# Opiate Review

Adapted from Safety Update - Opiates and Benzodiazepines: Ensuring Patient Safety

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<th>Opioid class</th>
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| Pure agonists           | Codeine, dihydrocodeine, fentanyl, hydrocodone, hydromorphone, levorphanol, meperidine, morphine, methadone, oxycodone, oxymorphone | • High binding affinity at the mu receptor  
  • No dosage ceiling effect |
| Partial agonist         | Buprenorphine                 | • High binding affinity but low efficacy at the mu receptor  
  • Ceiling effect for analgesia  
  • Used as abuse deterrent and detox |
| Mixed agonist-antagonist| Butorphanol, nalbuphine, pentazocine | • High affinity but low efficacy at mu receptor also have partial kappa agonist activity  
  • Partial agonist activity at the kappa receptor |
| Pure antagonist         | Naloxone, naltrexone, methylnaltrexone | • Antagonist at mu, kappa, and delta receptors  
  • High binding affinity to mu receptor with NO efficacy  
  • Abuse deterrent & detox |
| "Other"                 | Tramadol, tapentadol          | • Weak agonist at the mu receptor  
  • Inhibits reuptake of norepinephrine and serotonin |