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# Hypertension

This issue's special feature, on which these questions are based, was commissioned from independent authors. The Life-long Learning scheme 2007 is supported by an educational grant from Martindale Specials but the company has no editorial input. The information in the box below should help readers to identify knowledge gaps and undertake continuing professional development. Readers are also invited to complete the questions overleaf to test their knowledge of the articles, and send their answers, together with a stamped and addressed C5 envelope, to:

Life-long Learning — hypertension  
*Hospital Pharmacist*  
 1 Lambeth High Street  
 London SE1 7JN

Name: \_\_\_\_\_  
 RPSGB registration number: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Post code: \_\_\_\_\_



Entries must be received by 21 May 2007. Results will be returned with a certificate of completion.

## Life-long Learning competition

This is the third set of questions of the 2007 Life-long Learning competition, sponsored by Martindale Specials. The entrant who achieves the highest marks in this series of six exercises will win attendance at the European Association of Hospital Pharmacists annual congress, Maastricht, in spring 2008. The best five scores from the six exercises in this series, which will run until July/August 2007 will be taken into consideration.

The runner-up will receive registration and travel expenses for the *Hospital Pharmacist* conference in 2008. Third and fourth place will receive Pharmaceutical Press vouchers or British Society for the History of Pharmacy china mugs.

Your name, address and scores will be held on a database for the purpose of awarding prizes. Should you not wish your details to be held in this way, please tick the box. If you do this, you will be sent a certificate, but you will be ineligible for a prize.

## January 2007 answers — Poisoning

Answers to the Life-long Learning questions from the January issue of *Hospital Pharmacist* (poisoning) appear on p125

## How to undertake continuing professional development

### Identify knowledge gaps

- ◆ The causes and clinical features of hypertension and the methods of diagnosis
- ◆ The drugs used to treat the condition, their side effects and the precautions needed in special patient groups

### Act

- ◆ Read the articles in this issue
- ◆ Test your knowledge by answering the multiple-choice questions overleaf

### Evaluate

- ◆ What have you learnt?
- ◆ How has it added value to your practice?

- ◆ What will you do now and how will this be achieved?

The feature on hypertension has been accredited by the College of Pharmacy Practice against the Royal Pharmaceutical Society's general and hospital practice areas of competence, which can be accessed via *Hospital Pharmacist* online ([www.pjonline.com/links/hp](http://www.pjonline.com/links/hp))

Reading the feature and completing the questions will help readers to fulfil aspects of the following competency areas, depending on their area of practice and application of learning: G1, G5, G8, G9, HP1, HP2, HP4, HP5, HP10.

Completion of the questions entitles undergraduates to one point towards the Professional Development Certificate, a joint initiative between the British Pharmaceutical Students' Association and the College.

The assistance of the College of Pharmacy Practice is acknowledged in producing the CPD elements of this month's special feature.

Further information on how hospital pharmacists are approaching the challenges of CPD can be found in articles in the February 2005 issue of *Hospital Pharmacist* (2005;12:65–72).



To answer the questions, tick either the True or False column

	True	False		True	False
<b>1. Aetiology:</b>			<b>6. ACE inhibitors:</b>		
a) The sympathetic nervous system plays a role in blood pressure regulation			a) Renal function should be monitored in patients treated with angiotensin converting enzyme (ACE) inhibitors		
b) Isolated systolic hypertension is associated with a rise in peripheral resistance			b) ACE inhibitors are the initial treatment of choice in patients with diabetes		
c) The vascular endothelium helps to maintain normal blood pressure			c) The effect of ACE inhibitors will be reduced if the renin-angiotensin-aldosterone system is already activated		
d) Essential (primary) hypertension is associated with a rise in total peripheral resistance			d) The first dose of an ACE inhibitor should be administered in the morning		
e) In essential hypertension the medial layer of the arterial wall gradually becomes thinner			e) Early commencement of angiotensin converting enzyme inhibitor therapy can slow worsening of renal function		
<b>2. Epidemiology and risk:</b>			<b>7. Beta-blockers:</b>		
a) Women are more likely than men to develop hypertension at an early age			a) Beta-blockers should be used with caution in patients with a history of asthma		
b) The most common type of hypertension is secondary hypertension (where there is an identifiable cause)			b) Renally excreted beta blockers can usually be administered once daily		
c) Secondary hypertension is most commonly seen in elderly patients			c) Cardioselective beta-blockers are specific for beta-1 receptors		
d) Isolated systolic hypertension poses less of a cardiovascular risk than when both diastolic and systolic pressures are raised			d) Beta-2 receptors are located mainly in the heart		
e) Studies suggest that systolic blood pressure is the best predictor of risk of coronary disease in those aged over 60			e) Cold extremities are a side effect of beta-blockers		
<b>3. Symptoms and examinations:</b>			<b>8. Treatment and doses</b>		
a) Most patients with essential hypertension will experience breathlessness			a) A patient presenting with a systolic blood pressure of 210mmHG should be treated immediately with antihypertensives, even if no complications are present		
b) Blood pressure should be recorded as being elevated on three separate occasions before a diagnosis is made			b) Doses of thiazides should be increased in patients with gout		
c) Retinopathy is an example of end organ damage caused by hypertension			c) Guanethidine is indicated for the treatment of hypertensive crisis		
d) A history of headache is more common in essential hypertension than in secondary hypertension			d) ACE inhibitors are first line antihypertensives for patients with severe bilateral renal artery stenosis		
e) A detailed medical history should be taken to identify any causes of secondary hypertension			e) Beta-blockers are the recommended first line treatment of hypertension in the elderly		
<b>4. Investigations:</b>			<b>9. Side effects:</b>		
a) Proteinuria is a marker of early hypertensive renal damage			a) Lipid soluble beta-blockers may cause nightmares		
b) Chest X-rays should always be performed in hypertensive patients to check for any underlying cause			b) Hypernatraemia is a side effect of thiazide diuretics		
c) Chest X-rays are used routinely to test for left ventricular hypertrophy			c) Calcium channel blockers can cause gastrointestinal side effects such as constipation		
d) An electrocardiogram may show underlying ischaemia			d) Angiotensin II receptor antagonists inhibit the breakdown of kinins, causing a dry cough		
e) Blood glucose and lipid levels should be routinely monitored in hypertensive patients			e) Awareness of hypoglycaemia may be reduced in patients with diabetes mellitus who are taking beta-blockers		
<b>5. Antihypertensive drugs:</b>			<b>10. Lifestyle:</b>		
a) Stimulation of beta-receptors inhibits sympathetic nervous system activity			a) All patients should be offered lifestyle advice in addition to any pharmacological therapy prescribed		
b) Stimulation of beta-receptors increases peripheral resistance			b) Alcohol abstinence is thought to be the most important lifestyle change to reduce cardiovascular risk		
c) Thiazide diuretics increase sodium reabsorption in the distal tubule			c) Exercise only has a beneficial cardiovascular effect if the patient's weight is also reduced		
d) The diuretic effect of thiazides occurs 12 hours after administration			d) Potassium chloride is a safe alternative to sodium chloride in the diet		
e) Calcium channel blockers inhibit vasodilator activity			e) Some patients benefit more than others from restricted dietary salt intake		

Answers will appear in the June issue

