Hôpitaux Universitaires de Genève

FACULTÉ DE MÉDECINE

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Prévention primaire et secondaire des maladies cardio- et cérébrovasculaires: que peut-on proposer en 2011 ?

Colloque du Service de Médecine de premier recours
20 avril 2011

Prof. Dr. Jean-Michel Gaspoz
Département de Médecine communautaire, de premier recours et des urgences

Un homme de 55 ans vous consulte pour un bilan de santé.

Aucune plainte. Connu pour une hypertension artérielle traitée par lisinopril et thiazide.

FRCV: pas d'antécédent cardiovasculaire (CV) personnel ou familial. Sédentaire. Fumeur actif dès l'âge de 19 ans avec une consommation de 20 cigarettes/jour. BMI = 29.5 kg/m^2.

Tension artérielle :158/98 mmHg, sous traitement.
Labo : glycémie à jeun=6.5 mM/l, cholestérol total=6.4 mM/l, LDL-cholestérol=4.05 mM/l, HDL-Cholestérol=1.03 mM/l, triglycérides=2.9 mM/l.

Faut-il lui prescrire de l'aspirine à but préventif et/ou un hypolipémiant ? D'autres conseils ?

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L'aspirine

Aspirin in the primary and secondary prevention of vascular disease: collaborative meta-analysis of individual participant data from randomised trials

Antithrombotic Trialists' (ATT) Collaboration*

Antithrombotic Trialists' (ATT) Collaboration. Lancet 2009;373:1849-60

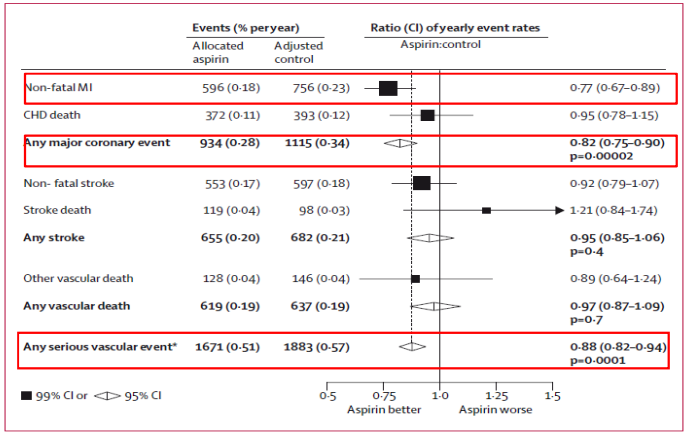
Design and eligibility criteria of primary prevention

	Dates of recruitment	Participating countries	Year of main publication	Number of participants	Mean duration of follow-up (years)	Target population	Eligible age range (years) at entry	Aspirin regimen	Randomised factorial comparison	Placebo control
British Doctors' Study[15]	Nov 1978–Nov 1979	UK	1988	5139	5·6	Male doctors	19–90	500 mg daily	None	No
US Physicians' Health Study[11]	Aug 1981–Apr 1984	USA	1988	22071	5·0	Male doctors	45–73	325 mg alternate days	β carotene vs placebo	Yes
Thrombosis Prevention Trial[9]	Feb 1989–May 1994	UK	1998	5085	6·7	Men with risk factors for CHD	45–69	75 mg daily	Warfarin vs placebo	Yes
Hypertension Optimal Treatment Trial[10]	Oct 1992–May 1994	Europe, North and South America, Asia	1998	18790	3·8	Men and women with DBP 100–115 mm Hg	50–80	75 mg daily	Three blood pressure regimens	Yes
Primary Prevention Project[13]	June 1993–Apr 1998	Italy	2001	4495	3·7	Men and women with one or more risk factors for CHD	45–94	100 mg daily	Vitamin E vs open control	No
Women's Health Study[14]	Sep 1992–May 1995	USA	2005	39876	10·0	Female health professionals	≥45	100 mg alternate days	Vitamin E vs placebo	Yes

CHD=coronary heart disease. DBP=diastolic blood pressure.

Antithrombotic Trialists' (ATT) Collaboration. Lancet 2009;373:1849-60

Serious vascular events in primary prevention trials – proportional effects of aspirin allocation



Antithrombotic Trialists' (ATT) Collaboration. Lancet 2009;373:1849-60

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 MARCH 31, 2005 VOL. 352 NO. 13

A Randomized Trial of Low-Dose Aspirin in the Primary Prevention of Cardiovascular Disease in Women

Paul M Ridker, M.D., Nancy R. Cook, Sc.D., I-Min Lee, M.B., B.S., David Gordon, M.A., J. Michael Gaziano, M.D., JoAnn E. Manson, M.D., Charles H. Hennekens, M.D., and Julie E. Buring, Sc.D.

Incidence and relative risks of confirmed cardiovascular endpoints

End Point	Aspirin (N=19,934)	Placebo (N=19,942)	Relative Risk (95% CI)*	P Value
	no. of events			
Major cardiovascular event†	477	522	0.91 (0.80–1.03)	0.13
Stroke	221	266	0.83 (0.69–0.99)	0.04
Ischemic	170	221	0.76 (0.63–0.93)	0.009
Hemorrhagic	51	41	1.24 (0.82–1.87)	0.31
Fatal	23	22	1.04 (0.58–1.86)	0.90
Nonfatal	198	244	0.81 (0.67–0.97)	0.02
Myocardial infarction	198	193	1.02 (0.84–1.25)	0.83
Fatal	14	12	1.16 (0.54–2.51)	0.70
Nonfatal	184	181	1.01 (0.83–1.24)	0.90
Death from cardiovascular causes	120	126	0.95 (0.74–1.22)	0.68
Transient ischemic attack	186	238	0.78 (0.64–0.94)	0.01
Coronary revascularization	389	374	1.04 (0.90–1.20)	0.61
Death from any cause	609	642	0.95 (0.85–1.06)	0.32

