

ASSESSMENT OF 30 MCQS

INSTRUCTIONS

- κ Attempt the following multiple choice questions.
- κ There is only one correct option for each question. Choose the most appropriate answer for each question and shade your choice on the given answer sheet using a 2B pencil.
- κ The answer sheet should be sent to the College of Family Physicians (Singapore) for marking.

1. Which of the following is a true statement about hypertension in Singapore?
 - a. Hypertension is more common in females than males
 - b. Hypertension is more common in Indian males than Chinese males
 - c. The 1998 Singapore National Health Survey found that the majority of known hypertensive subjects in Singapore have adequately controlled blood pressure
 - d. About 10% of adults between the ages of 30-39 years old have hypertension
 - e. The Singapore National Health Survey defined hypertension as having blood pressure greater or equal to 160/90 mmHg.
2. A 70-year-old Chinese gentleman has a blood pressure of 160/90mmHg. The following conclusions are reasonable EXCEPT:
 - a. He has isolated systolic hypertension
 - b. He has the risk factor for left ventricular failure
 - c. All else being equal, his risk of developing hypertensive complication is lower than a person with raised diastolic pressure
 - d. His increased pulse pressure is a significant predictor of cardiovascular complications
 - e. As he grows older, it is likely that his systolic blood pressure will increase while his diastolic pressure may remain stable or even decrease.
3. A 56-year-old Chinese housewife has diabetes mellitus and hypertension. She is currently on Nifedipine LA 30mg om, her blood pressure is still 150/60 mmHg and microalbuminuria. Which of the following statements pertaining to her condition is INCORRECT?
 - a. She should decrease her salt intake
 - b. She should have a complete evaluation for other risk factors
 - c. Consider using an ACE inhibitor
 - d. Maintaining her mean blood pressure at just above 140/90mmHg will increase renal perfusion and slow down the progression of renal disease
 - e. She should have an annual Creatinine Clearance Test.
4. The following patients would benefit from pharmacotherapy for hypertension EXCEPT:
 - a. A 72-year-old man who is a known hypertensive and has a blood pressure of 150/80 mmHg
 - b. A patient at a gestation of 20 weeks with a blood pressure of 140/90 mmHg
 - c. A forty-year-old man with a blood pressure of 130/95 mmHg, is a smoker and has a BMI of 26
 - d. A Type II diabetic with proteinuria of 70 mg/day
 - e. A 24-year-old woman at gestation of 12 weeks with a blood pressure of 130/80.
5. Which of the following situations will cause the estimated blood pressure to be lower than the true prevailing blood pressure in a subject?
 - a. A heavy smoker who had not smoked for more than 4 hours
 - b. A person running on a treadmill
 - c. A person who had just taken a cup of coffee
 - d. A person who is in a room with a temperature of 12°C
 - e. Using a small cuff in an obese person.
6. The following precautions will ensure greater accuracy when measuring blood pressure EXCEPT:
 - a. Check the aneroid sphygmomanometer against a mercury device to ensure that the air gauge is correct
 - b. Ensure that the length of air bladder of the cuff is at least 75% of the circumference of the upper arm
 - c. Use of portable electronic blood pressure measuring device in preference to mercury sphygmomanometer
 - d. Allow the patient to sit quietly for 5 minutes before measuring the blood pressure
 - e. Place the stethoscope lightly over brachial artery to ensure that it does not compress the artery.
7. A 45-year-old gentleman who is not on any medication has a blood pressure of at least 160/95mmHg on three separate occasions when you checked his blood pressure in your clinic. However he reported that the nurse at his factory recorded a blood pressure of 130/80mmHg. What would be your decision?
 - a. Start him on medication without further delay
 - b. Consider putting him on 24-hour ambulatory blood pressure monitoring
 - c. Investigate for renal artery stenosis
 - d. Tell him to accept the diagnosis of hypertension because faulty technique resulting in inaccurate blood pressure measurement is common
 - e. Arrange for intra-arterial measurement of blood pressure as he is likely to have pseudohypertension.
8. The following techniques ensure more accurate blood pressure measurement EXCEPT:
 - a. If there is a disparity of blood pressure reading in both arms due to a unilateral arterial lesion, the arm with the higher pressure should be used as reference
 - b. The blood pressure cuff should be inflated to a level above the systolic blood pressure, which is indicated by the disappearance of the brachial pulse
 - c. Special effort must be made to identify Korotkoff phase IV in patients with anemia, thyrotoxicosis or aortic regurgitation
 - d. Korotkoff phase V is identified when the sound disappears during auscultation over the brachial artery
 - e. Ensure that mercury sphygmomanometer is at the level of the subject's heart regardless of the position of the patient's arm.

