

# Alfentanil

Alfentanil is a **potent** but **short-acting** synthetic opioid analgesic drug, used for **anaesthesia in surgery**. It is an analogue of fentanyl with around **1/4 to 1/10 the potency of fentanyl** and around 1/3 of the duration of action, but with an **onset of effects 4x faster than fentanyl**.

# Buprenorphine

- Buprenorphine, sold under the brand name Subutex, among others, is an **opioid** used to treat **opioid addiction**, **acute pain**, and **chronic pain**. It can be used under the **tongue**, by **injection**, as a **skin patch**, or as an **implant**.
- Bioavailability: Sublingual: 30%; **Intranasal: 48%**
- Trade name: Subutex, others
- Onset of action: Within 30 min

# Bupivacaine

- Bupivacaine, marketed under the brand name Marcaine among others, is a medication used to **decrease feeling in a specific area**. It is used by **injecting it into the area**, around a nerve that supplies the area, or into the spinal canal's epidural space

# Fentanyl

- Fentanyl, also spelled fentanil, is an **opioid** used as a **pain medication** and together with other medications for anesthesia. Fentanyl is also used as a **recreational drug, often mixed with heroin or cocaine**. It has a **rapid onset** and effects generally last less than two hours.
- Onset of action: **5** minutes
- Duration of action: **IV**: 30–60 minutes
- Bioavailability: **92%** (**transdermal**); 89% (intranasal); 50% (buccal); 33% (ingestion); **100%** intramuscular

# Ketamine

- Ketamine is a medication mainly used for **starting and maintaining anesthesia**. It induces a trance-like state while providing pain relief, sedation, and memory loss. Other uses include for **chronic pain, sedation in intensive care, and depression**

# Methadone

- Methadone, sold under the brand name **Dolophine** among others, is an opioid used for **opioid maintenance therapy** in opioid dependence and for chronic pain management. **Detoxification using methadone can either be done relatively rapidly in less than a month** or gradually over as long as six months

# Morphine

- Morphine is a pain medication of the opiate family which is found naturally in a number of plants and animals. It acts directly on the **central nervous system to decrease the feeling of pain**. It can be taken for both **acute pain and chronic pain**.
- Bioavailability: **20–40% (by mouth)**, 36–71% (rectally), 100% (IV/IM)
- Onset of action: **5 minutes (IV)**, 15 minutes (IM), 20 minutes (PO)
- Duration of action: 3–7 hours
- Excretion: **Renal 90%**, biliary 10%

# Pentazocine

- Pentazocine, sold under the brand name Talwin among others, is a **painkiller** used to treat **moderate to severe pain**. It is believed to work by activating  **$\kappa$ -opioid receptors** and **blocking  $\mu$ -opioid receptors**. As such it is called an opioid as it delivers its effects on pain by interacting with the opioid receptor



# Pethidine

- Pethidine, also known as **meperidine** and sold under the brand name **Demerol** among others, is a synthetic opioid pain medication of the phenylpiperidine class.

# Sufentanil

- Sufentanil, sold under the brand names Dsuvia and Sufenta, is a **synthetic opioid analgesic** drug approximately **5 to 10 times** more potent than its parent drug, fentanyl, and **500 times as potent as morphine**.

# Tramadol

- Tramadol, sold under the brand name Ultram among others, is an **opioid pain medication** used to treat moderate to moderately severe pain. When **taken by mouth** in an immediate-release formulation, the onset of pain relief usually begins within **an hour**. It is also available by injection.