

## Under pressure (answers on page 34)

### Part one

At a routine 'well man' visit, Jacob, a successful West African businessman who is apparently healthy, was found, while seated in your consulting room chair, to have a blood pressure reading of 145/90 mm Hg. At 45 years of age, Jacob is at his prime in his career, doing well financially and with a stable family life. He is not overweight, but admits to having an irregular work schedule, often skipping meals and not taking enough time either to exercise or relax. You are happy with his general physical and mental health, and this blood pressure reading is the only aspect of the examination that might be a worry.

**Q1 How would you classify this blood pressure reading?**

- (a) Normal
- (b) Pre-hypertensive
- (c) Stage 1 ('mild') hypertension
- (d) Stage 2 ('moderate') hypertension

### Part two

**Q2 How do you explain this blood pressure reading to Jacob?**

- (a) Explain that it is nothing to worry about and that it is within normal limits for a man of his age (you remember that you were taught that a systolic of 100 plus the person's age was normal).
- (b) Talk about his lifestyle and explain that he should change it to bring down the pressure without the need for medication.
- (c) Tell him that his pressure is a bit high and that you will arrange for repeated blood pressure readings over the next month or two to make sure he doesn't need to take medication for it.
- (d) Explain that the medical views on high blood pressure have changed recently and to prevent possible heart attacks or strokes we would now wish to treat strictly even small increases in blood pressure more seriously, in order to reach values of 120/80. To do that, if his blood pressure remains at 145/90, he would need to go on antihypertensive medicines.

### Part three

**Q3 As for the effects of lifestyle on high blood pressure, which of the following has been shown to lower blood pressure by from 5 to 10 mm Hg?**

- (a) Changing to foods rich in fruits and vegetables with low fat intake.
- (b) Thirty minutes a day of aerobic exercise.
- (c) Reduce salt intake to 1.6 grams a day.
- (d) Restrict alcohol intake to two (for men) and one (for women) units per day.
- (e) If overweight, losing 8 percent of body weight.

### Part four

**Q4 Jacob is West African. On follow up, and after strenuous efforts at lifestyle change, his blood pressure has remained steadily at 145/90. You give him a 24-hour monitor, and through the night his blood pressure shows no sign of a 'dip'. His renal function test results are in the normal range. What is your next step?**

- (a) Start him on a thiazide diuretic or a calcium channel blocker.
- (b) Choose a beta-blocker or an alpha-blocker.
- (c) Continue without drug therapy, on the basis that at this relatively low level of raised blood pressure the risks of taking drugs are higher than his risk of stroke or heart attack. But continue to monitor him and advise him of 'red flag' symptoms.
- (d) Arrange a longer than usual meeting with him so that you can explain all the pluses and minuses of medication and the long term outlook of a persistently raised blood pressure like his. Then leave it to him to decide whether or not to take it.

### Part five

**Q5 The most comprehensive review of trials of the treatments of mild hypertension showed benefits of treatment in which of the following outcomes?**

- (a) Total cardiovascular events
- (b) Strokes
- (c) Coronary events
- (d) Heart failure
- (e) Cardiovascular deaths
- (f) Total deaths
- (g) None of the above