Major journals

BRITISH MEDICAL JOURNAL

Excess risk of fatal CHD associated with diabetes

Readability	✓ ✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓

1 The authors sought to produce a reliable and unbiased comparison of the relative risk for fatal coronary heart disease (CHD) associated with diabetes separately for men and women by updating the earlier reviews with published data from the Asia Pacific Cohort Studies Collaboration as well as any cohort studies published before March 2005.

2 Studies were eligible if they had reported estimates of the relative risk for fatal CHD comparing men and women with and without diabetes.

3 Thirty-seven studies of type 2 diabetes and fatal CHD were identified, with information on 447 064 people.

4 The rate of fatal CHD was higher in people with diabetes than in those without (5.4 versus 1.6%).

5 The overall summary relative risk for fatal CHD in people with diabetes compared with no diabetes was significantly greater among women than it was among men: 3.50 versus 2.06.

6 The pooled ratio of the relative risks (women:men) from 29 studies with multiple adjusted estimates was 1.46.

7 The relative risk for fatal CHD associated with diabetes is 50% higher in women than it is in men. This greater excess coronary risk may be explained by more adverse cardiovascular risk profiles among women with diabetes, combined with possible disparities in treatment that favour men.

Huxley R, Barzi F, Woodward M (2006) Excess risk of fatal coronary heart disease associated with diabetes in men and women: meta-analysis of 37 prospective cohort studies. *British Medical Journal* **332**(7533): 73–8

Excess coronary risk among women with diabetes

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The association between diabetes and coronary artery disease has been suggested to be stronger in women than in men, supporting the concept that diabetes reduces the advantages of being female. However, conflicting evidence has been reported over the past 10 years, especially relating to meta-analyses in this area.

A paper by Huxley et al (see left) estimates relative risks of fatal coronary disease associated with diabetes in men and women, based on a meta-analysis of prospective cohort studies published between 1966 and March 2005. Studies included were those that reported estimates of relative fatal coronary heart disease comparing men and women with and without diabetes. Thirty-seven studies of type 2 diabetes compared fatal coronary heart disease, identifying a total of 447 064 people. The rate of fatal coronary heart disease was higher in people with diabetes than those without (5.4 versus 1.6 %).

The overall relative risk of fatal coronary heart disease in people with diabetes compared with those without diabetes was significantly greater among women than in men. The ratio of relative risks (RR; men versus women) was 1.46 (95 % confidence interval, 1.14–1.88).

The authors therefore concluded that the RR of fatal coronary heart disease associated with diabetes is 50 % higher in women than it is in men, which may be explained by more adverse cardiovascular risk profiles potentially combined with possible disparities in treatment.

AMERICAN JOURNAL OF MEDICINE

Future CV guidelines promote risk reduction

Readability	✓ ✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓

1 Current guidelines on cardiovascular (CV) disease prevention reflect an active approach to the prevention of CV disease.

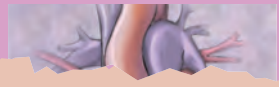
2 A new risk prediction system, Systematic Coronary Risk Evaluation (SCORE), defines risk in terms of absolute 10-year risk of a fatal CV event. The definition of high risk has also been refined.

3 Evidence indicates that lowering low-density lipoprotein-cholesterol levels beyond the recommended goals can produce incremental reductions in CV morbidity and mortality.

4 Future CV guidelines are likely to extend beyond recommendations on target lipid levels, providing comprehensive recommendations on combined risk reduction.

Graham I (2005) What impact will current trial data have on future guideline recommendations? *American Journal of Medicine* **118**(Suppl 12A): 42–7

AMERICAN JOURNAL OF MEDICINE



CV benefit of statin therapy in diabetes

Readability	✓ ✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓

1 Dyslipidaemia is a major cardiovascular (CV) risk factor in patients with type 2 diabetes.

2 Clinical trial data suggest that treatment of all lipid abnormalities may reduce CV risk in patients with type 2 diabetes.

3 Trial results suggest that low-dose statin therapy with atorvastatin results in significant reduction of CV events in patients with diabetes.

4 Patients with type 2 diabetes may be candidates for statin therapy regardless of low-density lipoprotein-cholesterol level.

Betteridge J (2005) Benefits of lipid-lowering therapy in patients with type 2 diabetes mellitus. *American Journal of Medicine* **118**(Suppl 12A): 10–15

'Individuals with prehypertensive levels of blood pressure have an increased risk of developing cardiovascular disease relative to those with optimal levels.'

AMERICAN JOURNAL OF MEDICINE

Good concordance with BP guidelines

Readability	✓ ✓ ✓
Applicability to practice	✓ ✓ ✓
WOW! factor	✓ ✓ ✓

1 Assessing blood pressure control by ambulatory blood pressure (BP) monitoring requires appropriate definitions.

2 The American Heart Association has issued two sets of definitions: normal 24-hour ambulatory BP is defined as <130/80 mmHg; normal daytime and night-time BP levels are defined as <135/85 mmHg and <120/70 mmHg, respectively.