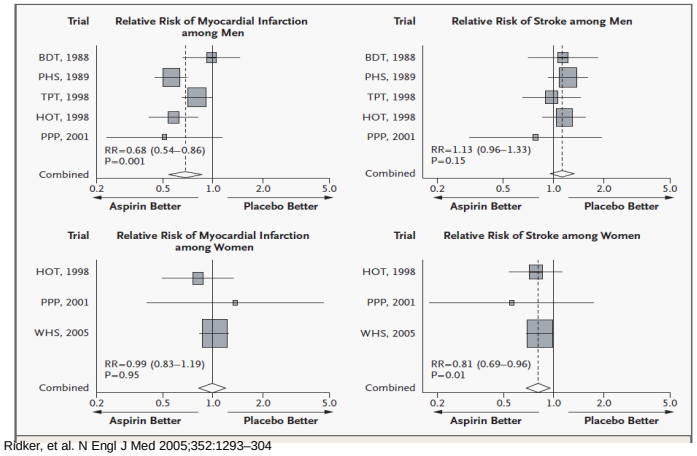
Ridker, et al. N Engl J Med 2005;352:1293–304

Incidence and relative risk of cardiovascular events according to baseline characteristics: WHS

Group	Total No.	Major CV Event				Stroke				Ischemic Stroke				Myocardial Infarction			
		Asp	Pla	RR (95% CI)	P Value	Asp	Pla	RR (95% CI)	P Value	Asp	Pla	RR (95% CI)	P Value	Asp	Pla	RR (95% CI)	P Value
		no.				no.				no.				no.			
Age																	
45–54 yr	24,025	163	161	1.01 (0.81–1.26)	0.92	77	90	0.85 (0.63–1.16)	0.31	57	71	0.80 (0.57–1.14)	0.21	69	56	1.23 (0.87–1.75)	0.25
55–64 yr	11,754	183	186	0.98 (0.80–1.20)	0.84	76	90	0.84 (0.62–1.14)	0.26	60	75	0.80 (0.57–1.12)	0.19	88	75	1.17 (0.86–1.59)	0.32
≥65 yr	4,097	131	175	0.74 (0.59–0.92)	0.008	68	86	0.78 (0.57–1.08)	0.13	53	75	0.70 (0.49–1.00)	0.05	41	62	0.66 (0.44–0.97)	0.04

Ridker, et al. N Engl J Med 2005;352:1293–304

Aspirin in the primary prevention of MI and stroke among men and women: the results of a meta-analysis



Ridker, et al. N Engl J Med 2005;352:1293–304

Conclusions for aspirin in primary prevention

- Overall
  - 12% reduction in serious vascular events[1]
- In men
  - 32% reduction in non fatal MIs[2]
- In women
  - 24% reduction in ischemic strokes[3]
  - 19% reduction in non-fatal strokes[3]
  - 22% reduction in TIAs[3]
  - 34% reduction in the risk of first MIs if aged ≥ 65 years[3]
- In patients with hypertension
  - 15% reduction in major CV events[4]
  - 36% reduction in the risk of first MI[4]
- In patients with diabetes
  - 12% reduction in serious vascular events[1]
  - 43% reduction in the risk of first MI in men[2]

1. Antithrombotic Trialists' (ATT) Collaboration. Lancet 2009;373:1849-60; 2. Eidelman, et al. Arch Intern Med 2003;163:2006–10; 3. Ridker, et al. N Engl J Med 2005;352:1293–304; 4. HOT Study Group. Lancet 1988;351:1755–62

However, aspirin allocation increased major gastrointestinal and extracranial bleeds (0.10% versus 0.07% per years, or in 3/10,000 persons on aspirin; p<0.0001), and the main coronary risk factors were also the risk factors for bleeding. How to integrate this in our final decision?

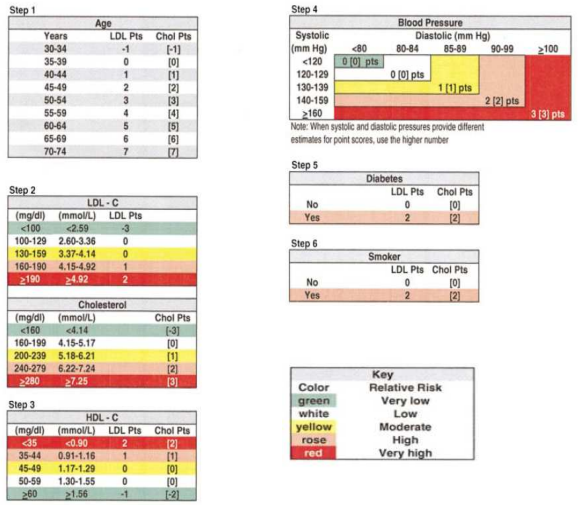
American Diabetes Association. Diabetes Care 2010;33(Suppl. 1)

Estimates of benefits and harms of aspirin given for 5 years to 1000 persons with various levels of baseline risk for coronary heart disease

Benefits and Harms	Baseline Risk for Coronary Heart Disease over 5 Years†		
	1%	3%	5%
Total mortality	No effect	No effect	No effect
Coronary heart disease events, *n*	1–4 avoided	4–12 avoided	6–20 avoided
Hemorrhagic strokes, *n*‡	0–2 caused	0–2 caused	0–2 caused
Major gastrointestinal bleeding events, *n*§	2–4 caused	2–4 caused	2–4 caused

Ann Intern Med 2002;136:157-160.

For many groups, available risk calculators can provide an accurate estimate of the risk or coronary heart disease events and strokes based on information about cardiovascular risk factors that include sex



Step 1

Age		
Years	LDL Pts	Chol Pts
30-34	-1	[-1]
35-39	0	[0]
40-44	1	[1]
45-49	2	[2]
50-54	3	[3]
55-59	4	[4]
60-64	5	[5]
65-69	6	[6]
70-74	7	[7]

Step 2

LDL - C		
(mg/dl)	(mmol/L)	LDL Pts
<100	<2.59	-3
100-129	2.60-3.36	0
130-159	3.37-4.14	0
160-190	4.15-4.92	1
≥190	≥4.92	2

Cholesterol		
(mg/dl)	(mmol/L)	Chol Pts
<160	<4.14	[-3]
160-199	4.15-5.17	[0]
200-239	5.18-6.21	[1]
240-279	6.22-7.24	[2]
≥280	≥7.25	[3]

Step 3

HDL - C			
(mg/dl)	(mmol/L)	LDL Pts	Chol Pts
<35	<0.90	2	[2]
35-44	0.91-1.16	1	[1]
45-49	1.17-1.29	0	[0]
50-59	1.30-1.55	0	[0]
≥60	≥1.56	-1	[-2]

