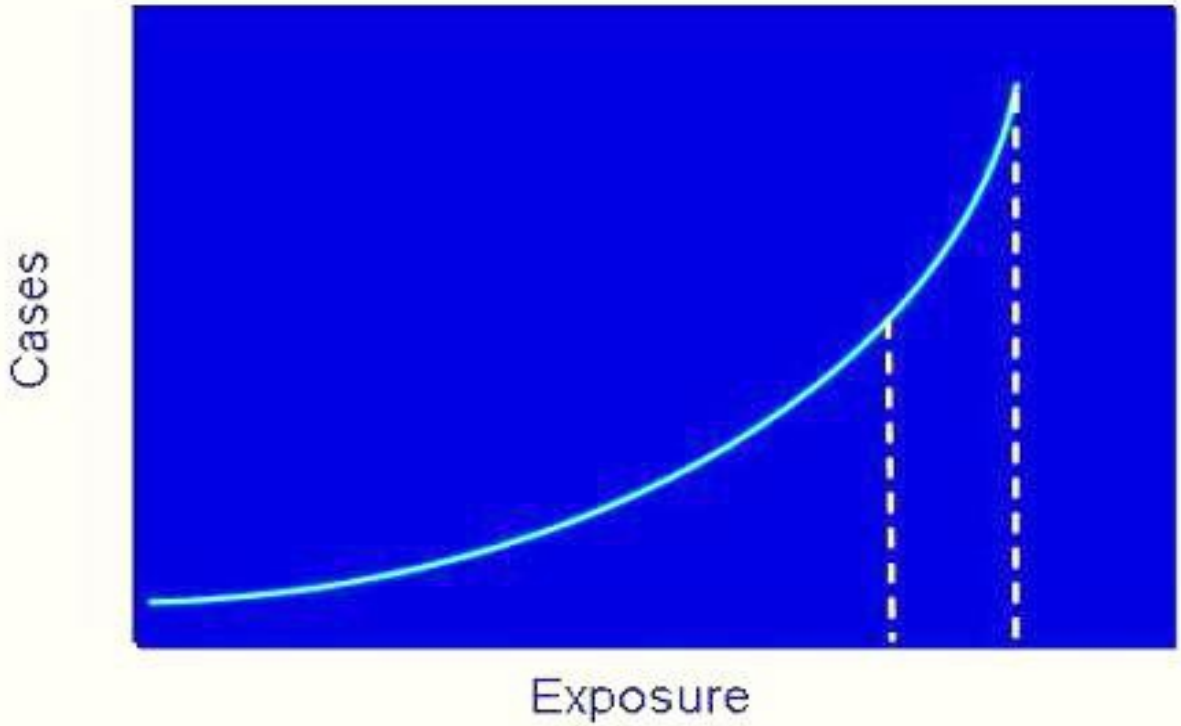
Cholesterol mmol

150 200 250 300
mg/dl

Но !Каротидната сонография демонстрира задабална IMT и наличие на плака!



The Prevention Paradox



A large number exposed to a small risk generate more cases than a small number exposed to a large risk

(c) 2007, Richard Glickman-Simon, M.D.

Total cardiovascular risk stratification
Asymptomatic organ damage

- Pulse pressure ≥60 mmHg (in the elderly).
- Electrocardiographic LVH (Sokolow-Lyon index >3.5 mV; RaVL >1.1 mV; Cornell voltage duration product >244 mm*ms), or
- Echocardiographic LVH (LVM index >115 g/m² in men; >95 g/m² in women).
- Carotid wall thickening (IMT >0.9 mm) or plaque.
- Carotid-femoral pulse wave velocity >10 m/s.
- Ankle-brachial index <0.9.
- Chronic kidney disease stage 3 (eGFR: 30-60 mL/min/1.73 m^2).
- Microalbuminuria (30-300 mg/24 h), or albumin-creatinine ratio (30-300 mg/g or 3.4-34 mg/mmol) (preferentially on morning spot urine).