9. Which of the following statements about "white-coat" hypertension is CORRECT?
- The white-coat effect can be minimized by asking the nurse to measure the blood pressure before the patient sees the doctor in the consultation room
 - White-coat hypertension is seldom encountered in the primary care setting
 - It is more common in younger patients than elderly patients.
 - Approximately 50% of patients with increased blood pressure readings recorded in the physicians' office have "white-coat" hypertension
 - Patients with "white-coat" hypertension have been shown to be at increased risk of developing significant complications of hypertension.
10. Ambulatory blood pressure monitoring is useful as a diagnostic aid in the following situations EXCEPT:
- A 35-year-old man with blood pressure of 150/95 mmHg on repeated occasions
 - A 68-year-old gentleman whose blood pressure is difficult to control despite repeated increase in medication
 - A 40-year-old lady who was recently started on anti-hypertensive medication and complains of weakness and dizziness
 - A 56-year-old gentleman with a blood pressure of 170/115 mmHg on more than 2 occasions
 - A 46-year-old lady with blood pressure of 145/100 mmHg on repeated occasions and fundoscopy revealed normal findings.
11. A 40-year-old patient that you are seeing for the first time had been treated for hypertension with medication for the past 2 years. He had defaulted treatment for the past 6 months. His blood pressure is 140/95mmHg. He told you that he had checked his blood pressure using his home blood pressure monitoring device and it had been normal at 130/80mmHg on many occasions. The following would be reasonable things to do EXCEPT:
- Check the patient for complications of hypertension
 - Tell the patient to accept that he has hypertension and that his home blood pressure device or his technique is most likely to be faulty
 - Reconsider the diagnosis of hypertension before re-starting treatment
 - Consider the diagnosis of white-coat hypertension
 - Tell the patient that he probably has hypertension but ask him to bring his home device to the clinic to check against your mercury sphygmomanometer.
12. A 55-year-old gentleman has had hypertension for more than 5 years. He refuses to give up smoking despite repeated advice. He had 2 episodes of gouty arthritis. He also has clinical evidence of peripheral vascular disease. Which of the following will be the most appropriate choice of medication?
- Atenolol
 - Amlodipine
 - Hydrochlorothiazide
 - Indapamide
 - Propranolol
13. A 48-year-old lady has hypertension, stable angina and poorly controlled insulin-dependent diabetes mellitus. She was found to have proteinuria but her creatinine level is normal. The following statements are correct EXCEPT:
- Thiazide diuretics may interfere with diabetic control
 - ACE inhibitors may have a beneficial effect on her co-morbid condition
 - Short-acting calcium antagonist may increase her cardiovascular risk
 - Beta-blockers may complicate the treatment of diabetes mellitus
 - Long-acting calcium antagonist may aggravate her angina symptoms.
14. The following feature in a hypertensive patient may lead one to suspect the presence of renal artery stenosis:
- Hypertension that is refractory to treatment
 - Blood pressure that is higher than 170 mmHg systolic
 - A palpable renal mass
 - Strong family history of hypertension
 - A decrease in the serum creatinine levels after treatment is started for hypertension with an ACE inhibitor.
15. Under the classification of the JNC6, the following recommendation is CORRECT:
- Diastolic blood pressure of 85-89 mmHg and a Systolic blood pressure of 130-139 mmHg is considered to be high normal blood pressure
 - Optimal blood pressure is defined as systolic <130 mmHg and diastolic <80 mmHg
 - A person with a systolic blood pressure that is 180/110 mmHg on more than 2 visits would be considered to have Stage 2 hypertension
 - A diastolic blood pressure of 94 mmHg is considered normal
 - A person with a blood pressure of 140/90 mmHg is considered to have normal blood pressure.
16. Which of the following is a CORRECT suggestion for dose adjustment in the management of hypertension?
- Twice-daily dosing is preferred over once-daily dosing with long-acting formulations because there will be less fluctuation in plasma concentration of the drug
 - Diuretics should not be combined with ACE inhibitors
 - Long-acting calcium antagonist should be used in place of short-acting nifedipine because the latter had been linked to increased cardiovascular mortality
 - After starting on an initial drug and there is no response, the best strategy would be to add a second drug from another class
 - The overall goal of the treatment of hypertension is to reach and maintain target blood pressure as recommended in the guidelines.
17. A 56-year-old patient with non-insulin diabetes has just been diagnosed with hypertension. He was started on treatment with atenolol 50mg om. His average blood pressure before treatment was 160/100 mmHg. Four weeks after treatment, he came for his first review and his blood pressure was 165/100 mmHg. Any of the following action taken by the doctor would be reasonable EXCEPT:
- Ask how many tablets he has left
 - Change to an ACE inhibitor
 - Add on a diuretic as a second drug
 - Change to a long-acting calcium antagonist
 - Ask him whether he feels more tired than usual recently.

