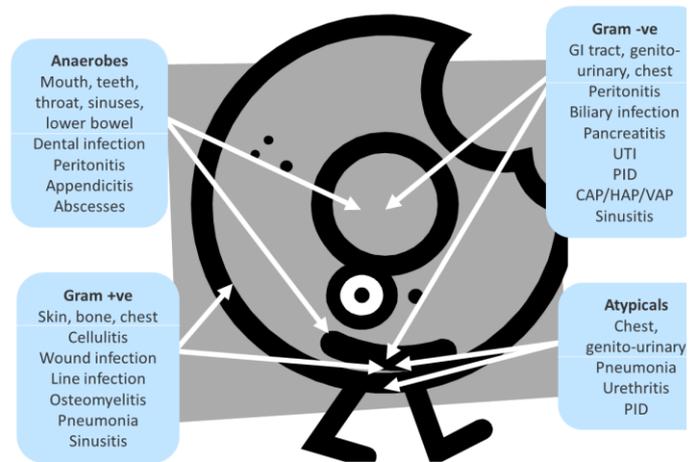# *Learning Portal Lite:* **Antibiotics**

This is a one-page summary; see the full version online

Antibiotic resistance is a serious, global problem. Public Health England have produced a strategy to tackle resistance and they recommend a "Start Smart – Then Focus" approach.

Bugs and drugs

• Bacteria are grouped as G+ve, G-ve and atypical. They are also distinguished according to their need for oxygen as anaerobes or aerobes.

• Remembering what bacteria are likely to infect different body systems is important, especially when making decisions empirically or before sensitivities are available. The image shows **in general** what is found where.

• Antibiotics may cover a broad spectrum of bacteria (e.g. macrolides, some penicillins), or a more narrow spectrum (e.g. teicoplanin, vancomycin for G+ve bacteria; aminoglycosides, ceftazidime for G-ve bacteria).

Anaerobes
Mouth, teeth, throat, sinuses, lower bowel
Dental infection
Peritonitis
Appendicitis
Abscesses

Gram -ve
GI tract, genito-urinary, chest
Peritonitis
Biliary infection
Pancreatitis
UTI
PID
CAP/HAP/VAP
Sinusitis

Gram +ve
Skin, bone, chest
Cellulitis
Wound infection
Line infection
Osteomyelitis
Pneumonia
Sinusitis

Atypicals
Chest, genito-urinary
Pneumonia
Urethritis
PID

Tailoring treatment

• Guidelines are useful in helping us to choose the most appropriate antibiotic for most patients, but you need to ensure that it is right for **your** patient taking into account any other medicines they may take, their medical history including their renal and liver function, their age, weight and allergy status.

• Remember the acronym **DRAInS (+ PARC)** if your patient appears not to be responding to antibiotic treatment.

Reviewing a prescription

When reviewing a prescription for antibiotic, you'll need to consider;

• The patient (e.g. age, renal/liver function, allergies, other medicines and medical history)
• The infection (e.g. whether sensitivities available, site, severity, risk of resistance)
• The antibiotic (e.g. spectrum, route, dose, formulation, monitoring, review date)

Information sources

• Know where to find your Trust's antimicrobial guidelines. If these are not helpful then try NICE Evidence Search for NICE guidelines, as well as guidance from other sources such as the Royal Colleges, SIGN and other experts.

• SmPCs and resources such as Martindale, AHFS Drug Information, Lexicomp, Micromedex or UpToDate can also be useful.

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