FENTANYL

Fentanyl is a potent synthetic opioid drug (x100 more potent than morphine). The onset of analgesia from fentanyl is relatively rapid (1-3 minutes) and lasts for 30-60 minutes. An advantage of fentanyl is greater cardiovascular stability and lack of histamine release following injection; which results in part from a selective action on μ-receptors rather than all opioid receptors. These properties mean it can be used in high dose with safety in sick patients when analgesia and sedation are required, or for anaesthesia. Fentanyl is metabolised in the liver and has no active metabolites so is unlikely to accumulate except when used in large doses. Fentanyl is very lipid soluble which explain how it can be used as fentanyl patches and lozenges for use in pain treatment.

FENTANYL			
RECEPTOR TYPE	Gaba Receptors	α2-Receptors	Opioid Receptors
Receptor type			✓
ONSET	Rapid (< 1 minute)	Intermediate (1-3 minutes)	Slow (> 3 minutes)
Rate of Onset		✓	
Rate of Offset			✓
EFFECT	Strong	Weak	None
Sedative effect (hypnosis and anxiolysis)		✓	
Amnesic effect			✓
Analgesic effect	✓		
RISKS	None	Lower Risk	Higher Risk
Cardiovascular effects (low pulse and/or blood pressure	✓		
Respiratory depression			✓
Potential to cause delirium		✓	
Active metabolites and/or accumulation	✓		
Potential toxic effects		✓	
COST	Low	Intermediate	High
Cost		✓	

DESIST