Step 4

Blood Pressure					
Systolic (mm Hg)	Diastolic (mm Hg)				
	<80	80-84	85-89	90-99	≥100
<120	0 [0] pts				
120-129		0 [0] pts			
130-139			1 [1] pts		
140-159				2 [2] pts	
≥160					3 [3] pts

Note: When systolic and diastolic pressures provide different estimates for point scores, use the higher number

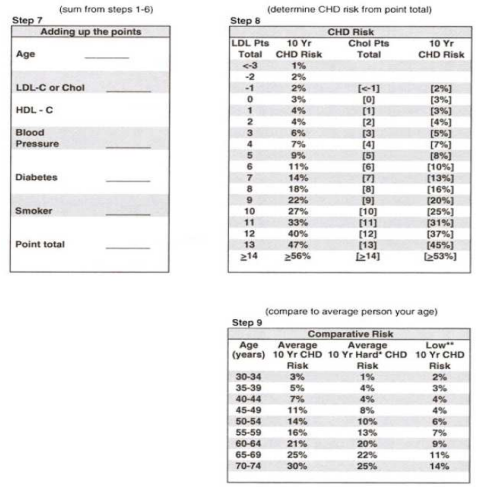
Step 5

Diabetes		
	LDL Pts	Chol Pts
No	0	[0]
Yes	2	[2]

Step 6

Smoker		
	LDL Pts	Chol Pts
No	0	[0]
Yes	2	[2]

Key	
Color	Relative Risk
green	Very low
white	Low
yellow	Moderate
rose	High
red	Very high



(sum from steps 1-6)

Step 7

Adding up the points	
Age	_____
LDL-C or Chol	_____
HDL - C	
Blood Pressure	_____
Diabetes	_____
Smoker	_____
Point total	_____

(determine CHD risk from point total)

Step 8

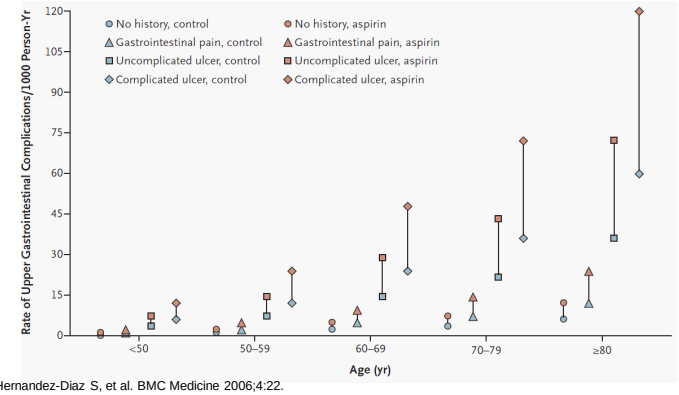
CHD Risk			
LDL Pts Total	10 Yr CHD Risk	Chol Pts Total	10 Yr CHD Risk
<-3	1%		
-2	2%		
-1	2%	[<-1]	[2%]
0	3%	[0]	[3%]
1	4%	[1]	[3%]
2	4%	[2]	[4%]
3	6%	[3]	[5%]
4	7%	[4]	[7%]
5	9%	[5]	[8%]
6	11%	[6]	[10%]
7	14%	[7]	[13%]
8	18%	[8]	[16%]
9	22%	[9]	[20%]
10	27%	[10]	[25%]
11	33%	[11]	[31%]
12	40%	[12]	[37%]
13	47%	[13]	[45%]
≥14	≥56%	[≥14]	[≥53%]

(compare to average person your age)

Step 9

Comparative Risk			
Age (years)	Average 10 Yr CHD Risk	Average 10 Yr Hard* CHD Risk	Low** 10 Yr CHD Risk
30-34	3%	1%	2%
35-39	5%	4%	3%
40-44	7%	4%	4%
45-49	11%	8%	4%
50-54	14%	10%	6%
55-59	16%	13%	7%
60-64	21%	20%	9%
65-69	25%	22%	11%
70-74	30%	25%	14%

Estimated rates of upper gastrointestinal complications in men according to age and the presence or absence of a history of such complications and regular treatment with aspirin



Hernandez-Diaz S, et al. BMC Medicine 2006;4:22.

Aspirin for the prevention of cardiovascular disease: US Preventive Services Task Force recommendation statement

Methods: Review of the literature since 2002, focusing on new evidence on the benefits and harms of aspirin for the primary prevention of cardiovascular disease, including myocardial infarction and stroke. The new evidence was reviewed and synthesized according to sex.

USPSTF. Ann Intern Med 2009;150:396-404.

US Preventive Services Task Force recommendation statement: men

Variable	Estimated MIs Prevented (per 1000 Men), *n*		
	Age 45–59 Years	Age 60–69 Years	Age 70–79 Years
10-year CHD risk			
1%	3.2	3.2	3.2
2%	6.4	6.4	6.4
3%	9.6	9.6	9.6
4%	12.8	12.8	12.8
5%	16	16	16
6%	19.2	19.2	19.2
7%	22.4	22.4	22.4
8%	25.6	25.6	25.6
9%	28.8	28.8	28.8
10%	32	32	32
11%	35.2	35.2	35.2
12%	38.4	38.4	38.4
13%	41.6	41.6	41.6
14%	44.8	44.8	44.8
15%	48	48	48
16%	51.2	51.2	51.2
17%	54.4	54.4	54.4
18%	57.6	57.6	57.6
19%	60.8	60.8	60.8
20%	64	64	64
	Estimated Harms, *n*		
Type of event			
GI bleeding	8	24	36
Hemorrhagic stroke	1	1	1

USPSTF. Ann Intern Med 2009;150:396-404.

