Slide 1

Effect of Statins on Glucose

Jupiter study
2 years
Median A1c - 5.8% (placebo) vs 5.9% (rosuvastatin) p=0.001
Newly diagnosed diabetes inc. from 2.4% to 3.0% but primary CV endpoint dec. from 2.8% to 1.6%

345,417 patients
2 years VA
Non-diabetics - FPG inc 0.17 mmol/L (3 mg/dL) more if on a statin vs no statin
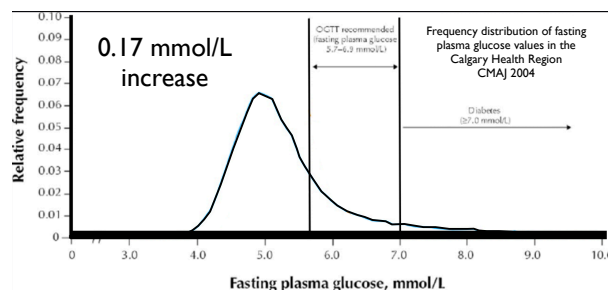0.6 (10) if diabetic

J Investig Med. 2009 Mar;57(3):495-9. doi: 10.231/JIM.0b013e318197ec8b

Effect of Statins on Glucose

TNT and IDEAL studies - statin comparative studies - excluded diabetics from analysis

	New-onset diabetes (%)	CV event (%)
Atorvastatin 10 or simvastatin 20-40mg	6.9	10.7
Atorvastatin 80 mg	7.8	9.2
RR	16% inc	15% dec
AR	0.9% inc	1.5% dec

JACC 2013;61:148–52

Slide 4

0.17 mmol/L increase

Frequency distribution of fasting plasma glucose values in the Calgary Health Region CMAJ 2004
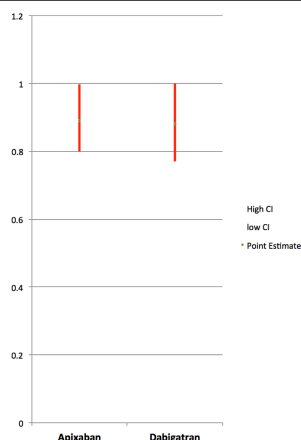
The diagnosis of diabetes is the diagnosis of a SURROGATE condition/marker
= HCTZ inc. glucose but dec. CV events

Novel Anti-Coagulants

"ARISTOTLE: A major win for apixaban in AF"

"the most positive yet"

"first of the three new oral anticoagulants to show a clearly significant reduction in all-cause mortality"

http://www.theheart.org/article/1268723.do, Dabigatran (150mg): N Engl J Med 2009;361:1139-51. Apixaban: N Engl J Med. 2011;365(11):981-92

Do multivitamins reduce all cause mortality?

• Meta-Analysis: 21 studies (91,074pts)

	Fixed Effects RR	Random Effects RR	Hetero (I²)
Overall Mortality	0.98 (0.94-1.02)	0.97 (0.91-1.04)	16%
Cancer Mortality	0.96 (0.88-1.04)	0.96 (0.88-1.04)	0%
CVD Mortality	1.01 (0.93-1.09)	0.95 (0.81-1.13)	26%

Bottom-Line: No strong evidence for multivitamins reducing mortality

Macpherson H, Pipingas A, Pase MP. Am J Clin Nutr doi: 10.3945/ajcn.112.049304

Pancreatitis and Cholesterol

Meta-analysis

Statin: 21 RCT, 2 with published data on incident pancreatitis and 19 with unpublished data, for 153,414, mean 4.3 yrs.

Risk of Pancreatitis: Risk Ratio 0.79 (0.65-0.95)

    5 yr NNT ≈1200

Fibrates: 7 RCTs 40,162 over x5.3 yrs.

Risk of Pancreatitis: Risk Ratio 1.39 (1.00-1.95)

    5 yr NNH 935

Bottom-Line: If worried about pancreatitis, better off with Statins

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Primary prevention of CVD with a Mediterranean diet - 4.8 years, 58% men, 67 y/o, 48% diabetics, 40% statins, BMI 30, 83% HTN

	Mortality (%)	MI, stroke, and death from CVD (%)	MI(%)	Stroke (%)
Low-fat	4.7	4.4	1.6	2.4
Mediterranean diet with EVOO	4.6	3.8	1.5	1.9
Mediterranean diet with NUTS	4.7	3.4	1.3	1.3
Relative risk reduction	NSS	~20-30%	NSS	~20-40%
Absolute risk reduction		~1%		~1%
Number needed to treat		~100		~100

Risk: Relative, Absolute & NNT

If you don't know where you start, it's hard to know where you finish.

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Zoster Vaccine reduces shingles up to 70%

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Study	Placebo	Zoster Vac	Benefit	NNT (3 yrs)
Age 50-59 (3 yrs)	2.03%	0.62%	1.41%	71
Age ≥60 (3 yrs)	3.42%	1.67%	1.75%	58

Bottom-Line: Over 3 years, one in 60-70 patients will avoid shingles due to the vaccine

- One in 350 for post-herpetic neuralgia.