18. Assuming treatment duration had been adequate and secondary hypertension had been excluded, according to JNC6 classification, which of the following patients have refractory hypertension?
- A 40-year-old man whose average blood pressure is 150/95 mmHg and is on atenolol 100 mg om, indapamide 5mg om and amlodipine 10 mg om
 - A 73-year-old lady whose average blood pressure is 155/90 mm Hg and is on atenolol 100mg om, amlodipine 10 mg om and hydrochlorothiazide 25mg
 - A 63-year-old man whose average blood pressure is 150/96mm Hg and is on atenolol 100 mg om, enalapril 20 mg om and amlodipine 10 mg om
 - A 57-year-old man whose average blood pressure is 145/90 mmHg and is on enalapril 40 mg om and hydrochlorothiazide 25 mg om
 - A 69-year-old man whose average blood pressure is 165/90 mmHg and is on indapamide 5mg om, atenolol 50 mg om and enalapril 40 mg om.
19. A 39-year-old woman's average blood pressure reading is 150/95 mmHg. Her blood pressure was previously well controlled on atenolol 50 mg om for the past one year. You have increased the dose to atenolol 100 mg om and added indapamide 2.5 mg om last week and the blood pressure remains at 150/95 mmHg. It would be reasonable to do any of the following EXCEPT:
- Prescribe an exercise programme
 - Increase the dose of atenolol further to 150 mg om
 - Observe for another 4 weeks and reassess
 - Check her pulse
 - Assess the salt intake in her diet.
20. A 39-year-old woman who works as a model has hypertension that is poorly controlled. She is on many medications for various complaints. You have convinced her to show you all the medication that she is taking. The following is likely to have an adverse effect on hypertension management EXCEPT:
- Naproxen sodium for menses cramps
 - Hydroxyzine for sensitive nose
 - Oral contraceptive pills
 - Over-the-counter nose drops for "blocked nose"
 - Slimming pills prescribed for her by another doctor.
21. A patient fulfills the definition of refractory hypertension. The following are likely causes EXCEPT:
- White-coat hypertension
 - Disease progression
 - Onset of renal failure
 - Secondary hypertension
 - Left ventricular hypertrophy
22. A 54-year-old man with an average blood pressure of 160/105 mmHg measured on 4 different visits to the clinic. The following findings, if present, will have significant impact on the diagnosis of hypertension EXCEPT:
- Normal fundus
 - Fourth heart sound
 - Multiple neurofibromata and café-au-lait spots
 - A 5-centimetre lipoma on the upper back
 - Flame haemorrhages seen during fundoscopy.
23. The following are true statements regarding dietary sodium EXCEPT:
- Dietary sodium reduction cannot cause any significant decrease of systolic blood pressure in normotensive persons
 - It has been estimated that a reduction of 77 mmol/day of dietary sodium can lead to a decrease of 1.1 mmHg in diastolic blood pressure
 - The recommended dietary sodium intake is no more than 10g of sodium chloride per day
 - Reduction of dietary sodium is unlikely to have significant benefits if patients are already on anti-hypertensive medication
 - Patients on diuretics should not be asked to restrict their sodium intake.
24. Hypertension is a risk factor for the following conditions EXCEPT:
- Retinal disease
 - Ruptured aortic aneurysm
 - Left ventricular hypertrophy
 - Aortic stenosis
 - Congestive heart failure
25. Under the JNC6 recommendations, the following would be correct EXCEPT:
- Blood pressure screening should start from the age of 18
 - The diagnosis of hypertension is based on the average of two or more elevated blood pressure readings taken at each of the two or more visits after initial screening
 - Subjects with a systolic blood pressure of 130-139 mmHg and diastolic blood pressure of 85-89 mmHg should have their blood pressure checked again in 1 year
 - A subject with an initial blood pressure reading of 165/105 at screening should be started on treatment
 - A well patient with a diastolic blood pressure of 115 mmHg should be checked again within 1 week.
26. A 35-year-old man has a mean blood pressure of 140/94 mmHg. His height is 1.74m and his weight is 89kg. He is reluctant to start taking anti-hypertensive medication. The following are appropriate things to tell him EXCEPT:
- If he can reduce his bodyweight by 5 kg, there is a good chance that he may not need medication
 - If he exercises four times a week for more than 20 minutes each time, there is good chance that his blood pressure may normalize
 - Losing weight and regular exercise prevents the worsening of hypertension but it is unlikely that his blood pressure can be controlled without medication
 - Increased vegetable intake and reduction in saturated fat in the diet will decrease his blood pressure
 - He should go for a screening test for hyperlipidemia.
27. The following persons have risk factors for developing hypertension EXCEPT:
- A person with high total blood cholesterol
 - A person whose father developed hypertension at the age of 40 but the mother who is already age 50 and still normotensive
 - A person with a body mass index of 32
 - A person who drinks a large bottle of beer everyday
 - A person who works as an office worker and exercises once a week.

