

CVS REGULATION MCQS:

1. Blocking vagal tone with atropine in a normal adult will lead to a heart rate of
 - A: 30
 - B: 70
 - C: 100
 - D: 150 ✓

2. What do the axons of RVLM neurons activate?
 - A: hypothalamus
 - B: limbic cortex
 - C: preganglionic sympathetic nerves ✓
 - D: vagus nerve

3. Where do you find baroreceptors?
 - A: carotid sinus ✓
 - B: caudal ventrolateral medulla
 - C: coronary sinus
 - D: left ventricle

4. What will lead to increased discharge of baroreceptors?
 - A: decreased heart rate
 - B: decreased pulse pressure
 - C: hypoxia
 - D: increased mean arterial pressure ✓

5. When do type B atrial stretch receptors discharge?
 - A: during atrial systole
 - B: in late diastole ✓
 - C: when venous return decreases
 - D: with increased intra-thoracic pressure

6. Mr Strong is lifting weights. What happens during prolonged straining?
 - A: baroreceptor discharge increases
 - B: heart rate decreases
 - C: intra-thoracic pressure reduces
 - D: venous return decreases ✓

7. Peripheral chemoreceptors in the carotid & aortic bodies are activated by
- A: hypocarbia
 - B: hypoxia ✓
 - C: increased blood flow
 - D: metabolic acidosis
8. A head injured patient is hypertensive & bradycardia. Their Cushing reflex is mediated by
- A: carotid body compression
 - B: local medullary hypoxia ✓
 - C: loss of cerebral auto-regulation
 - D: loss of cortical input to vasomotor centres
9. Relaxation of vascular smooth muscle is mediated by
- A: endothelin-1
 - B: nitric oxide ✓
 - C: plasma kallikrein
 - D: thromboxane A2
10. The respiratory registrar asks you to order a BNP level. B-type natriuretic peptide:
- A: antagonises vasoconstrictor agents ✓
 - B: increases endothelin-1 secretion
 - C: is released during hypoxia
 - D: will be elevated in hypovolaemia
11. As pressure in a local vascular bed increases, vascular smooth muscle contracts due to
- A: drop in local pH
 - B: elevated sympathetic discharge
 - C: increased vagal tone
 - D: intrinsic response to stretch ✓