

## PHARMACOLOGY - ANALGESIA MCQs

1. The mu opioid receptor
  - A: causes less sedation than the others
  - B: has greater affinity for endorphins ✓
  - C: has no effect on gastrointestinal motility
  - D: mediates the pronociceptive action of dynorphin
2. An oral dose of opioid
  - A: is poorly absorbed
  - B: is variably absorbed depending on fasting state
  - C: requires metabolism to active metabolites to bind opioid receptors
  - D: will undergo variable first pass metabolism depending on the patient ✓
3. Receptor actions of morphine include
  - A: decreased mRNA transcription
  - B: down regulation Ca<sup>++</sup> channels on peripheral nerve endings
  - C: opening of K<sup>+</sup> channels on post synaptic neurons ✓
  - D: repolarisation of post-synaptic neurons
4. Opioid tolerance is associated with
  - A: increased spinal dynorphin levels
  - B: lack of endocytosis of mu receptors ✓
  - C: persistent activation of kappa receptors
  - D: rapid development when ketamine is used simultaneously
5. A local resident is brought in after a heroin overdose. Alterations to his respiratory function include
  - A: decreased response to hypercapnia ✓
  - B: irritability and coughing in response to airway secretions
  - C: loss of response to painful stimulus
  - D: rigidity of the chest wall
6. A palliative care patient has been taking 20mg doses of morphine. An equivalent dose of hydromorphone is
  - A: 1.5mg
  - B: 3mg ✓
  - C: 10mg
  - D: 20mg

7. The shortest duration of analgesia is expected from
- A: alfentanil ✓
  - B: buprenorphine
  - C: fentanyl
  - D: meperidine
8. Tapentadol
- A: binds avidly to mu receptors
  - B: inhibits norepinephrine reuptake ✓
  - C: may cause more nausea than morphine
  - D: reversibly binds to kappa receptors
- 9: A patient has started tramadol for post surgical pain. They return to hospital with confusion, tachycardia and hypertension. You suspect an interaction with
- A: alpha adrenoreceptor antagonists
  - B: buprenorphine
  - C: metoclopramide
  - D: serotonin reuptake inhibitors ✓
10. You have injected an unconscious patient with IV naloxone. You expect its clinical action to last for
- A: 20 minutes
  - B: 40 minutes
  - C: 90 minutes ✓
  - D: 360 minutes
11. A patient is considering naltrexone treatment for alcohol addiction. This is contraindicated in
- A: ongoing alcohol abuse
  - B: opioid substitution therapy ✓
  - C: seizure disorder
  - D: use of antidepressants
- 12: In opioid use, miosis
- A: depends on delta receptor activation
  - B: is not reversed by naltrexone
  - C: is reversible by atropine ✓
  - D: reduces with long term opioid use