



Aa



# Antibiotic spectrum

Drug	spectra	Uses
Glycosomyin		UTI
2) cycloserine		2 <sup>nd</sup> line TB
3) Bacitracin		<ul style="list-style-type: none"> <li>• S. aureus nasal carriers</li> <li>• Pseudomonas colitis, endocarditis</li> </ul>
4) Glycopeptide (Vancomycin)	gram +ve	<ul style="list-style-type: none"> <li>• MRSA</li> <li>• E. faecium</li> <li>• fulminant P. colitis</li> </ul>
5) Penicillin G (benzathine)	mainly gram +ve spirochetes	<ul style="list-style-type: none"> <li>• Rheumatic fever prophylaxis</li> <li>• Yaws</li> <li>• Leptospirosis</li> <li>• Syphilis</li> <li>• Rat bite fever</li> <li>• gas gangrene</li> <li>• Streptococcus</li> <li>• S. aureus</li> <li>• meningococci</li> <li>• gonococci</li> <li>• actinomycosis</li> <li>• anthrax</li> <li>• tetanus</li> </ul>
6) Ampicillin	gram +ve like	moderate



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67 Ampicillin, amoxicillin

- gram +ve like penicillin
- gram -ve - Salmonella, shigella
- H. influenzae.
- E. coli, proteus.
- H. pylori

moderate

- UTI - E. coli, proteus
- GIT - Salmonella, shigella
- E. faecalis
- Resp - H. influenzae, Pneumococcus

Severe

- endocarditis
- bacteremia
- Listeria
- meningitis - H. influ, meningococ

77 Carbapenem Ticarcillin Piperacillin

- gram +ve
- gram -ve
- + Pseudomonas

severe gram -ve disease

87 1st Gen- cephalosporin

- cefadroxil
- cefalexine
- cefazoline
- cefandine

- gram +ve ↑↑↑
- gram -ve ↑
- aerobes
- X gram -ve anaerobes

UTI, cellulitis, mastitis (mid)

surgical prophyl

97 2nd gen cephalosporin

- gram +ve ↑↑
- gram -ve ↑↑
- aerobes

H. influenzae, moraxella, pneumococci



Ad



2<sup>nd</sup> gen cephalosporin

cefuroxime

cefotetan

cefazolin

cefadroxil

cefprozil

gram +ve ↑↑

gram -ve ↑↑

aerobics

anaerobics

gram +ve aerobics

gram +ve anaerobics

H. influenzae, moraxella, pneumococci

otitis media, sinusitis, pneumonia

surgical pro-colorectal surgery

PID

diverticulitis

peritonitis

lung abscess

(not DOC)

3<sup>rd</sup> gen cephalosporin

ceftriaxone

cefepime

cefixime - DOC - oral typhoid

ceftazidime

gram -ve aerobics

DOC

DOC

Typhoid

E. coli

Klebsiella

meningitis

(except listeria)

Gonorrhoea

Providencia

most gram -ve aerobics except

Pseudomonas, Proteus, serotia

Pseudomonas

meliodosis, febrile

neutropenia

ceftazidime/ceftazidime + avibactam

complicated abdominal infect<sup>n</sup>

4<sup>th</sup> gen

gram -ve ↑↑↑



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ceftazidone/ ceftazidime + avibactam - **Complicated abdominal infect<sup>n</sup>**

11) 4<sup>th</sup> gen  
cephalosporin  
ceftriaxone  
cefepime

gram-ve ↑↑↑  
(> ceftriaxone)  
+ pseudomonas

12) 5<sup>th</sup> gen  
cephalosporin  
ceftaroline  
cefbiprole

gram+ve ↑↑↑  
(> ceftriaxone)

**MRSA**

13) Carbapenem  
**Imipenem**

all  
(most wide  
spectrum)

**Serratia**  
**acinetobacter**  
**enterobacter**  
**pseudomonas**

Doripenem  
Meropenem  
Ertapenem

→ **PID, lung abscess,  
diverticulitis.**

14) Monobactam -  
Aztreonam

gram-ve  
only

penicillin allergy  
gram-ve infect<sup>n</sup>

15) Polymixin

gram-ve  
aerob

skin infect<sup>n</sup>  
topical

B

**E/colistin**

**MDR - klebsiella,**  
**pseudomonas,**  
**enterobacter**



# 16> Daptomycin

gram +ve  
(Staphylococcus  
Enterococcus)

