

STARTER QUESTIONS

1. What type of **microorganism** causes the disease COVID-19 ?
2. How can Covid-19 be **spread** from one person to another ?
3. How can the risk of **spreading** COVID-19 from person to person be **reduced**?
4. What are the most common **symptoms** of COVID-19?
5. How is COVID-19 **diagnosed**?

STARTER QUESTIONS

1. What type of **microorganism causes** the disease COVID-19 ? **Virus (Coronavirus - SARS-CoV-2)**

2. How can Covid-19 be **spread** from one person to another ? **respiratory (droplets and aerosols) and contact routes**

3. How can the risk of **spreading** COVID-19 from person to person be **reduced**? **hand washing/alcohol gel, face coverings, social distancing, self-isolation**

4. What are the most common **symptoms** of COVID-19? **High temperature, cough, loss of taste or smell**

5. How is COVID-19 **diagnosed**? **Swab test of throat and nose**

LEARNING INTENTION;

Antibiotics

Success Criteria..

I can :

- ❖ state that antibiotics are chemicals that prevent the growth of bacteria
- ❖ Give an example of an antibiotic and what it can be used to treat

Antibiotics

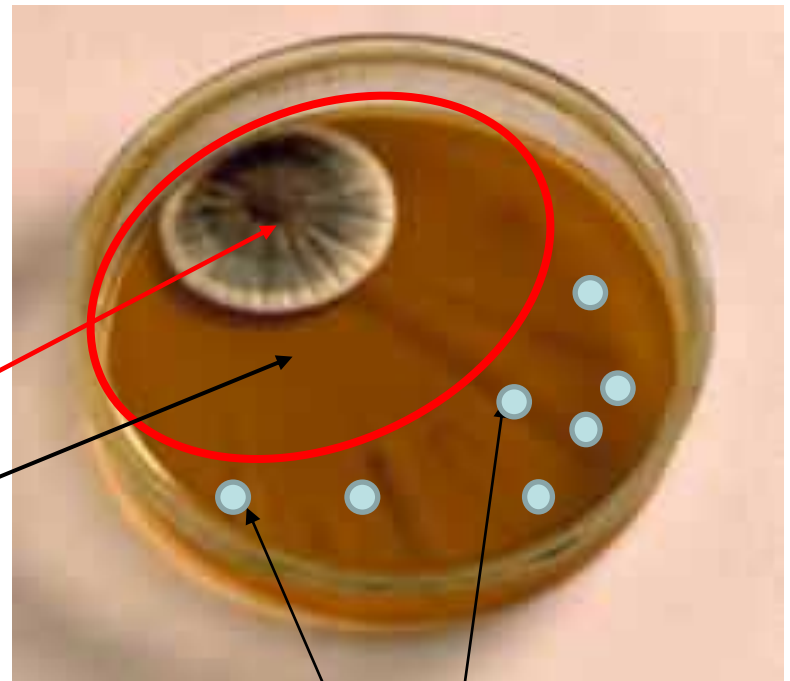
Antibiotics are chemicals which prevent the growth of **BACTERIA**



First antibiotic **penicillin** was discovered by Alexander Fleming in 1928



Fleming was growing bacteria on a plate, went on holiday and left plates on his bench
returned to find **mould** growing on plate



bacteria did not grow in area around **penicillium** mould

bacterial growth

concluded mould **Penicillium** was producing a chemical (called **penicillin**) which was preventing growth of bacteria

Antibiotics prevent the growth of bacteria

➤ so can be used to treat bacterial diseases



Necrotising fasciitis



Your Doctor might give you an antibiotic to help you fight a bacterial disease.

penicillin

cephalexin



doxycycline

Clarithromycin

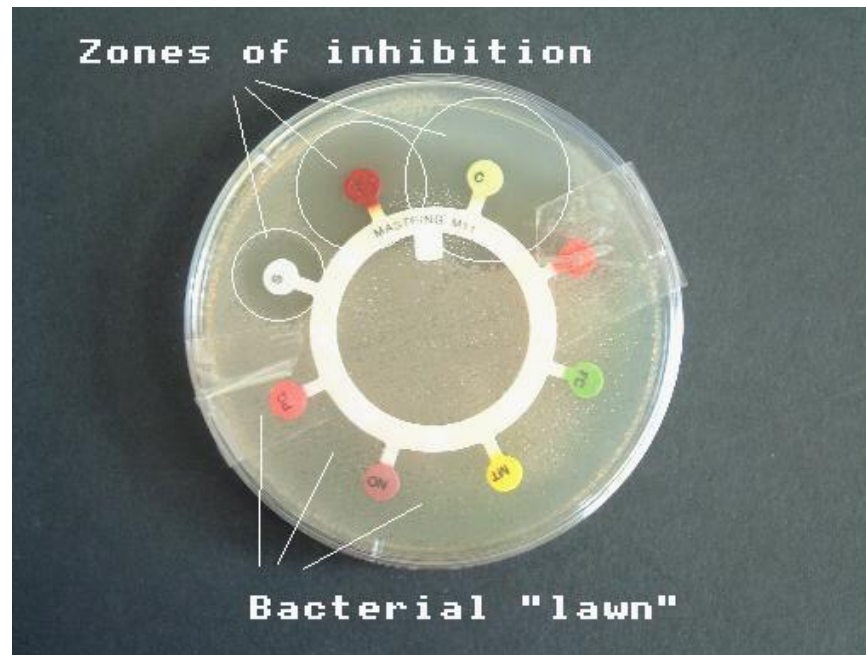
Must complete the course

If **no improvement** after course,
Doctor might take a **blood** or
sputum sample or **swab** from the
infected area.

