## BASIC ANTIBIOTICS SUMMARY .

Drug	Activity	Indication	Class	Action	Contraindication
Amoxicillin	Broad spectrum Gram-POSITIVE/NEGATIVE	Susceptible infections; <i>H. pylori-</i> associated peptic ulcers; severe/ resistant HAP	Borad-spectrum penicillin	Destroys bacterial cell wall	History of allergy; <i>C. diff</i> infection; penicillin-associated liver injury; severe renal impairment
Azithromycin	Broad spectrum Gram-POSITIVE/NEGATIVE	RTI; skin/soft tissue infection; severe pneumonia; <i>H. pylori</i> eradication	Synthetic macrolide	Inhibits bacterial protein synthesis	Macrolide hypersensitivity; severe hepatic impairment; severe renal impairment
Benzylpenicillin	Narrow spectrum Some Gram-POSITIVE cover and Gram-negative cocci	Tonsillitis; pneumonia; endocarditis; skin/soft tissue infection; meningitis; septicaemia; gas gangrene	Penicillin	Destroys bacterial cell wall	Renal impairment; penicillin allergy
Cefalexin	Broad spectrum Gram-NEGATIVE (some Gram-positive cover)	UTI; RTI; Very severe or complicated antibiotic-resistant organisms	Cephalosporin	Destroys bacterial cell wall	C. diff risk; allergy; anaphylactic reaction; epilepsy; renal impairment
Cefotaxime	Broad spectrum Gram-NEGATIVE (some Gram-positive cover)	UTI; RTI; Very severe or complicated antibiotic-resistant organisms	Cephalosporin	Destroys bacterial cell wall	C. diff risk; allergy; anaphylactic reaction; epilepsy; renal impairment
Chloramphenicol	Broad spectrum Gram-POSITIVE/NEGATIVE Aerobes/anaerobes	Bacterial conjunctivitis; otitis externa	-	Inhibits bacterial protein synthesis	Hypersensitivity reaction; bone marrow disorders; third trimester pregnancy; breastfeeding; children <2y/o; hepatic impairment
Ciprofloxacin	Borad spectrum Gram-NEGATIVE (particularly Pseudomonas)	UTI; severe gastroenteritis; LRTI	Quinolone	Inhibits bacterial DNA replication	Seizures; children; QT prolongation
Clarithromycin	Broad spectrum Gram-POSITIVE/NEGATIVE	RTI; skin/soft tissue infection; severe pneumonia; <i>H. pylori</i> eradication	Synthetic macrolide	Inhibits bacterial protein synthesis	Macrolide hypersensitivity; severe hepatic impairment; severe renal impairment
<b>Co-amoxiclav</b> (amoxicillin with clavulanic acid)	Broad spectrum Gram-POSITIVE/NEGATIVE	Susceptible infections; <i>H. pylori-</i> associated peptic ulcers; severe/ resistant HAP	Borad-spectrum penicillin	Destroys bacterial cell wall	History of allergy; C. <i>diff</i> infection; penicillin-associated liver injury; severe renal impairment
Doxycycline	Broad spectrum Gram-POSITIVE/NEGATIVE	Acne vulgaris; LRTI; infective exacerbations of COPD; pneumonia; PID	Tetracycline	Inhibits bacterial protein synthesis	Pregnancy; breastfeeding; children <12y/o; renal impairment
Erythromycin	Broad spectrum Gram-POSITIVE (some Gram-negative cover)	RTI; skin/soft tissue infection; severe pneumonia; <i>H. pylori</i> eradication	Natural macrolide	Inhibits bacterial protein synthesis	Macrolide hypersensitivity; severe hepatic impairment; severe renal impairment
Flucloxacillin	Narrow spectrum Gram-POSITIVE <i>Staph</i> .	Skin/soft tissue infection; osteomyelitis; septic arthritis; endocarditis	Penicillinase-resistant penicillin	Destroys bacterial cell wall	Renal failure; history of penicillin allergy; prior flucloxacillin-related hepatotoxicity; hepatic impairment
Gentamicin	Gram-POSITIVE Aerobes	Sepsis; pyelonephritis; complicated UTI; endocarditis; bacterial skin, eye, external ear infection	Aminoglycoside	Inhibits bacterial protein synthesis	Neonates; elderly; renal impairment; myasthenia gravis
Levofloxacin	Borad spectrum Gram-NEGATIVE (some Gram-positive cover))	UTI; severe gastroenteritis; LRTI	Quinolone	Inhibits bacterial DNA replication	Seizures; children; QT prolongation
Meropenem	Broad spectrum Gram-NEGATIVE (some Gram-positive cover)	UTI; RTI; Very severe or complicated antibiotic-resistant organisms	Cephalosporin	Destroys bacterial cell wall	C. diff risk; allergy; anaphylactic reaction; epilepsy; renal impairment
Metronidazole	Anaerobic bacteria and protozoa	Antibiotic-associated colitis; oral infection; aspiration pneumonia; surgical/gynaecological infection; protozoal infection	-	Inhibits bacterial DNA replication	Severe liver damage; <b>alcohol</b>
Neomycin	Gram-POSITIVE Aerobes	Sepsis; pyelonephritis; complicated UTI; endocarditis; bacterial skin, eye, external ear infection	Aminoglycoside	Inhibits bacterial protein synthesis	Neonates; elderly; renal impairment; myasthenia gravis
Nitrofurantoin	Most bacteria causing UTI Gram-POSITIVE/NEGATIVE	UTI	-	Inhibits bacterial DNA replication	Pregnant women towards term; babies <3m/o; renal impairment; long-term prevention
Phenoxymethyl- penicillin	Narrow spectrum Some Gram-POSITIVE cover and Gram-negative cocci only	Tonsillitis; pneumonia; endocarditis; skin/soft tissue infection; meningitis; septicaemia; gas gangrene	Penicillin	Destroys bacterial cell wall	Renal impairment; penicillin allergy
<b>Tazocin</b> (piperacillin with tazobactam)	Broad spectrum Gram-POSITIVE/NEGATIVE Anaerobes	LRTI; UTI; intra-abdominal sepsis; skin/soft tissue infection	Antipseudomonal penicillin	Destroys bacterial cell wall	C. diff risk; <b>penicillin allergy</b> ; moderate/ severe renal impairment
Trimethoprim	Broad spectrum Gram-POSITIVE/NEGATIVE INCREASING RESISTANCE	Acute/recurrent UTI; acne; RTI; prostatitis; pneumocystis pneumonia	Anti-folate	Inhibits bacterial DNA replication	First trimester of pregnancy; folate- deficiency; renal impairment; neonates; elderly; HIV infection
Vancomycin	Narrow spectrum Gram-POSITIVE (inc. MRSA)	Endocarditis; antibiotic-associated colitis	Glycopeptide	Destroys bacterial cell wall	Renal impairment; elderly