VRSA  
VRE  
(except pulmonary)

# 17> Tetracycline - Doxycycline

gram +ve &  
most gram -ve  
except  
Proteus  
Pseudomonas  
Bruidiencia  
enterobactere  
acinetobactere

mycoplasma hominis  
Rickettsia  
Chlamydia (STD)  
Cholera  
Borrelia  
Brucella  
Plague prophylaxis  
pleuroderis  
Pericarditis  
syphilis  
malaria  
filaria  
anthrax  
SIADH  
atypical pneumonia

Minocycline → leprosy, acne  
Demeclocycline  
Tegacycline

↳ not used  
in UTI, bacteremia,  
meningitis  
(↓ conc. in urine  
& blood)  
↓  
used in resistant  
gram +ve & gram -ve  
cases

# 18> Aminoglycoside

Streptomycin  
Tobramycin

gram -ve  
aerobcs

plague  
tularemia



Aa



# 18) Aminoglycoside

gram -ve  
aerobes

plague

tularaemia

Streptomycin

Tobramycin

Amikacin

Gentamicin

Paromomycin → malaria  
leishmania

Netilmicin

Neomycin

Plazomicin → gut  
sterilization in  
hepatic encephalopathy  
↓  
UTI

add on drug →  
cell wall synthesis  
inhibitors for -  
pseudomonas  
enterobacter  
Klebsiella

add on for  
enterococcal  
endocarditis

2<sup>nd</sup> line TB

# 19) Macrolides

gram +ve  
(like penicillin)  
few  
gram -ve

Erythromycin

Clarithromycin

Azithromycin

Telithromycin

pertussis

Diphtheria

R-fever prophylaxis  
in penicillin  
allergy

Chancroid

leprosy  
TB  
MAC

Campylobacter

cholera in children

chlamydia & cholera

in pregnant

atypical pneumonia

↳ mycoplasma, legionella

chlamydia

18> Oxazolidinones  
Linezolid  
Tedizolid

VRSA } Pneumonia  
VRE }  
  
TB

19> Streptogramin  
Daptomycin + Quinupristin

reserve drug  
for  
VRSA  
MRSA  
VRE

20> Clindamycin  
lincosamide

not active  
against gram-ve  
aerobes

Toxic shock sx  
supradiaphragmatic  
anaerobic  
infect<sup>n</sup>  
osteomyelitis

21> Chloramphenicol

Resistant Rickettsia

22> Pleuromutilins

Ritamulin → skin infect<sup>n</sup>  
Defamulin → pneumococcus (gramve) → resistant CAP  
H. influenzae,  
Klebsiella

23> Fidaxomicin

Pseudomembranous colitis  
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23> Fidaxomicin

Pseudomonas colitis

24> Mupirocin

MRSA nasal carriage

25> Rifamycin

gut sterilization

26> Sulfonamides  
- sulfadiazine  
sulfazazole  
Sulfamethoxazole  
sulfadoxin

gram +ve  
aerobcs,  
gram -ve  
aerobcs  
except  
Rickettsia  
Pseudomonas  
not against  
anaerobcs

malaria  
toxoplasma  
burn pt.

27> Cotrimoxazole  
(Trimethoprim +  
sulfamethoxazole)

cystitis  
Prostribitis  
nocardiosis  
Pneumocystis  
Isosporiasis  
cyclosporiasis

28> Nalidixic acid

gram -ve

UTI  
travellers  
diarrhoea

29> Fluoroquinolones  
Ciprofloxacin

Wide

travellers' diarrhea  
anthrax





Aa



29> Fluoroquinolones  
Ciprofloxacin

Wide

traveller's diarrhoea

anthrax

typhoid carriers

mass prophylaxis  
of meningococci

pyelonephritis

TB

Moxifloxacin }  
Gatifloxacin } Resp.  
levofloxacin }

Pseudomonas  
H. influenzae  
Klebsiella  
mycoplasma, chlamydia.  
legionella

Pneumonia  
first line  
drug

30> Methanamine

UTI

31> Nitrofurantoin

UTI