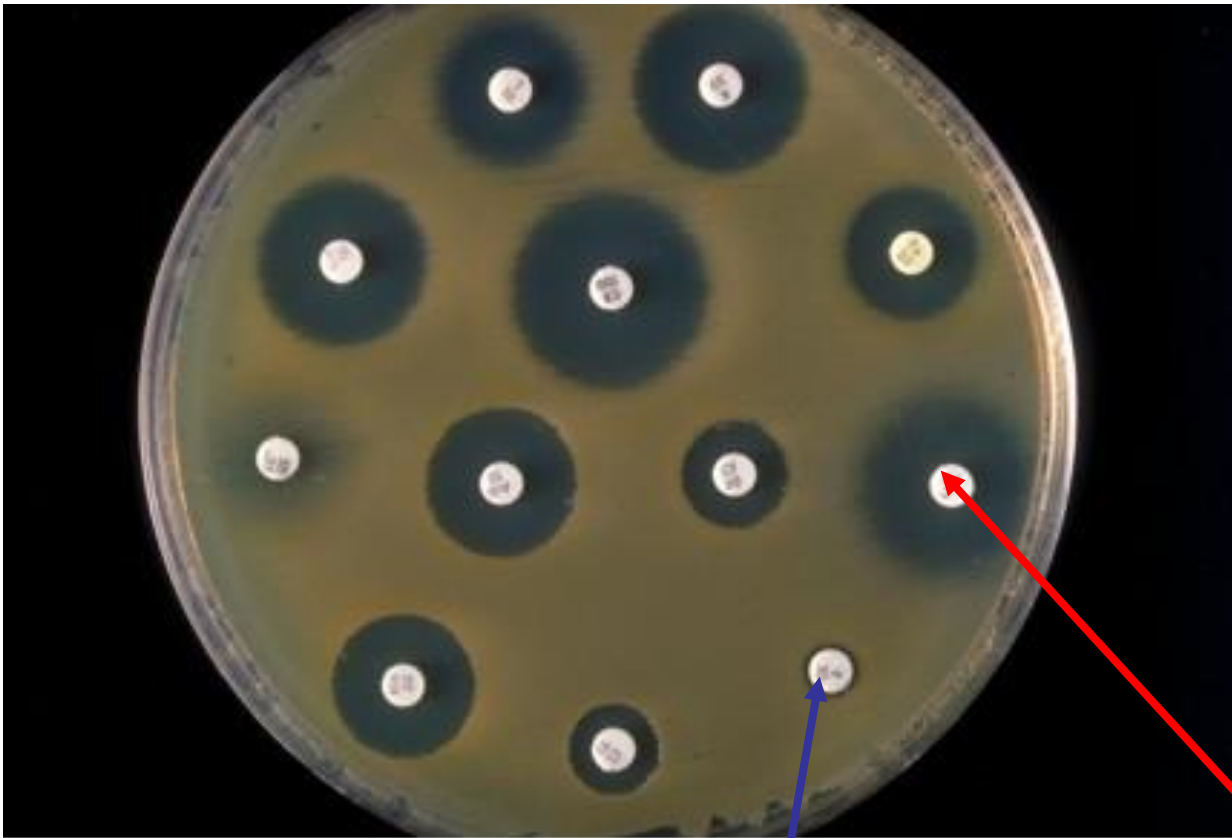


Analysis of sample

A *Microbiologist* at the Hospital Lab. will *grow the bacteria* making you ill on a special jelly plate containing *different types of antibiotics*.



Which antibiotic should the Doctor use to treat the patient?



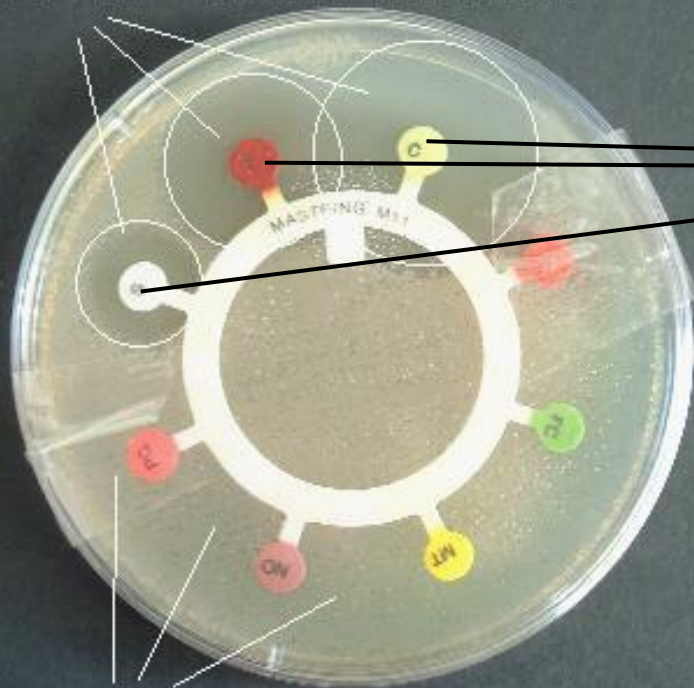
clear area
around
disc it has
prevented
growth of
bacteria

bacteria is
sensitive to
antibiotic

if bacteria grows
around disc then
bacteria is **resistant** to
antibiotic

Which antibiotic should the Doctor use to treat the patient?

Zones of inhibition



Bacterial "lawn"

All of these 3 antibiotic discs have area of no bacterial growth around them

The one with the largest clear zone around it would be most effective but all could be used