US Preventive Services Task Force recommendation statement: women

Variable	Estimated Strokes Prevented (per 1000 Women), *n*		
	Age 55–59 Years	Age 60–69 Years	Age 70–79 Years
10-year stroke risk			
1%	1.7	1.7	1.7
2%	3.4	3.4	3.4
3%	5.1	5.1	5.1
4%	6.8	6.8	6.8
5%	8.5	8.5	8.5
6%	10.2	10.2	10.2
7%	11.9	11.9	11.9
8%	13.6	13.6	13.6
9%	15.3	15.3	15.3
10%	17	17	17
11%	18.7	18.7	18.7
12%	20.4	20.4	20.4
13%	22.1	22.1	22.1
14%	23.8	23.8	23.8
15%	25.5	25.5	25.5
16%	27.2	27.2	27.2
17%	28.9	28.9	28.9
18%	30.6	30.6	30.6
19%	32.3	32.3	32.3
20%	34	34	34
	Estimated Harm, *n*		
Type of event			
GI bleeding	4	12	18

USPSTF. Ann Intern Med 2009;150:396-404.

Recommendations (1)

- Encourage men 45-79 years to use aspirin when the potential benefit of a reduction in MIs outweighs the potential harm of an increase in gastrointestinal haemorrhage. (A)
- Encourage women 55-79 years to use aspirin when the potential benefit of a reduction in ischaemic strokes outweighs the potential harm of an increase in gastrointestinal haemorrhage. (A)

Recommendations (2)

- Evidence is insufficient to assess the balance of benefits and harms of aspirin for CV prevention in men and women age 80 years or older. (I)
- Do not encourage aspirin use for CVD prevention in women younger than 55 years and in men younger than 45 years. (D)

Intervention intervals

- Although the optimal timing and frequency of discussions related to aspirin therapy are unknown, a reasonable option might be every 5 years in middle age and later and also whenever other cardiovascular risk factors are detected

Aspirin for the prevention of cardiovascular disease: clinical summary of USPSTF recommendations

Population	Men Age 45–79 Years	Women Age 55–79 Years	Men Age <45 Years	Women Age <55 Years	Men and Women Age ≥80 Years
Recommendation	Encourage aspirin use when potential CVD benefit (MIs prevented) outweighs potential harm of GI hemorrhage	Encourage aspirin use when potential CVD benefit (strokes prevented) outweighs potential harm of GI hemorrhage	Do not encourage aspirin use for MI prevention	Do not encourage aspirin use for stroke prevention	No Recommendation
	Grade: A		Grade: D		Grade: I (insufficient evidence)

How to Use This Recommendation

Shared decision making is strongly encouraged with individuals whose risk is close to (either above or below) the estimates of 10-year risk levels indicated below. As the potential CVD benefit increases above harms, the recommendation to take aspirin should become stronger.

To determine whether the potential benefit of MIs prevented (men) and strokes prevented (women) outweighs the potential harm of increased GI hemorrhage, both 10-year CVD risk and age must be considered.

Risk Level at Which CVD Events Prevented (Benefit) Exceeds GI Harms

Men		Women	
Age	10-Year CHD Risk	Age	10-Year Stroke Risk
45–59 years	≥4%	55–59 years	≥3%
60–69 years	≥9%	60–69 years	≥8%
70–79 years	≥12%	70–79 years	≥11%

The table above applies to adults who are not taking NSAIDs and who do not have upper GI pain or a history of GI ulcers. NSAID use and history of GI ulcers increase the risk for serious GI bleeding events considerably and should be considered in determining the balance of benefits and harms.

NSAID use combined with aspirin use approximately quadruples the risk for serious GI bleeding events compared with the risk with aspirin use alone. The rate of serious bleeding in aspirin users is approximately 2 to 3 times greater in patients with a history of GI ulcers.

Risk Assessment

For men: Risk factors for CHD include age, diabetes, total cholesterol level, HDL cholesterol level, blood pressure, and smoking.
CHD risk estimation tool: http://healthlink.mcw.edu/article/923521437.html

For women: Risk factors for ischemic stroke include age, high blood pressure, diabetes, smoking, history of CVD, atrial fibrillation, and left ventricular hypertrophy.
Stroke risk estimation tool: www.westernstroke.org/PersonalStrokeRisk1.xls

Relevant Recommendations from the USPSTF

The USPSTF has made recommendations on screening for abdominal aortic aneurysm, carotid artery stenosis, CHD, high blood pressure, lipid disorders, and peripheral arterial disease. These recommendations are available at www.preventiveservices.ahrq.gov.

For the full recommendation statement and supporting documents, please go to www.preventiveservices.ahrq.gov.

USPSTF. Ann Intern Med 2009;150:396-404.

Effect of daily aspirin on long-term risk of death due to cancer: analysis of individual patient data from randomised trials

Peter M Rothwell, F Gerald R Fowkes, Jill F F Belch, Hisao Ogawa, Charles P Warlow, Tom W Meade

Lancet 2011; 377: 31–41

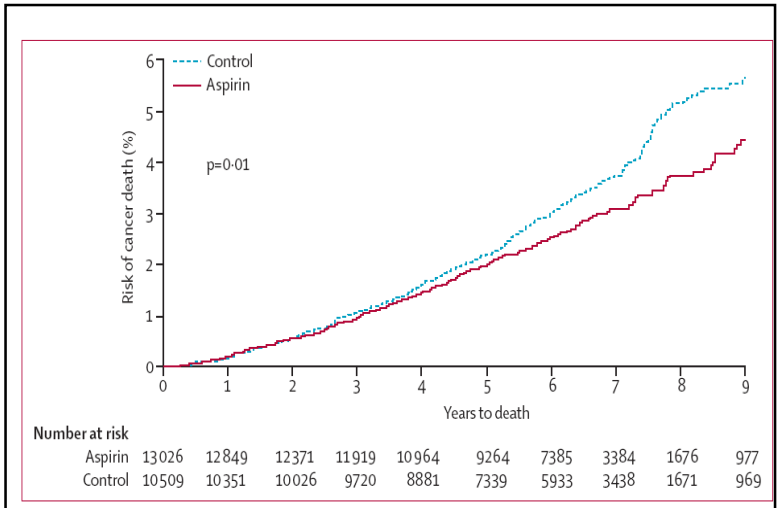


Figure 2: Effect of allocation to aspirin versus control on risk of death due to cancer during the trial treatment periods in a pooled analysis of the 23 535 patients in seven trials[17–21,23,24]