28. A 29-year-old man had been recently diagnosed to have hypertension. The presence of the following features would make you consider the possibility of pheochromocytoma EXCEPT:
- Episodic hypertension
 - Microscopic hematuria
 - Glucose intolerance
 - Palpitation and perspiration
 - Cardiomyopathy.
29. A 30-year-old woman presents with confusion and vomiting at your clinic. She was on 3 different types of antihypertensive medication prescribed by a hospital specialist. The accompanying relatives told you that she had hypertension for more than 10 years but recently she decided to go on herbal treatment and has stopped her medication for more than a month. Her blood pressure is 190/120 mmHg. In your examination you would look out for the following signs EXCEPT:
- A swollen optic disc
 - Dysarthria
 - Bilateral fine tremors
 - Unequal pupil size
 - Hemiparesis
30. A 57-year-old male smoker walks into your clinic. His general condition is good. He has a BP of 150/90 mmHg and has bilateral pedal oedema and a raised JVP. His weight increased by 3 kg recently. He is currently on atenolol 50 mg om and enalapril 10 mg om furosemide 40 mg om, Span K 0.6mg and spironolactone 25 mg om. During history taking, you found that he is also on omega 3 fish oil. Which of the following treatment decision would be most appropriate?
- Refer him immediately to the emergency department by ambulance
 - Increase his dose of furosemide to 80 mg om
 - Advise fluid restriction to one litre per day, ask him to continue on the same medication regime and review him in a week's time
 - Ask him to stop his omega 3 fish oil
 - Stop spironolactone.

**Distance Learning Module - Basic Home Health Care
MCQ's Answers**

Question No.	Answer	Question No.	Answer
1	C	16	A
2	B	17	D
3	C	18	B
4	E	19	D
5	D	20	A
6	C	21	C
7	D	22	D
8	B	23	D
9	B	24	A
10	A	25	D
11	B	26	E
12	C	27	D
13	D	28	A
14	D	29	E
15	C	30	D