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Blood Pressure, 2013: 193-278

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Total cardiovascular risk stratification

Other risk factors (RF), asymptomatic organ damage (OD) or disease	Blood Pressure (mmHg)			
	High normal SBP 130-139 or DBP 85-89	Grade 1 HT SBP 140-159 or DBP 90-99	Grade 2 HT SBP 160-179 or DBP 100-109	Grade 3 HT SBP ≥180 or DBP ≥110
No other RF		Low risk	Moderate risk	High risk
1-2 RF	Low risk	Moderate risk	Moderate to High risk	High risk
≥3 RF	Low to moderate risk	Moderate to high risk	High risk	High risk
OD, CKD stage 3 or diabetes	Moderate to high risk	High risk	High risk	High to very high risk
Symptomatic CVD, CKD stage ≥4 or diabetes with OD/RFs	Very high risk	Very high risk	Very high risk	Very high risk

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Скринигът за ТОУ подобрява стратификацията на риска

Conventional Risk Stratification

	SBP 140-159 or DBP 90-99	SBP 160-179 or DBP 100-109	SBP ≥180 or DBP ≥110
0 RF	5	1	1
1-2 RF	55	25	10
≥ 3 RF or TOD or DM or ACC	64	40	11

Incl. Micro-albuminuria

	SBP 140-159 or DBP 90-99	SBP 160-179 or DBP 100-109	SBP ≥180 or DBP ≥110
0 RF	5	1	1
1 -2 RF	48	18	8
≥ 3 RF or TOD or DM or ACC	71	47	13

Incl. Echo Data

	SBP 140-159 or DBP 90-99	SBP 160-179 or DBP 100-109	SBP ≥180 or DBP ≥110
0 RF	5	1	1
1 - 2 RF	43	20	7
≥ 3 RF or TOD or DM or ACC	76	45	14

Incl. Microalbuminuria and Echo Data

	SBP 140-159 or DBP 90-99	SBP 160-179 or DBP 100-109	SBP ≥180 or DBP ≥110
0 RF	5	1	1
1 - 2 RF	39	15	5
≥ 3 RF or TOD or DM or ACC	80	50	16

Initiation of lifestyle changes and antihypertensive drug treatment based on total CV risk

Other risk factors (RF), asymptomatic organ damage (OD) or disease	Blood Pressure (mmHg)			
	High normal SBP 130-139 or DBP 85-89	Grade 1 HT SBP 140-159 or DBP 90-99	Grade 2 HT SBP 160-179 or DBP 100-109	Grade 3 HT SBP ≥180 or DBP ≥110
No other RF	• No BP intervention	• Lifestyle changes for several months • Then add BP drugs targeting <140/90	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
1-2 RF	• Lifestyle changes • No BP intervention	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
≥3 RF	• Lifestyle changes • No BP intervention	• Lifestyle changes for several weeks Then add BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
OD, CKD stage 3 or diabetes	• Lifestyle changes • No BP intervention	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
Symptomatic CVD, CKD stage ≥4 or diabetes with OD/RFs	• Lifestyle changes • No BP intervention	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90

(In patients with diabetes, the optimal diastolic BP target is 80-85 mmHg)