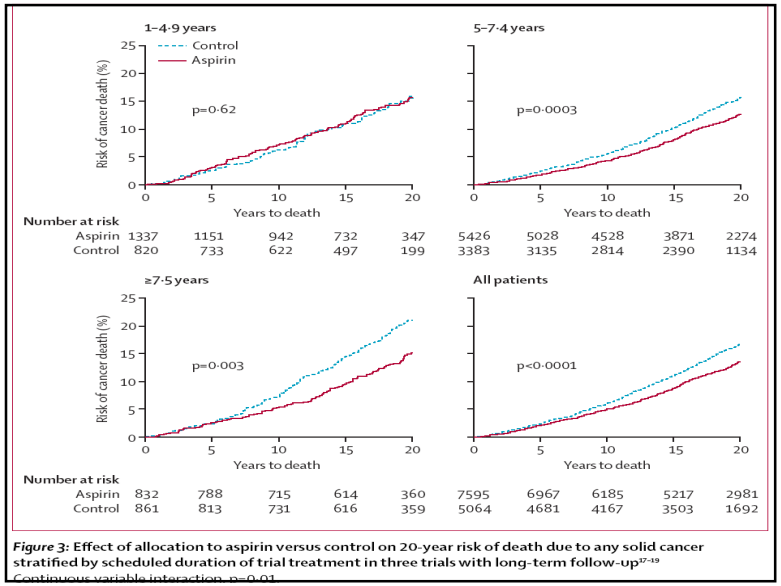


Figure 3: Effect of allocation to aspirin versus control on 20-year risk of death due to any solid cancer stratified by scheduled duration of trial treatment in three trials with long-term follow-up[17–19]
Continuous variable interaction, p=0·01

	n	0–5 years' follow-up		≥5 years' follow-up	
		HR (95% CI)	p value	HR (95% CI)	p value
Site of primary cancer*					
Gastrointestinal					
Oesophagus	23	0·78 (0·27–2·23)	0·64	0·43 (0·11–1·72)	0·23
Pancreas	45	0·88 (0·44–1·77)	0·73	0·25 (0·07–0·92)	0·04
Colorectal	54	0·78 (0·39–1·56)	0·48	0·41 (0·17–1·00)	0·05
Stomach	36	1·85 (0·81–4·23)	0·14	3·09 (0·64–14·91)	0·16
Other	24	0·67 (0·23–1·99)	0·47	0·20 (0·04–0·91)	0·04
All	182	0·96 (0·67–1·38)	0·81	0·46 (0·27–0·77)	0·003
Non-gastrointestinal					
Lung	198	0·92 (0·65–1·30)	0·65	0·68 (0·42–1·10)	0·11
Prostate	37	0·70 (0·29–1·73)	0·44	0·52 (0·20–1·34)	0·17
Bladder and kidney	31	1·04 (0·44–2·47)	0·93	1·28 (0·36–4·54)	0·70
Other solid	93	0·86 (0·52–1·44)	0·57	1·01 (0·51–1·98)	0·98
All	359	0·90 (0·69–1·16)	0·41	0·76 (0·54–1·08)	0·12
Unknown primary	36	0·56 (0·28–1·15)	0·12	0·56 (0·09–3·38)	0·53
All solid cancers	577	0·88 (0·72–1·08)	0·22	0·64 (0·49–0·85)	0·002
Histological type†					
Adenocarcinoma	247	0·86 (0·62–1·18)	0·34	0·53 (0·35–0·81)	0·003
Non-adenocarcinoma	224	0·89 (0·65–1·23)	0·48	0·79 (0·50–1·24)	0·30
Unknown	106	0·91 (0·58–1·44)	0·70	0·69 (0·34–1·43)	0·32
Haematological	50	0·82 (0·44–1·54)	0·53	0·34 (0·09–1·28)	0·11
All cancers*	627	0·88 (0·72–1·06)	0·17	0·62 (0·47–0·82)	0·001
All cancers including ETDRS‡	657	0·86 (0·71–1·04)	0·11	0·66 (0·50–0·87)	0·003

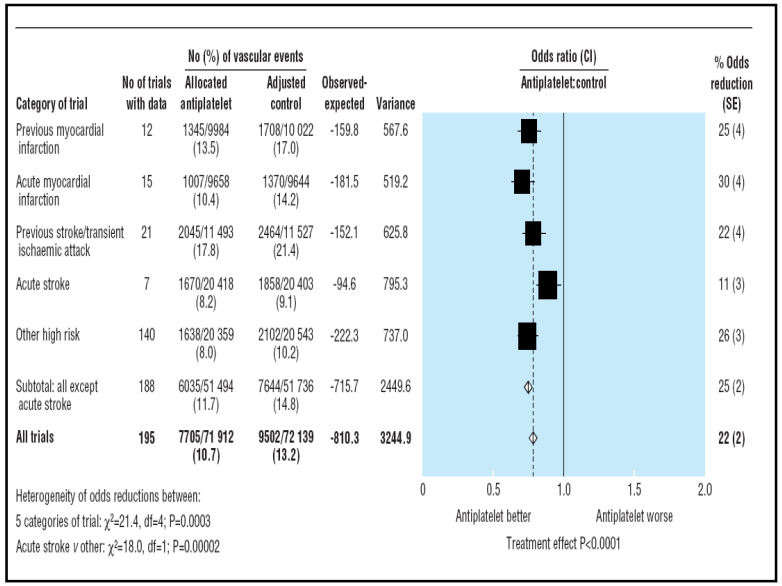
The numbers of cancer deaths included from each trial are those shown on webappendix p 3. n=number of cancer deaths. HR=hazard ratio. ETDRS=Early Treatment Diabetic Retinopathy Study. *Analysis confined to the six trials with site-specific cancer data follow-up.[17–19,21,23,24] †Analysis confined to solid (non-haematological) cancers. ‡Analysis included cancer deaths in ETDRS,[20] in which neither primary site nor histological type was known in any case.

