

Define the following terms and give an example of each:

Communicable –

Bacteria –

Virus –

Fungi –


What are the different ways pathogens are spread?

By air –

Direct contact –

By water –

(BIOLOGY ONLY) Describe how you would grow useful bacteria in a science lab and how you ensure it is done safely:

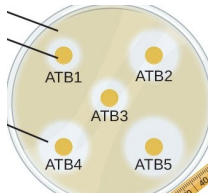


(BIOLOGY ONLY) Calculating bacterial growth:

1. Equation for number of times bacteria divide in a set amount of time.

2. Equation for calculating the number of bacteria in a population.

3. Compare the effectiveness of antibiotics and disinfectants using $\overline{\overline{r^2}}$ on the image below.



Topic 3 Infection & Response

Different diseases				
Name	Bacteria / Virus / Fungi / Protist	Symptoms	Problems	Treatments
HIV / AIDS				
Salmonella				
Malaria				
Rose black spot				
Gonorrhoea				
Measles				
Tobacco Mosaic Virus				

Describe the role and function of the three types of white blood cell:

1) Phagocytosis:

2) Antibodies

3) Antitoxins

(BIOLOGY ONLY) How are monoclonal antibodies used to treat disease?

Advantages	Disadvantages

(BIOLOGY ONLY) How are monoclonal antibodies made?

What are they used for?

Pregnancy tests –

Diagnosis of disease –

Monitoring –

Research –

Treatment -

Compare the uses of antibiotics and painkillers.

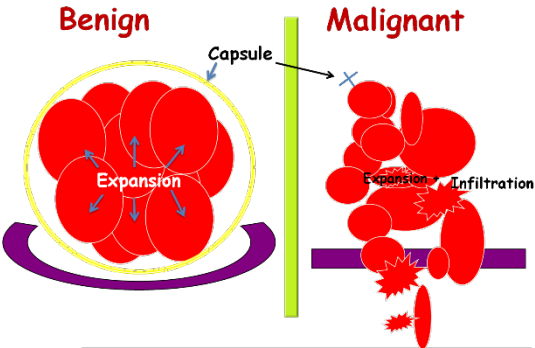
Describe how penicillin was discovered.

List different risk factors that affect disease:

Compare the formation of malignant and benign tumours.

Benign –

Malignant –

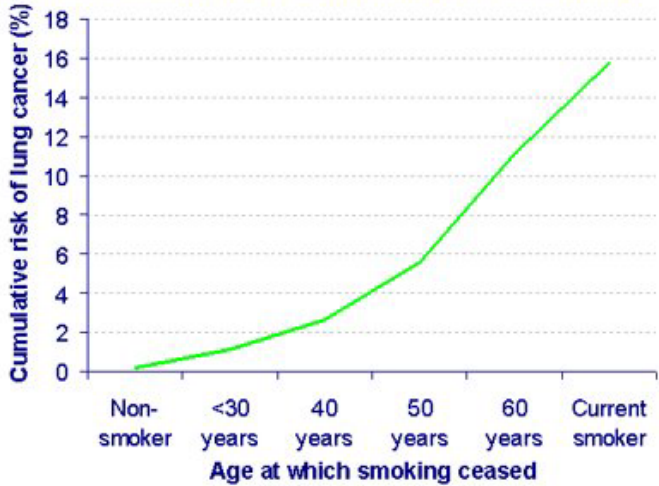


Describe these, in terms of the graph below:

Casual mechanism

Correlation

Figure 1.2: Cumulative risk of lung cancer among men in the UK at age 75, according to age at which they stopped smoking



Describe the treatments of cancer:

Radiotherapy:

Chemotherapy:

Risk 1: Smoking

Nicotine –

Carbon monoxide –

Smoking during pregnancy –

Carcinogens –

Smoking and the heart -

Risk 2: Diet, exercise and disease

Diet, exercise and obesity –

Exercise and health –

Obesity and type 2 diabetes -

Risk 3: Alcohol and Carcinogens

Alcohol and health –

Brain and liver damage –

Alcohol and pregnancy –

Ionising radiation -

1. Label the different places pathogens can enter the body.
2. Describe the protective defences at each place.

