Anesthetics
- Benzocaine
- Bupivacaine
- Halothane
- Ketamine
- Lidocaine
- Midazolam
- Nitrous oxide
- Propofol
- Sevoflurane
Benzocaine

- **Local anesthetic**
- **Ester-type**
- **Blocks Na channels & nerve conduction**
  - Topical anesthetic
    - Pain
    - Itching
    - Inflammation
  - Burns
  - Insect bites
  - Contact dermatitis
  - Wounds

- **Irritates skin when 1st applied**
- Use caution w/ sunburn & large areas of skin

- Cross-sensitivity w/ other ester-type anesthetics
Bupivacaine

- **Local anesthetic**
- **Amide-type**

- **Blocks Na channels & nerve conduction**
  
  - Local or regional anesthetic
    - Surgical
    - Diagnostic
    - Obstetrical
    - Therapeutic

- Cross-sensitivity w/ amide-type anesthetics
Halothane

- General anesthetic
- **Inhalational, halogenated hydrocarbon**
  - Potentiates GABA binding to GABA-A Cl ion channel
    - Suppresses sensory processing in thalamus
  - General anesthetic
  - High blood:gas partition coefficient
  - Slow rate of induction & recovery

- Sensitizes heart to catecholamine-induced cardiac arrhythmia
- Hepatotoxic
  - Fluoride metabolites
Ketamine

- **IV anesthetic**
- **Glutamate antagonist**
- **Blocks glutamate NMDA receptors**
  - Dissociate anesthesia
    - Analgesia
    - Immobility
    - Amnesia
    - Does NOT depression respiration or cause LOC
  - Anesthesia
    - Minor surgical & diagnostic procedures
    - Children
    - Delirium
    - Hallucination
    - Irrational behavior during recovery
    - ↑ BP
Lidocaine

- Local anesthetic
- Amide-type

- Blocks Na channels & nerve conduction
  - Topical
  - Infiltration
  - Nerve block
  - Epidural
  - Spinal anesthesia
  - Eutectic mixture
    - Lidocaine & prilocaine
    - Anesthetize intact skin for venipuncture
    - IV cannulation
    - Circumcision

- Cross-reactivity w/ amide-type anesthetics
Midazolam

- Sedative-hypnotic-anxiolytic
- **Short-acting BZDP**

- **Potentiates GABA binding to GABA-A Cl ion channel**
  - Sedation
  - Hypnosis
  - Amnesia

- Preoperative sedation & anxiolysis
- Sedation of mechanically vented pts

- Apnea
- Laryngospasm
- Respiratory depression
- Cardiac arrest
Nitrous Oxide

- Inhalation general anesthetic
- **Anesthetic gas**

- **Potentiates GABA binding to GABA-A Cl ion channel**
  - Suppresses sensory processing in thalamus
  - Minor surgery & dental procedures
  - Rapid induction & recovery
  - Euphoria – laughing gas
Propofol

- General anesthesia
- IV anesthetic
- Diisopropyl phenol

- Potentiates GABA binding GABA-A Cl ion channel
  - Hypnosis
  - Anesthesia
  - Amnesia
  - NO analgesic effect
  - Intubation & maintenance of general anesthesia
  - Sedation of intubated pts in ICU

- Bradycardia
- Hypotension
Sevoflurane

- General anesthetic
- Inhalation anesthetic

- Potentiates GABA binding to GABA-A Cl channel
  - Suppresses sensory processing in thalamus
  - Causes LOC

- General anesthesia