

Aluminium hydroxide Magnesium oxide Sodium hydrogencarbonate	Antacids (contain anti-foaming agents & alginates)	-simple bases that neutralize the excess acid in the stomach and preventing inflammation -relieve pain and discomfort	Aluminum – constipation and absorbs phosphate -> bone damage Magnesium – diarrhoea NaHCO ₃ – produces CO ₂ -> bloating and belching
Aspirin	Mild Analgesic	Pain Killer -Preventing enzyme involved in syntheses of prostaglandin forming at the site of injury/pain, which causes swelling/fever/pain transmissions Prevent blood clotting -prevent strokes & heart attacks	-bleeding in the lining of stomach -allergic reactions Use by children -Reye's diseases (liver/brain disease) Overdose -acidosis (by low pH of blood)
Morphine & Codeine (from opium poppy) opiates	Strong Analgesics	Pain relief -injury, surgery, heart attack or chronic diseases -interact temporarily with receptors in the brain, CNS signals are blocked	Ex: heroine Short term -Euphoria, dulling of pain -depress nervous system, slow breathing -nausea and vomiting -may lead to coma/death Long term -social problems -constipation, poor eating habits -risk of AIDS, hepatitis etc. from needle sharing
Paracetamol (Tylenol)	Mild Analgesic	Pain relief -no side effects for children -less problematic	Rarely causes kidney damage and blood disorders. Overdose -brain damage/damage to liver and kidney
Alcohol	Depressant	-used as an antiseptic before surgery -harden skin	-can lead to psychological/physical dependence -lead to violence and ruin families Short term -feeling of relaxation -increases confidence and sociability -dilates small blood vessels -> warmth Long term -feeling of relaxation -heart disease/high blood pressure -miscarriages/deformities Withdrawal -DT – delirium tremens – shaking
Benzodiazepines & Prozac/vallium	Depressants or antidepressants	-reduce anxiety and stress -help insomnia	-may induce dependence
Amphetamines	Stimulants	-mimics effect of stimulation on the sympathetic nervous system. Similar to adrenaline.	-can lead to tolerance and dependence -increase heart rate and breathing, dilation of pupils, constipation -decrease appetite, weight loss, fatigue, depression

Ecstasy	Stimulant	Designer drug -relieve Parkinson's disease -mental relaxation, increased sensitivity to stimuli	-hallucinations -severe effects and fatal effects
Caffeine	Stimulant	-most widely used stimulant in world -found in some pain killers, speeds up effects	-diuretic -alertness -restlessness
Nicotine	Stimulant	-found in tobacco	-addiction -can lead to lung disease, ulcers and cancer Withdrawal -cravings, nausea -weight gain, insomnia, irritability, depression
Penicillin	Antibacterial	-prevent growth and multiplication of bacteria discovered by Fleming when working with Petri culture of Staphylococcus aureus and a mould appeared from contamination	-overuse can lead to resistance by bacteria, which can be passed on. Thus the side chain is often modified.
Acyclovir	Antiviral	-alters cell's genetic material so that virus cannot use it to multiply -binding site could be altered -cell wall could be altered -prevent virus from losing its coat -blocking action of reverse transcriptase	-viruses are very simple and replicate by using a host cell (they do not contain their own organelles required) therefore it is difficult to kill the virus without harming human cells.
Cisplatin	Geometric Isomer	-very effective in ovarian and testicular cancer and other forms -has no overall charge so it can diffuse through the cancer cell membrane and exchange a chloride ion for a molecule of water to form $[Pt(NH_3)_2Cl(H_2O)]^+$. It then enters the cell's nucleus and binds to the DNA by exchanging another chlorine, altering cell's DNA and cannot copy correctly...therefore dying	-its isomer (trans) is not an effective anti-cancer drug
Taxol		An example of a drug made by using chiral auxiliaries. Because there is a chiral carbon meaning 2 different enantiomers (mirror images) can be made have different effects on the body. An auxiliary, which is itself optically active attaches to the starting material, prevents rotation and therefore the correct stereo chemical conditions are provided to produce only one enantiomer.	-anti-cancer drug

		The auxiliary is then removed and recycled.	
Cocaine from a South American plant (erythoxylum coco)	Local Anaesthetic	-deaden pain and increase endurance -suppress nerve transmissions and block action of acetylcholine (a neurotransmitter which allows repetitive impulses to travel along nerves) & constricts blood vessels -also a stimulant	-very addictive -anxiety, nausea, headaches -breathing difficulties, convulsion, coma, death
Procaine and lidocaine	Local anaesthetic	Used in dentistry and minor surgery	Synthesized from cocaine same anaesthetic properties. -do not affect the brain or act as stimulant
Ethoxyethane (ether)	General anaesthetic	Renders patient unconscious	-highly flammable, strange smell C ₂ H ₅ OC ₂ H ₅
Nitrogen (I) oxide	General anaesthetic	Renders patient unconscious -used by dentists	-not very effective N ₂ O
Cyclopropane	General anaesthetic	Renders patient unconscious	-damage ozone layer CF ₃ CB ₂ H ₅
LSD Naturally grows on wheat	Mind altering drug	Noticeable effect Used in psychotherapy -blocks action of serotonin responsible for transmitting impulses across the synapses	-restlessness, dizziness, desire to laugh and distortions in sound/visual perception -hallucinations -> despair & suicide -believe they are able to fly Long term -severe depression -flashbacks -psychological dependence
Psilocybin Found in mushrooms		-resembles poisonous fungi	-mildly hallucinogenic – slight alter in perception -feelings of exhilaration and insight -tolerance develops but no addiction
Mescaline		-alters perception -appetite reduced	-terrible or ludicrous visions lasting 2-3 days -may cause trembling and nausea - enhanced with alcohol -could cause liver damage
Marijuana		-mild hallucinogenic -relaxing and enhanced perception	-loss of time -confusion and emotional distress Long term -apathy and lower fertility -risks associated with smoking tobacco