Drug	Function
Glyceral Trinitrate Spray	- Vasodilates, redistributes and venodilates - High first pass metabolism - Prodrug that becomes NO - Glutathione S-transferase acts on GTN to become NO - NO activated **GUANYLYL CYCLASE** to increase cGMP levels - cGMP dephosphorylates LC of myosin
Aspirin	- prevents thrombosis in coronary vessels by blocking platelet function - inhibits **CYCLOOXYGENASE** (covalent irreversible binding) - cyclooxygenase makes thromboxane and prostaglandins - is an NSAID (non-steroidal anti-inflammatory drug) - when used as NSAID→ 350mg/4 hrs **Low dose aspirin (50mg daily)** - supresses platelet function (without anti-inflammatory effects) - platelets are in blood, so when aspirin is absorbed into splanchnic venous circulation at high concentration, it already **begins inactivating platelets** - ALREADY PERFORMING FUNCTION so only low dose required **Aspirin for Analgesia** - Tissues that are targeted by aspirin to reduce pain make new COX frequently - Regular, large doses are therefore required **REABSORPTION OF ASPIRIN** - Aspirin is an ACID→ so it is uncharged when the environment is acidic - When urine is acidified→ aspirin uncharged→ lipid soluble→ reabsorbed - In **aspirin overdose**: forced ALKALINE DIURESIS ■ Give bicarbonate solution and lots of WATER ■ Urine becomes basic→ aspirin is charged→ unable to be reabsorbed
Propofol	- anaesthesia (intravenous) - acts on CNS and rapidly equilibrates with the brain (compartment theory) - QUICK drug action
D-Tubocurarine	- Causes **paralysis** and **respiratory arrest** - **ANTAGONIST** of nicotinic receptor - Has quaternary ammonium ion (same as ACh) that prevents it from being absorbed in GIT because of the charge - Positive charged ions have difficulty getting through lipid environment - Curare like drugs used for anaesthetic (surgery) - Competitively binds **ALPHA SUBUNIT OF NICOTINIC RECEPTOR**
Beta Blockers	- **Beta-1 adrenoceptor** antagonists - Block overactive sympathetic NS
Atropine	- Increases HR (treats bradycardia) - Inhibits parasympathetic tone of vagus - **ANTAGONIST** of MUSCARINIC receptor - Was used as anaesthetic, prevents glandular secretions (parasympathetic) - Dilates pupil - Anticholinergic
Propranolol	- Competitive ANTAGONIST at **beta-1 adrenoceptor** (also beta-2) - Decreases heart rate (treats tachycardia) - BETA BLOCKER - Modification of the catecholamine structure of noradrenaline
Morphine	- From opium poppy (analgesia) - High first pass metabolism (intravenous or intramuscular admin) - **Competitive AGONIST** of OPIOID RECEPTORS (GPCR)