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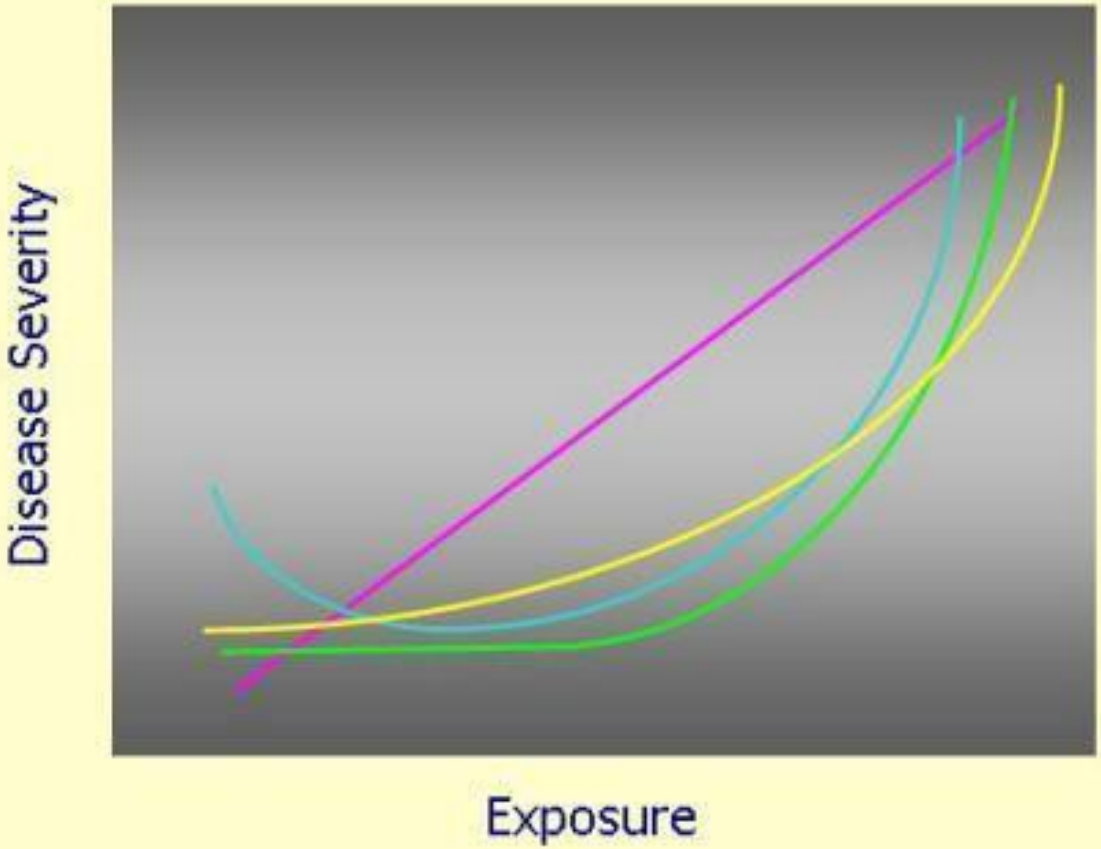
www.escardio.org/guidelines

European Society of Hypertension

Dose-Response Curves



Cigarette smoking / Cancer
Radiation exposure / Cancer

Anemia / Morbidity
Intraocular pressure / Glaucoma
Alcohol intake / Traffic accidents

Blood pressure / Morbidity
Weight / Mortality
Alcohol consumption / Mortality

Cholesterol / CHD
Blood pressure / Stroke
Bone density / Fracture

(c) 2007, Richard Glickman-Simon, M.D.

The Ultimate Risk Factor

Source: Social Security Online
http://www.ssa.gov

(c) 2007, Richard Glickman-Simon, M.D.

Elderly

Recommendations	Class	Level
In elderly hypertensives with SBP ≥160 mmHg there is solid evidence to recommend reducing SBP to between 150 and 140 mmHg.	I	A
In fit elderly patients <80 years old antihypertensive treatment may be considered at SBP values ≥140 mmHg with a target SBP <140 mmHg if treatment is well tolerated.	IIb	C
In individuals older than 80 years with an initial SBP ≥160 mmHg it is recommended to reduce SBP to between 150 and 140 mmHg, provided they are in good physical and mental conditions.	I	B
In frail elderly patients, it is recommended to leave decisions on anti-hypertensive therapy to the treating physician, and based on monitoring of the clinical effects of treatment.	I	C
Continuation of well-tolerated antihypertensive treatment should be considered when a treated individual becomes octogenarian.	IIa	C
All hypertensive agents are recommended and can be used in the elderly, although diuretics and calcium antagonists may be preferred in isolated systolic hypertension.	I	A

