

The cardiovascular prevention and lifestyle quiz for cardiologists

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European Journal of Cardiovascular Prevention and Rehabilitation 2009, 16 (Suppl 2):S8–S10

The following multiple-choice questions test your knowledge on smoking (cessation), exercise, and obesity/heart healthy food. Only one answer is correct (see below plus appropriate literature references). Good luck!

- (a) 1–6 months,
- (b) 1–2 years,
- (c) 2–3 years,
- (d) 5–10 years.

Smoking and smoking cessation

(1) What is the percentage of all avoidable deaths that smoking is responsible for in long-term smokers?

- (a) 20% (one half of these because of cardiovascular disease),
- (b) 35% (one half of these because of cardiovascular disease),
- (c) 50% (one half of these because of cardiovascular disease),
- (d) 75% (one half of these because of cardiovascular disease).

(2) How many of your patients – on average – will stop smoking after an acute coronary syndrome of coronary artery bypass grafting?

- (a) ± 30%,
- (b) ± 50%,
- (c) ± 70%,
- (d) ± 90%.

(3) How long does it take in patients with coronary artery disease who stop smoking before their risk falls to the level of those patients with coronary artery disease who never smoked?

(4) What is the effect of a smoking ban in public places on acute coronary syndromes in nonsmokers?

- (a) No effect,
- (b) ± 5% reduction,
- (c) ± 10% reduction,
- (d) ± 20% reduction.

Exercise and the heart

(1) What is the current public health recommendation (European Society of Cardiology) for physical activity?

- (a) 15–20 min of moderate intensity activity on 2–3 days of the week,
- (b) 30–45 min of moderate intensity activity on 2–3 days of the week,
- (c) 15–20 min of moderate intensity activity on most days of the week,
- (d) 30–45 min of moderate intensity activity on most days of the week.

(2) How would you make a prescription for moderate intensity activity after having performed an exercise stress test?

- (a) Preferred target heart rate during peak exercise of 50–60% of average maximum heart rate,
- (b) Preferred target heart rate during peak exercise of 60–75% of average maximum heart rate,

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Conflicts of interest: none.

- (c) Preferred target heart rate during peak exercise of 75–85% of average maximum heart rate,
 (d) Preferred target heart rate during peak exercise of at least 85% of average maximum heart rate.
- (3) What is the minimum cardiorespiratory-fitness level that is associated with significantly lower cardiovascular event rates for a man at 50 years of age? (expressed in metabolic equivalent units, 1 MET corresponding to 3.5 ml/min/kg of oxygen consumption).
- (a) 6 MET,
 (b) 7 MET,
 (c) 8 MET,
 (d) 9 MET.
- (4) What is the minimum cardiorespiratory-fitness level that is associated with significantly lower cardiovascular event rates for a woman at 50 years of age? (expressed in metabolic equivalent units, 1 MET corresponding to 3.5 ml/min/kg of oxygen consumption).
- (a) 6 MET,
 (b) 7 MET,
 (c) 8 MET,
 (d) 9 MET.
- (5) How many of your patients – on average – will take up some physical activity outside work (20 min \geq 3 times a week) after an acute coronary syndrome of coronary artery bypass grafting?
- (a) \pm 15%,
 (b) \pm 25%,
 (c) \pm 50%,
 (d) \pm 75%.
- (c) Low-carbohydrate diet,
 (d) Reduced-calorie diets result in similar weight loss, regardless of their macronutrient composition.
- (3) What is incorrect regarding trans fatty acids?
- (a) They can be monounsaturated or polyunsaturated fatty acid isomers,
 (b) They are mainly derived from meats, dairy products, margarines and ready-cooked meals from the food-processing industry,
 (c) They are associated with lower LDL-cholesterol levels and lower cardiovascular morbidity and mortality,
 (d) They are associated with higher LDL-cholesterol levels and higher cardiovascular morbidity and mortality.
- (4) What is not correct regarding the Mediterranean diet?
- (a) It is characterized by a high intake of monounsaturated fat, plant proteins, whole grains, and fish; moderate intake of alcohol; and low consumption of red meat, refined grains, and sweets,
 (b) A stricter adherence to the Mediterranean diet is inversely associated with total and cardiovascular mortality,
 (c) It is less effective than a low-fat diet in the secondary prevention of cardiac events,
 (d) A stricter adherence to the Mediterranean diet is inversely associated with the risk of stroke in women.

