Solutions

2.1

- Constipation – the μ effect that hardly tolerises ✓.

2.2

- Clinical effect needs receptor adaptation, not just the block ✓.

2.3

- Cyclo-oxygenase: COX-1 (housekeeping) and COX-2 (inflammatory) ✓.

3.1

- Inflammation: NSAID at peripheral COX – gastric cost ✓.
- Post-operative: opioid at μ – respiratory price ✓.
- Neuropathic: agents on neuronal excitability – neither site alone ✓.
- Different sites → additive without overlapping toxicity ✓.

3.2

- Tolerance: down-regulation – same concentration does less ✓.
- Dependence: withdrawal unmasks the adapted state ✓.
- Short courses by design limit the adaptation ✓.
- Paracetamol: dose-related – glutathione saturated, liver protein bound (MED10 necrosis) ✓.