Major journals

NEW ENGLAND JOURNAL OF MEDICINE

CV and T2D risk reduced if obese children become non-obese adults

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

1 Although childhood obesity is associated with increased cardiovascular risk, it is unclear whether this risk is reduced in people who are overweight or obese as children but not obese as adults.

2 Data from four prospective cohort studies that measured childhood and adult BMI were analysed (n=6328); mean follow-up was 23 years.

3 People with obesity from childhood to adulthood, compared with those with a normal BMI as children and non-obese as adults, had an increased risk of T2D (relative risk [RR], 5.4; 95% confidence interval [CI], 3.4–8.5), hypertension (RR, 2.7; 95% CI, 2.2–3.3), elevated LDL-cholesterol (RR, 1.8; 95% CI, 1.4–2.3), reduced HDL-cholesterol (RR, 2.1; 95% CI, 1.8–2.5), elevated triglycerides (RR, 3.0; 95% CI, 2.4–3.8), and carotid-artery atherosclerosis (RR, 1.7; 95% CI, 1.4–2.2) (P≤0.002 for all comparisons).

4 The risk of outcomes were similar in people who were overweight or obese during childhood but were non-obese as adults compared to those who had a normal BMI from childhood to adulthood (P>0.20 for all comparisons).

5 It was concluded that childhood obesity that persisted into adulthood increased the risk of T2D, hypertension, dyslipidaemia, and carotid-artery atherosclerosis. In overweight or obese children who became non-obese by adulthood, these risks were similar to those of people who were never obese.

Juonala M, Magnussen CG, Berenson GS et al (2011) Childhood adiposity, adult adiposity, and cardiovascular risk factors. *N Engl J Med* **365**: 1876–85

Mama, don't let your babies grow up to be obese …

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Willie Nelson, the country and western singer, implores: "Mama, don't let your babies grow up to be cowboys". The main hazards therein appear to be "smoky old pool rooms" and loneliness. However, childhood obesity appears to be equally hazardous!

Childhood obesity studies clearly indicate the increased risk of cardiovascular disease (CVD) and diabetes with this clinical problem (Franks et al, 2010). From a parental, clinical and societal perspective, it is far more important to ask the question of whether this risk is attenuated if the obese child becomes non-obese in adulthood.

> ***"… if participants were normal weight as children then the risk of adult obesity was only 14.6%; if they were obese as a child, however, then the risk of adult obesity was 82.3%."***

Juonala et al (2011; summarised alongside) conducted an analysis of 6328 people from four prospective cohort studies from the USA, Australia and Finland. What they found, was that if participants were normal weight as children then the risk of adult obesity was only 14.6%; if they were obese as a child, however, then the risk of adult obesity was 82.3%.

The 23-year follow-up data showed that the following risks were significantly increased in overweight/obese children becoming overweight/obese adults in comparison with normal weight adults: risk of type 2 diabetes increased by 540%, hypertension by 270%, elevated LDL-cholesterol by 180% and carotid artery atherosclerosis by 170%. As these endpoints were determined in younger adulthood, there may be an even greater threat to longer-term health.

The very good news is that, overweight or obese children who became non-obese as adults had the same CVD risk profile as those who had a normal BMI throughout childhood and adulthood. This is a clarion call to prevent and treat childhood obesity. We can be optimistic as childhood obesity does not appear to leave a legacy of CVD or diabetes if the obese child become a non-obese adult.

Franks PW, Hanson RL, Knowler WC et al (2010) Childhood obesity, other cardiovascular risk factors, and premature death. *N Engl J Med* **362**: 485–93

ARCHIVES OF INTERNAL MEDICINE

Lifestyle and drug therapy for CV risk improves ED

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

1 The authors conducted a systematic review and meta-analysis of randomised controlled trials (RCTs) evaluating the effect of lifestyle modification (LM) and drug therapy for CV risk factors on the severity of ED.

2 RCTs with follow-up of at ≥6 weeks of LM or drug therapy for cardiovascular (CV) risk reduction were included; the main outcome measure was weighted mean differences in the International Index of Erectile Dysfunction (IIEF-5) score.

3 Some 740 participants from six trials in four countries were identified. LM and drug therapy were associated with significant improvement in IIEF-5 score: weighted mean difference, 2.66 (95% confidence interval [CI], 1.86–3.47).

4 Excluding trials with statin therapy (n=143), LM (n=597) was associated with significant improvement in IIEF-5 score: weighted mean difference, 2.40 (95% CI, 1.19–3.61).

5 The authors concluded that LM and drug therapy for CV risk reduction improve sexual function in men with ED.

Gupta BP, Murad MH, Clifton MM et al (2011) The effect of lifestyle modification and cardiovascular risk factor reduction on erectile dysfunction: a systematic review and meta-analysis. *Arch Intern Med* **171**: 1797–803

"Consultations every 2 weeks yielded faster HbA_{1c}, blood pressure and LDL-cholesterol target achievement."