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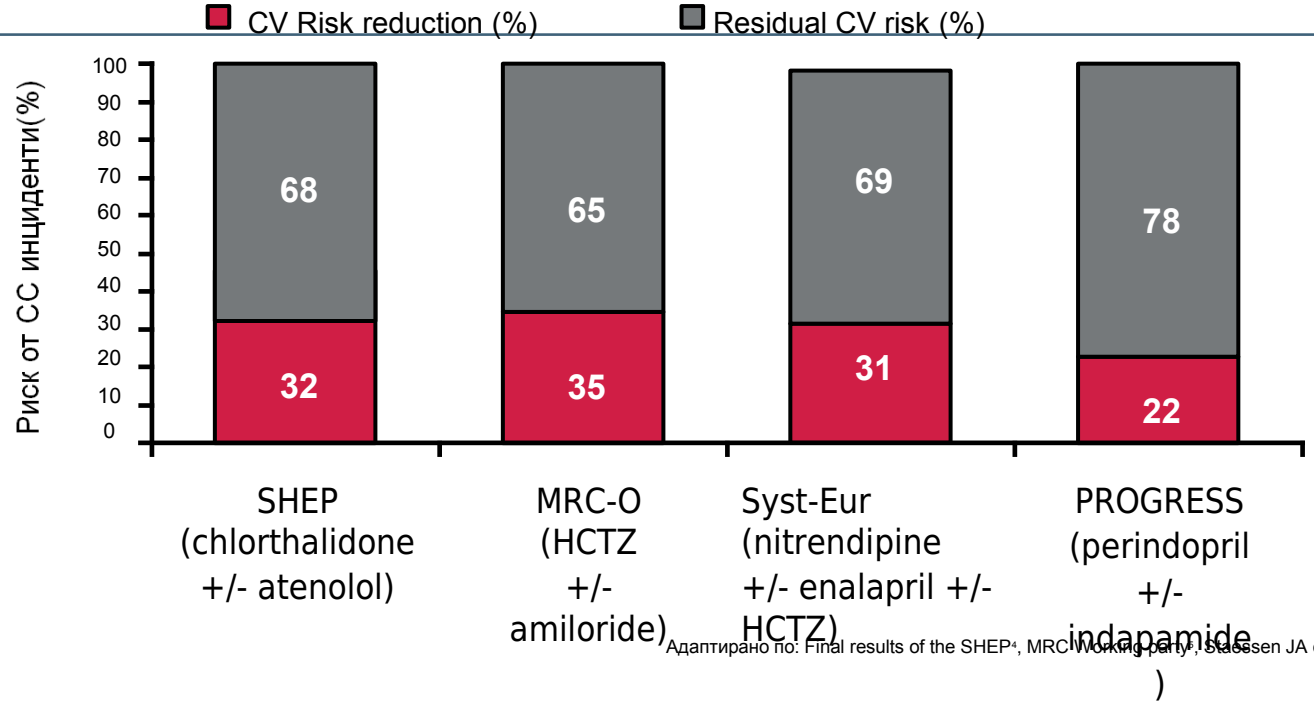
Антихипертензивната терапия не е достатъчна

Дори при адекватно антихипертензивно лечение остава значим резидуален риск!



Адаптирано по: Final results of the SHEP[4], MRC Working party[5], Staessen JA et al[6], Jan van Gijn[7]

MRC-O - Medical Research Council trial of treatment of hypertension in older adults[5] SHEP - Systolic Hypertension in the Elderly Program[4]
Syst-Eur - Systolic Hypertension in Europe[6]
PROGRESS - Preventing Strokes by Lowering Blood Pressure in Patients With Cerebral Ischemia[7]
АХ - артериална хипертония, СС - сърдечно-съдов, HCTZ - hydrochlorothiazide

Recommendations of treatment of risk factors associated with hypertension

Recommendations	Class	Level
It is recommended to use statin therapy in hypertensive patients at moderate to high CV risk, targeting a low-density lipoprotein cholesterol value <3.0 mmol/L (115 mg/dL).	I	A
When overt coronary heart disease is present, it is recommended to administer statin therapy to achieve low-density lipoprotein cholesterol levels <1.8 mmol/L (70 mg/dL).	I	A
Antiplatelet therapy, in particular low-dose aspirin, is recommended in hypertensive patients with previous CV events.	I	A
Aspirin should also be considered in hypertensive patients with reduced renal function or a high CV risk, provided that BP is well controlled.	IIa	B
Aspirin is not recommended for CV prevention in low-moderate risk hypertensive patients, in whom absolute benefit and harm are equivalent.	III	A
In hypertensive patients with diabetes, a HbA_{1c} target of <7.0% is recommended with antidiabetic treatment.	I	B
In more fragile elderly patients with a longer diabetes duration, more comorbidities and at high risk, treatment to a HbA_{1c} target of <7.5-8.0% should be considered.	IIa	C