Table 1: Pooled analysis of the effect of allocation to aspirin on risk of death due to cancer during the seven trials from which individual patient data were available,[17–21,23,24] stratified by type of primary tumour and period of follow-up

Collaborative meta-analysis of randomised trials of antiplatelet therapy for prevention of death, myocardial infarction, and stroke in high risk patients

Antithrombotic Trialists' Collaboration

BMJ 2002;324:71–86



Category of trial	No of trials with data	No (%) of vascular events: Allocated antiplatelet	No (%) of vascular events: Adjusted control	Observed-expected	Variance	% Odds reduction (SE)
Previous myocardial infarction	12	1345/9984 (13.5)	1708/10 022 (17.0)	-159.8	567.6	25 (4)
Acute myocardial infarction	15	1007/9658 (10.4)	1370/9644 (14.2)	-181.5	519.2	30 (4)
Previous stroke/transient ischaemic attack	21	2045/11 493 (17.8)	2464/11 527 (21.4)	-152.1	625.8	22 (4)
Acute stroke	7	1670/20 418 (8.2)	1858/20 403 (9.1)	-94.6	795.3	11 (3)
Other high risk	140	1638/20 359 (8.0)	2102/20 543 (10.2)	-222.3	737.0	26 (3)
Subtotal: all except acute stroke	188	6035/51 494 (11.7)	7644/51 736 (14.8)	-715.7	2449.6	25 (2)
All trials	**195**	**7705/71 912 (10.7)**	**9502/72 139 (13.2)**	**-810.3**	**3244.9**	**22 (2)**

Odds ratio (CI) Antiplatelet:control

0 0.5 1.0 1.5 2.0

Antiplatelet better Antiplatelet worse

Treatment effect P<0.0001

Heterogeneity of odds reductions between:

5 categories of trial: χ^2=21.4, df=4; P=0.0003

Acute stroke *v* other: χ^2=18.0, df=1; P=0.00002

HUG Hôpitaux Universitaires de Genève

FACULTÉ DE MÉDECINE UNIVERSITÉ DE GENÈVE

Les hypolipémiants

Efficacy and safety of cholesterol-lowering treatment: prospective meta-analysis of data from 90 056 participants in 14 randomised trials of statins

*Cholesterol Treatment Trialists' (CTT) Collaborators**

Lancet 2005; 366: 1267–78

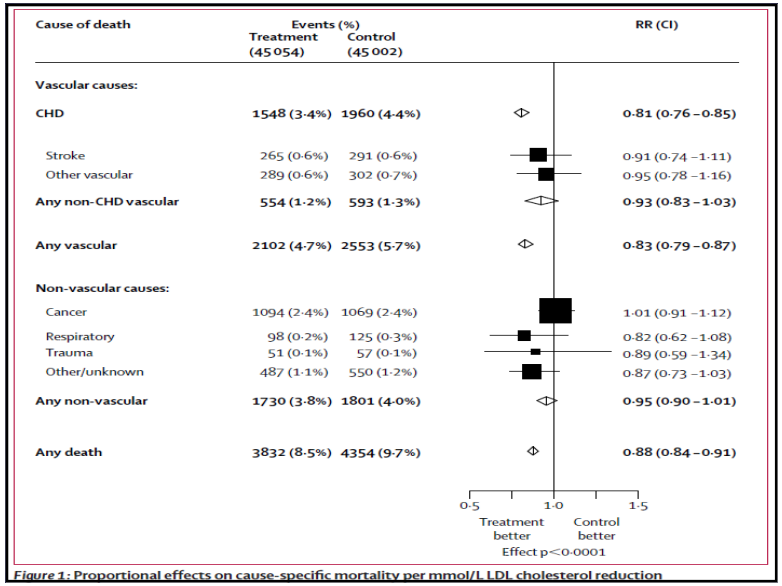


Figure 1: Proportional effects on cause-specific mortality per mmol/L LDL cholesterol reduction

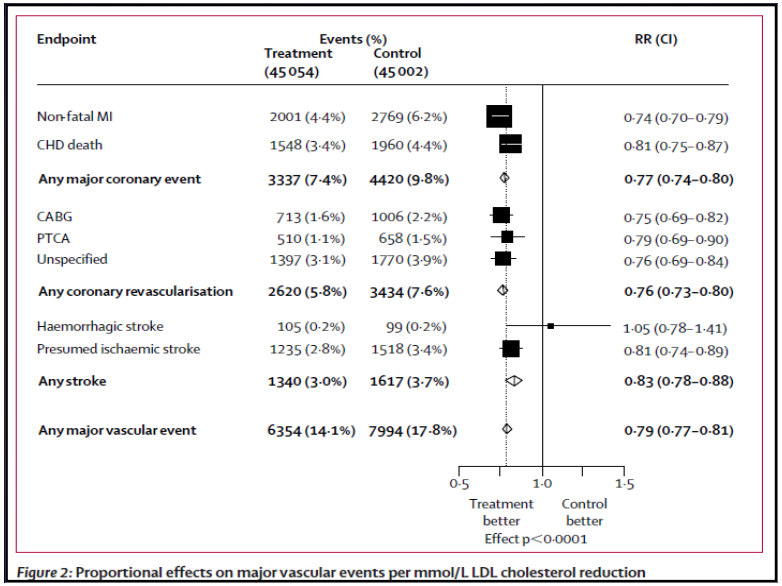


Figure 2: Proportional effects on major vascular events per mmol/L LDL cholesterol reduction