3 Concordance between the cut-offs was found in 92 % of 4121 consecutive ambulatory BP measurement sessions.

4 Among the 8 % of discordant participants, only 1 % were hypertensive applying the 24-hour (but not day/night) BP values, whereas 7 % were hypertensive according to day/night but not 24-hour values.

Ben-Dov IZ, Ben-Arie L, Mekler J, Bursztyn M (2006) Normal ambulatory blood pressure: a clinical-practice-based analysis of recent American Heart Association recommendations. *American Journal of Medicine* **119**: 69.e13–18

LANCET

Adherence to treatment improves outcome in CHF

Readability	✓ ✓
Applicability to practice	✓ ✓
WOW! factor	✓ ✓

1 The authors assessed the association between adherence to treatment in people with chronic heart failure (CHF) and clinical outcome in the CHARM (Candesartan in Heart failure: Assessment of Reduction in Mortality and morbidity) programme.

2 CHARM compared the effects of the angiotensin receptor blocker candesartan with placebo in 7599 people with CHF. Median follow-up was 38 months.

3 Cox regression analysis showed that good adherence was associated with lower all-cause mortality in all people (hazard ratio [HR], 0.65). The adjusted HR for good adherence was similar in the candesartan (0.66) and placebo (0.64) groups.

4 Good adherence to medication is associated with a lower risk of death than poor adherence in people with CHF, irrespective of assigned treatment.

Granger BB, Swedberg K, Ekman I et al (2005) Adherence to candesartan and placebo and outcomes in chronic heart failure in the CHARM programme: double-blind, randomised, controlled clinical trial. *Lancet* **366**: 2005–11

ARCHIVES OF INTERNAL MEDICINE

The metabolic syndrome is a risk factor for stroke

Readability	✓ ✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓

1 This investigation compares the prevalence of diabetes and the metabolic syndrome in each sex and the stroke risk associated with each entity alone and in combination. The population sample comprised 2097 people in the Framingham Offspring Study aged 50–81 years and free of stroke.

2 Relative risk (RR) of stroke in people with both diabetes and the metabolic syndrome (3.28) was higher than that for either condition alone (metabolic syndrome alone RR, 2.10; diabetes alone RR, 2.47).

3 The metabolic syndrome is more prevalent than diabetes and a significant independent risk factor for stroke in people without diabetes.

Najarian RM, Sullivan LM, Kannel WB, Wilson PW, D'Agostino RB, Wolf PA (2006) Metabolic syndrome compared with type 2 diabetes mellitus as a risk factor for stroke: the Framingham Offspring Study. *Archives of Internal Medicine* **166**: 106–11

'The metabolic syndrome is more prevalent than diabetes and a significant independent risk factor for stroke in people without diabetes.'

AMERICAN JOURNAL OF MEDICINE

Prehypertension increases CVD risk

Readability	✓ ✓ ✓ ✓
Applicability to practice	✓ ✓ ✓ ✓
WOW! factor	✓ ✓ ✓ ✓

1 Research on the risk of cardiovascular disease (CVD) among people with prehypertension (blood pressure 120/80–139/89 mmHg) is incomplete. Additional information among people with a high risk of CVD complications may help focus current and future efforts.

2 The authors investigated the association of prehypertension levels of blood pressure with the risk of incident CVD in 8960 adults aged 45–64 years who participated in the Atherosclerosis Risk in Communities study.

3 Compared with optimal blood pressure (systolic blood pressure [SBP] <120 mmHg and diastolic blood pressure [DBP] <80 mmHg), the relative risk (RR) of CVD for high normal blood pressure (SBP of 130–140 mmHg and DBP of 85–90 mmHg) was 2.33 and the RR for normal blood pressure (SBP of 120–130 mmHg and DBP of 80–85 mmHg) was 1.81.

4 RR for high normal blood pressure was: 3.29 among the black participants; 4.10 among those with diabetes; 2.41 for those aged 55–64 years; 1.90 among those with renal insufficiency; 3.56 among people with a body mass index (BMI) >30 kg/m^2; and 1.85 among individuals with low-density lipoprotein-cholesterol >160 mg/dl (>4.1 mmol/l).

5 Individuals with prehypertensive levels of blood pressure have an increased risk of developing CVD relative to those with optimal levels.

6 The association is pronounced among black people, people with diabetes and those with a high BMI.

Kshirsagar AV, Carpenter M, Bang H et al (2006) Blood pressure usually considered normal is associated with an elevated risk of cardiovascular disease. *American Journal of Medicine* **119**: 133–41