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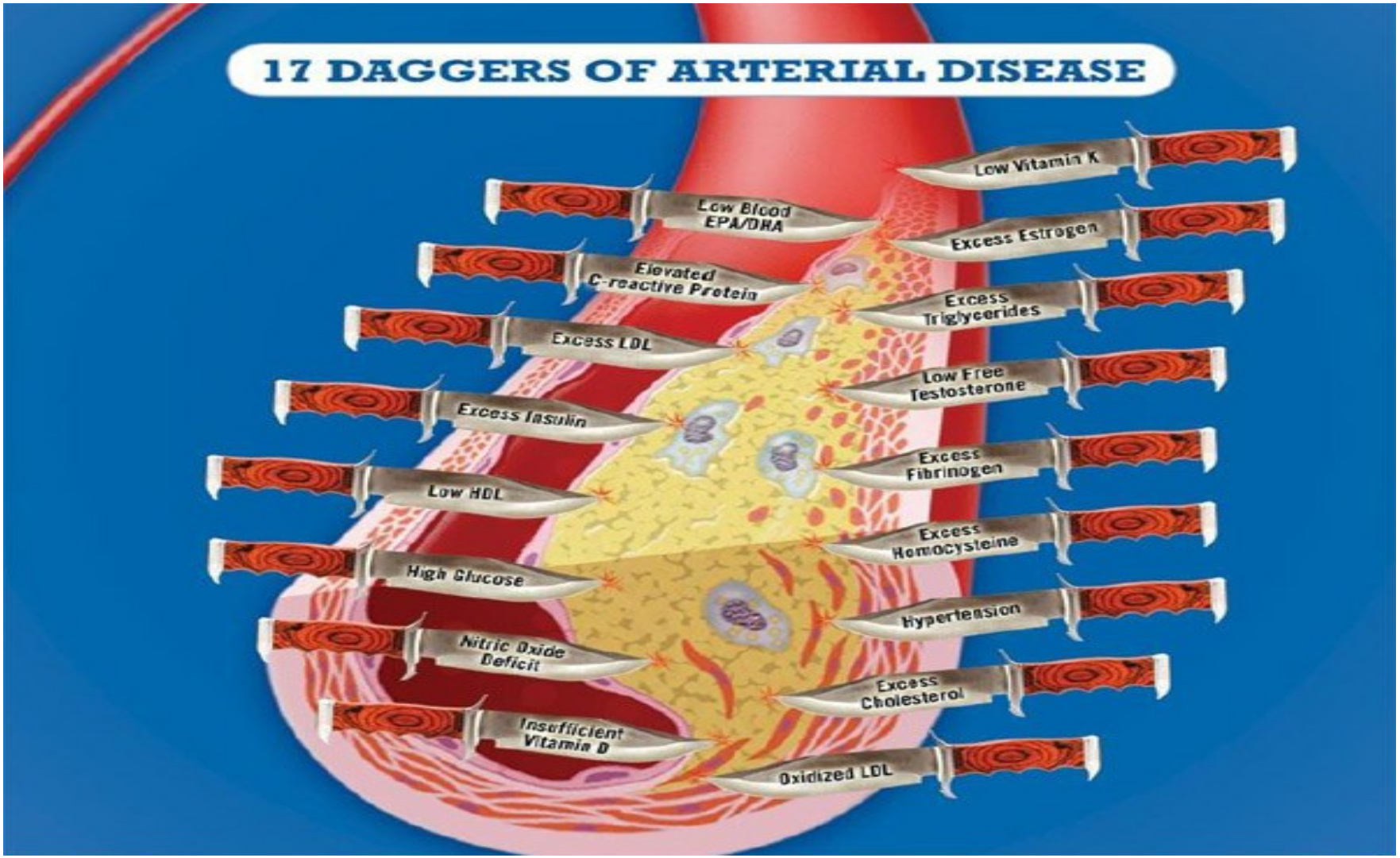
Изводи

- Независимо от нашите усилия, АХ си остава убиец N1 в света.
- АХ често се придружава от други традиционни и нетрадиционни РФ и СС риск нараства в геометрична прогресия.
- Рисковите калкулатори работят на популационно ниво, но резидуалният СС риск си остава проблем.
- Ето защо е необходим индивидулизиран и комплексен подход при оценката на риска и избора на профилактична и терапевтична стратегия.

Благодаря за вниманието!