Answers

Smoking and smoking cessation

- Obesity and heart healthy food**
- (1) What is the prevalence of obesity (body mass index 30 kg/m^2) – on average – in your patients after an acute coronary syndrome of coronary artery bypass grafting?
- (a) \pm 15%,
 (b) \pm 25%,
 (c) \pm 35%,
 (d) \pm 50%.
- (2) Which is the most effective weight-loss diet?
- (a) High-fat diet,
 (b) High-protein diet,
- (1) Answer (c). European Guidelines on Cardiovascular Disease Prevention. Fourth Joint European Societies' Task Force on cardiovascular disease prevention in clinical practice. *Eur J Cardiovasc Prev and Rehabil* 2007; **14** (suppl 2):S1–S113. p. S23.
- (2) Answer (b). Kotseva K, Wood D, De Backer G, De Bacquer D, Pyorala K, Keil U, *et al.*, on behalf of the EUROASPIRE Study group. EUROASPIRE III: a survey on the lifestyle, risk factors and use of cardioprotective drug therapies in coronary patients from 22 European countries. *Eur J Cardiovasc Prev Rehabil* 2009; **16**:121–137.
- (3) Answer (c). European Guidelines on Cardiovascular Disease Prevention. Fourth Joint European Societies' Task Force on cardiovascular disease prevention in clinical practice. *Eur J Cardiovasc Prev and Rehabil* 2007; **14** (Suppl 2):S1–S113. p. S23.

- (4) Answer (d). Pell JP, Haw S, Cobbe S, Newby DE, Pell AC, Fishbacher C, *et al.*, Smoke-free Legislation and Hospitalizations for Acute Coronary Syndrome. *New Engl J Med* 2008; **359**:482–491.

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- (1) Answer (d). European Guidelines on Cardiovascular Disease Prevention. Fourth Joint European Societies' Task Force on cardiovascular disease prevention in clinical practice. *Eur J Cardiovasc Prev and Rehabil* 2007;**14**(suppl 2):S1–S113. p. S40.
- (2) Answer (b). European Guidelines on Cardiovascular Disease Prevention. Fourth Joint European Societies' Task Force on cardiovascular disease prevention in clinical practice. *Eur J Cardiovasc Prev and Rehabil* 2007;**14**(suppl 2):S1–S113. p. S40.
- (3) Answer (c). Kodama S, Saito K, Tanaka S, Maki M, Yachi Y, Asumi M, *et al.* Cardiorespiratory fitness as a quantitative predictor of all-cause mortality and cardiovascular events in healthy men and women. *JAMA* 2009; **301**:2024–2035. (meta-analysis of 33 trials comprising more than 187 000 healthy men and women).
- (4) Answer (a). Kodama S, Saito K, Tanaka S, Maki M, Yachi Y, Asumi M, *et al.* Cardiorespiratory fitness as a quantitative predictor of all-cause mortality and cardiovascular events in healthy men and women. *JAMA* 2009; **301**:2024–2035. (meta-analysis of 33 trials comprising more than 187 000 healthy men and women).
- (5) Answer (a). Kotseva K, Wood D, De Backer G, De Bacquer D, Pyorala K, Keil U, *et al.* on behalf of

the EUROASPIRE Study group. EUROASPIRE III: a survey on the lifestyle, risk factors and use of cardioprotective drug therapies in coronary patients from 22 European countries. *Eur J Cardiovasc Prev Rehabil* 2009; **16**:121–137.

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- (1) Answer (c). Kotseva K, Wood D, De Backer G, De Bacquer D, Pyorala K, Keil U, on behalf of the EUROASPIRE Study group. EUROASPIRE III: a survey on the lifestyle, risk factors and use of cardioprotective drug therapies in coronary patients from 22 European countries. *Eur J Cardiovasc Prev Rehabil* 2009; **16**:121–137.
- (2) Answer (d). Sacks FM, Bray GA, Carey VJ, Smith SR, Ryan DH, Anton SD, *et al.* Comparison of weight-loss diets with different compositions of fat, protein, and carbohydrates. *N Engl J Med* 2009; **360**:859–873.
- (3) Answer (c). European Guidelines on Cardiovascular Disease Prevention. Fourth Joint European Societies' Task Force on cardiovascular disease prevention in clinical practice. *Eur J Cardiovasc Prev and Rehabil* 2007; **14** (suppl 2):S1–S113. p. S27.
- (4) Answer (c). De Lorgeril M, Salen P, Martin JL, Mohjoud I, Delaye J, Mamelle N. Mediterranean diet, traditional risk factors and the rate of cardiovascular complications after myocardial infarction: final report of the Lyon Diet Heart Study. *Circulation* 1999; **99**:779–785 and Fung T, Rexrode KM, Mantzoros CS, Manson JE, Willets WC, Hu FB. Mediterranean diet and incidence of and mortality from coronary heart disease and stroke in women. *Circulation* 2009; **119**:1093–1100.