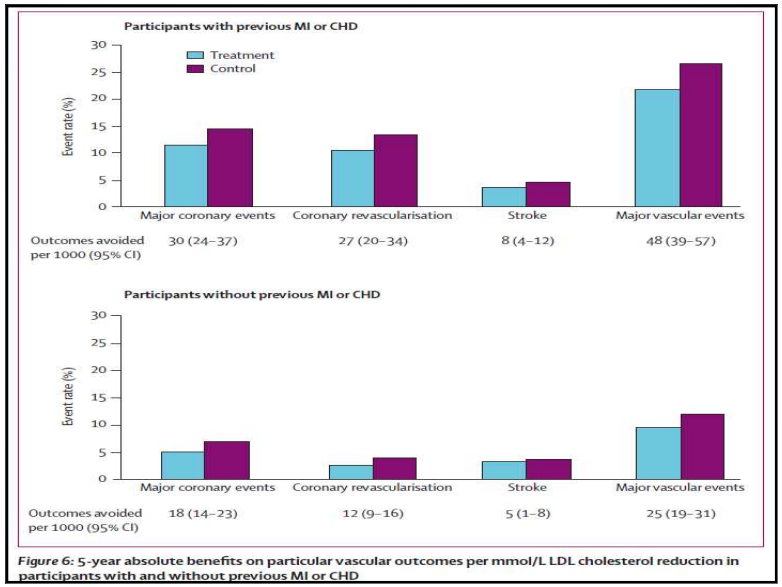
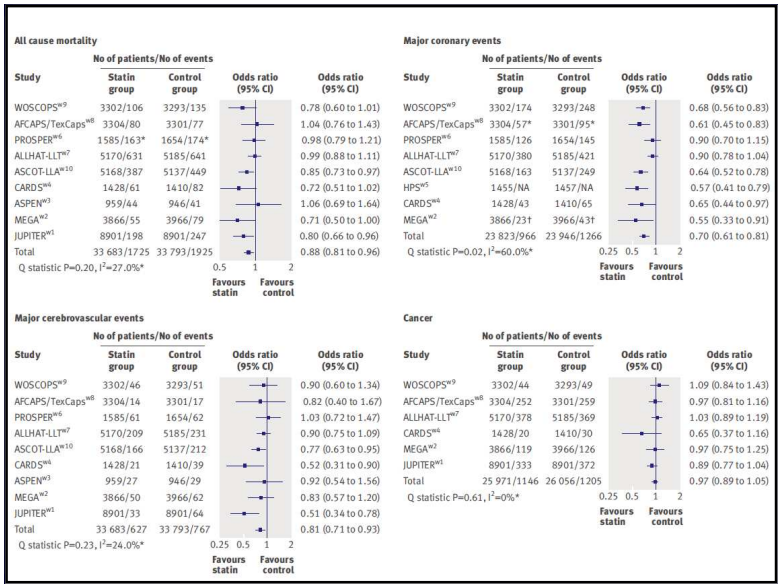


Figure 6: 5-year absolute benefits on particular vascular outcomes per mmol/L LDL cholesterol reduction in participants with and without previous MI or CHD



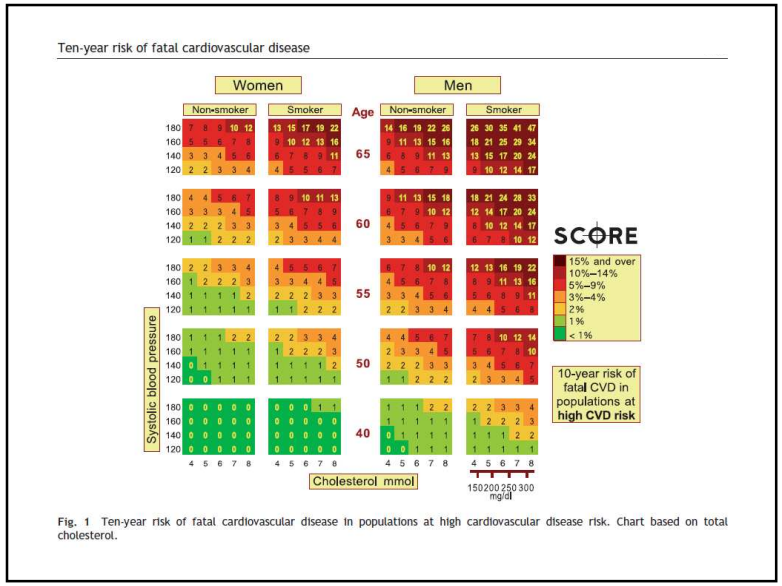


Fig. 1 Ten-year risk of fatal cardiovascular disease in populations at high cardiovascular disease risk. Chart based on total cholesterol.

Score du GSLA

Estimation du risque cardio-vasculaire global

Score de risque du GSLA

1) Nombre de points par facteur de risque, en fonction du degré de sévérité

Age (ans)	
35–39	0
40–44	6
45–49	11
50–54	16
55–59	21
60–65	26

Antécédents familiaux	
Non	0
Oui	4

Fumeur	
Non	0
Oui	8

Pression artérielle systolique (mm Hg)	
< 120	0
120–129	2
130–139	3
140–159	5
≥ 160	8

HDL-cholestérol (mmol/l)	
< 0,91	11
0,91–1,16	8
1,17–1,41	5
≥ 1,42	0

LDL-cholestérol (mmol/l)	
< 2,59	0
2,59–3,36	5
3,37–4,13	10
4,14–4,91	14
≥ 4,91	20

Triglycérides (mmol/l)	
< 1,14	0
1,14–1,70	2
1,71–2,27	3
≥ 2,28	4

2) Addition des points de tous les facteurs de risque

3) Risque absolu d'événement coronarien aigu en l'espace de 10 ans, compte tenu du nombre total de points

Risque sur 10 ans pour la Suisse, en pourcentage	
0–24 points	< 1
25–31 points	1–2
32–41 points	2-5
42–49 points	5–10
50–58 points	10–20
> 58 points	> 20

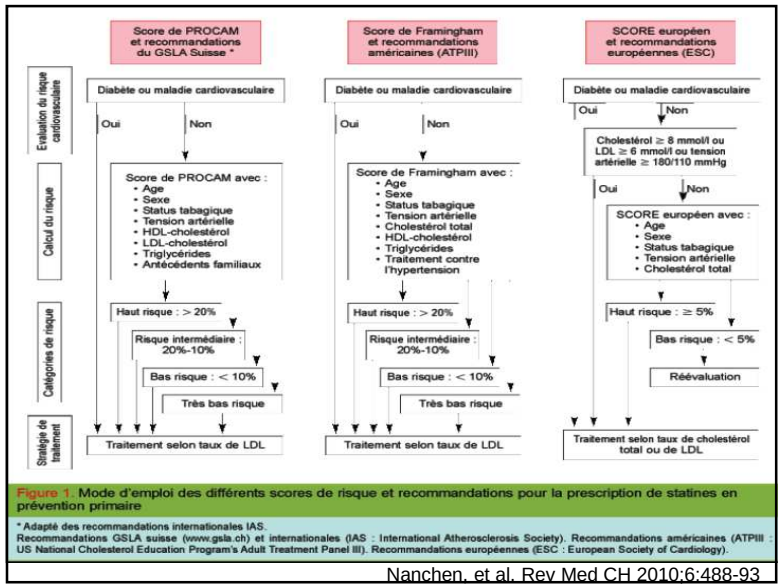


Figure 1. Mode d'emploi des différents scores de risque et recommandations pour la prescription de statines en prévention primaire

* Adapté des recommandations internationales IAS.
Recommandations GSLA suisse (www.gsla.ch) et internationales (IAS : International Atherosclerosis Society). Recommandations américaines (ATPIII : US National Cholesterol Education Program's Adult Treatment Panel III). Recommandations européennes (ESC : European Society of Cardiology).