AMERICAN JOURNAL OF MEDICINE

Mediterranean diet superior to low-fat diet in CV risk reduction

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

1 To elucidate the comparative effects of Mediterranean versus low-fat diets to reduce cardiovascular (CV) risk, the authors undertook a systematic review of randomised controlled trials comparing the two diets in obese and overweight people, with a minimum follow-up of 6 months.

2 Six trials were identified (n=2650; 50% women; mean age, 35–68 years, mean BMI 29–35 kg/m^2).

3 After 2 years' follow-up, people on a Mediterranean diet had more favourable changes in weighted mean differences of body weight, BMI, systolic and diastolic blood pressure, fasting plasma glucose, total cholesterol and C-reactive protein.

4 It was concluded that Mediterranean diets were more effective than low-fat diets in reducing CV risk and inflammatory markers.

Nordmann AJ, Suter-Zimmermann K, Bucher HC et al (2011) Meta-analysis comparing Mediterranean to low-fat diets for modification of cardiovascular risk factors. *Am J Med* **124**: 841–51.e2

ANNALS OF INTERNAL MEDICINE

Combined lifestyle modification reduces diabetes risk

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

1 This study used a survey to examine the associations of lifestyle factors and the risk of T2D in 114 996 men and 92 483 women aged 50–71 years.

2 Low-risk groups were formed by dichotomising each lifestyle factor.

3 T2D developed in 11 031 men and 6969 women; for each additional lifestyle factor in the low-risk group, the odds for diabetes were 31% lower in men and 39% lower in women.

4 Men and women with low-risk diet score, physical activity level, smoking status, and alcohol use had odds ratios for T2D of 0.61 (confidence interval [CI], 0.56–0.66) and 0.43 (CI, 0.34–0.55), respectively. Absence of obesity further reduced this risk.

5 The authors concluded that combined lifestyle factors were associated with a reduction in risk of T2D.

Reis JP, Loria CM, Sorlie PD et al (2011) Lifestyle factors and risk for new-onset diabetes: a population-based cohort study. *Ann Intern Med* **155**: 292–9

ARCHIVES OF INTERNAL MEDICINE

Patient consultation frequency linked to target achievement

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

1 This study aimed to assess whether increased frequency of patient consultations is associated with faster attainment of glycaemic, blood pressure (BP) and LDL-cholesterol (LDL-C) targets.

2 Participants (n=26 496) had diabetes and elevated HbA_{1c}, BP, and/or LDL-C levels; the relationship between these parameters and consultation frequency was assessed.

3 Consultation frequency of 1–2 weeks versus 3–6 months was associated with significantly faster achievement of HbA_{1c} level <53 mmol/mol (<7%), BP <130/85 mmHg, and LDL-C <100 mg/dL (5.6 mmol/L; all P<0.001).

4 Doubling the time between consultations increased time to HbA_{1c}, BP and LDL-C targets (P<0.001 for all).

5 It was concluded that consultations every 2 weeks yielded faster HbA_{1c}, BP and LDL-C target achievement.

Morrison F, Shubina M, Turchin A (2011) Encounter frequency and serum glucose level, blood pressure, and cholesterol level control in patients with diabetes mellitus. *Arch Intern Med* **171**: 1542–50

AMERICAN JOURNAL OF MEDICINE

Weight loss improves cardiometabolic risk in very obese people

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

1 The authors studied the hypothesis that cardiometabolic risk in a primary care cohort of very obese adults would increase with additional weight gain and reduce incrementally beginning with 5% body weight reduction.

2 The cohort comprised 208 people with a BMI of 40–60 kg/m^2 from the Louisiana Obese Subjects Study, 48 of whom had T2D.

3 Weight loss was significantly associated with improvements in fasting plasma glucose (FPG), HDL- and LDL-cholesterol, triglycerides, alanine aminotransferase, uric acid, high-sensitivity C-reactive protein, and lactate dehydrogenase.

4 Most parameters deteriorated with weight gain and progressively improved with ≥5% weight loss.

5 All risk factors, except for LDL-cholesterol, significantly improved with ≥20% weight loss.

6 Median FPG increased significantly (13%) with stable or gained weight at 1 year in those who had not been diagnosed with T2D and had normoglycaemia at baseline; however, FPG did not change significantly with reduced weight.

7 No significant change in blood glucose levels was observed in people with T2D who gained weight, however an incremental decline was seen after 5% weight reduction and culminating in 25% blood glucose reduction with ≥20% weight loss.

8 The authors concluded that incremental weight loss can improve cardiometabolic risk in very obese adults.

Johnson WD, Brashear MM, Gupta AK et al (2011) Incremental weight loss improves cardiometabolic risk in extremely obese adults. *Am J Med* **124**: 931–8