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Tableau 1. Critères d'éligibilité à un traitement de statines selon les scores et recommandations choisis

Scores de risque et recommandations correspondantes	Conditions nécessaires	Eligible pour statines si
PROCAM et IAS 2003 (adapté en Suisse par le GSLA) Estime le risque absolu d'événement coronarien mortel ou non mortel à dix ans	• Diabète ou maladie cardiovasculaire • Haut risque : > 20% • Risque intermédiaire : 10%-20% • Bas risque : < 10% • Très bas risque : < 10% et max 1 facteur de risque [a]	• LDL ≥ 2,6 mmol/l • LDL ≥ 2,6 mmol/l • LDL ≥ 3,4 mmol/l • LDL ≥ 4,1 mmol/l • LDL ≥ 4,9 mmol/l
Framingham et ATP-III 2001 (américaines) Estime le risque absolu d'événement coronarien mortel ou non mortel à dix ans	• Diabète ou maladie cardiovasculaire • Haut risque : > 20% • Risque intermédiaire : 10%-20% • Bas risque : < 10% • Très bas risque : < 10% et max 1 facteur de risque [a]	• LDL ≥ 2,6 mmol/l • LDL ≥ 2,6 mmol/l • LDL ≥ 3,4 mmol/l • LDL ≥ 4,1 mmol/l • LDL ≥ 4,9 mmol/l
SCORE et ESC 2007 (européennes) Estime le risque absolu de mort cardio-vasculaire à dix ans	• Diabète ou maladie cardiovasculaire ou forte augmentation d'un facteur de risque isolé : cholestérol ≥ 8 mmol/l ; LDL ≥ 6 mmol/l ; tension artérielle ≥ 180/110 mmHg • Haut risque : ≥ 5%	• Cholestérol ≥ 5 mmol/l ou LDL ≥ 3 mmol/l

[a] Facteurs de risque : tabagisme actif ; tension artérielle ≥ 140/90 mmHg ou médicaments antihypertenseurs ; histoire familiale positive ; HDL < 1 mmol/l ; homme âgé de ≥ 45 ans ; femme âgée de ≥ 55 ans.
GSLA : Groupe Suisse Lipides et Athérosclérose www.gsla.ch ; IAS : International Atherosclerosis Society ; ATP-III : US National Cholesterol Education Program's Adult Treatment Panel III ; ESC : European Society of Cardiology.

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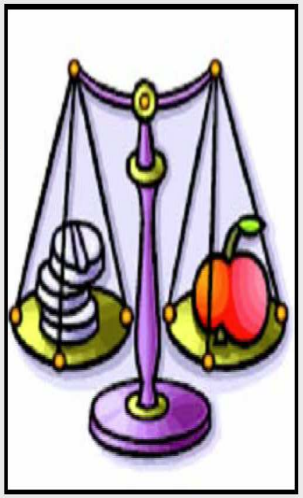
Statin + thiazide
+ beta-blocker
+ ACE-inhibitor
+ Aspirin



Wine, fish,
dark chocolate
fruits, vegetables,
garlic, almonds

Un homme de 55 ans vous consulte pour un bilan de santé.

Aucune plainte. Connu pour une hypertension artérielle traitée par lisinopril et thiazide.

FRCV: pas d'antécédent cardiovasculaire (CV) personnel ou familial. Sédentaire. Fumeur actif dès l'âge de 19 ans avec une consommation de 20 cigarettes/jour. BMI = 29.5 kg/m^2.

Tension artérielle :158/98 mmHg, sous traitement.
Labo : glycémie à jeun=6.5 mM/l, cholestérol total=6.4 mM/l, LDL-cholestérol=4.05 mM/l, HDL-Cholestérol=1.03 mM/l, triglycérides=2.9 mM/l.

Faut-il lui prescrire de l'aspirine à but préventif et/ou un hypolipémiant ? D'autres conseils ?

Score du GSLA

Estimation du risque cardio-vasculaire global

Score de risque du GSLA

1) Nombre de points par facteur de risque, en fonction du degré de sévérité						2) Addition des points de tous les facteurs de risque
Age (ans)		**Fumeur**		**LDL-cholestérol (mmol/l)**		
35–39	0	Non	0	< 2,59	0	
40–44	6	Oui	8	2,59–3,36	5	3) Risque absolu d'événement coronarien aigu en l'espace de 10 ans, compte tenu du nombre total de points
45–49	11	**Pression artérielle systolique (mm Hg)**		3,37–4,13	10	
50–54	16	< 120	0	4,14–4,91	14	
55–59	21	120–129	2	≥ 4,91	20	
60–65	26	130–139	3	**Triglycérides (mmol/l)**		**Risque sur 10 ans pour la Suisse, en pourcentage**
Antécédents familiaux		140–159	5	< 1,14	0	0–24 points < 1
Non	0	≥ 160	8	1,14–1,70	2	25–31 points 1–2
Oui	4	**HDL-cholestérol (mmol/l)**		1,71–2,27	3	32–41 points 2-5
		< 0,91	11	≥ 2,28	4	42–49 points 5–10
		0,91–1,16	8			50–58 points 10–20
		1,17–1,41	5			> 58 points > 20
		≥ 1,42	0			

Notre patient:

Risque coronarien selon le score PROCAM/GSLA :10-20% à 10 ans et risque de mortalité CV : 6% selon le SCORE/ESC. Il se classe respectivement à risque CV intermédiaire ou élevé.

Valeur cible de LDL-cholestérol <3.4 mM/l selon les recommandations du GSLA et <2.5 mM/l selon celle de l'ESC.

A recommander une modification de son alimentation (pauvre en graisse), l'arrêt du tabac, une réduction du poids et une activité physique plus intense, en tenant compte de sa motivation au changement et de ses ressources personnelles.

Si après 3 mois, ses valeurs lipidiques restent identiques, un traitement par une statine et d'aspirine en prévention primaire sont recommandés chez ce patient, après discussion des risques et bénéfices de ces traitements.

Merci pour votre attention