

## B1 - Keeping Healthy Quiz

1. What is an epidemic?

A disease affecting many people in a country/area.

2. Why does bird flu spread quicker than swine flu?

There are more birds than pigs and birds migrate so it is difficult to control their movement.

3. Why will antibiotics not get rid of flu?

Antibiotics only kill bacteria and flu is caused by a virus.

4. Explain why a person's diet should contain fat, protein and carbohydrates.

For a balanced diet as carbohydrates are needed for energy, proteins for growth (building cells) and repair and fats for energy and insulation.

5. Why does the body need vitamins and minerals?

To maintain health and prevent deficiency diseases such as scurvy, rickets and osteoporosis.

6. Explain why pathogens make us feel ill.

Pathogens reproduce quickly and produce large amounts of toxins which damage cells. Bacteria produce toxins, viruses damage cells.

7. Give three ways in which white blood cells protect us against pathogens.

White blood cells produce antibodies which destroy the pathogens, white blood cells engulf (ingest and digest) pathogens and produce antitoxins which counteract the toxins produced by pathogens.

8. Why does a vaccination make people immune?

Injecting a patient with a dead/weakened or inactive pathogen. White blood cells produce antibodies which are reproduced quickly on re-infection.

9. What is the benefit of vaccinating a large number of people of the same population?

It reduces the risk of spreading an infection so an epidemic is less likely.

10. MMR stands for which three diseases?

Mumps, measles and rubella

11. Why can antibiotics not be used to cure viral diseases?

Viruses are found inside cells and are therefore inaccessible to the antibiotic.

12. Explain why there are so many antibiotic-resistant bacteria these days.

Overusing antibiotics kills all non-resistant bacteria. This means there is less competition for non-resistant bacteria, formed as a result of gene mutation, so the non-resistant bacteria can reproduce.

13. Give three reasons for the low death rate from infectious diseases in modern hospitals.

Better hygiene, better drugs, better understanding about immunity, better sterilisation of equipment, better isolation of patients.

14. Define metabolic rate.

The rate of chemical reactions inside the body.

15. Give three factors that affect a person's metabolic rate.

Level of activity, genes, BMI, age, gender

16. Give two factors that affect the concentration of cholesterol in a person's blood.

Diet, genes

17. Name two diseases linked to obesity?

Arthritis, diabetes, high blood pressure, heart diseases (stroke, heart attack, blood clots)

18. Incubation of bacteria usually takes place at 35°C, yet in school laboratories the temperature is restricted to 25°C. Explain why.

To prevent the growth of pathogens.

19. Why are hand gel dispensers placed at the entrance of most hospital wards?

It prevents the spread of pathogens as it destroys them.

20. How do viruses cause illness?

They enter a cell and destroy it.

21. Which nutrient is contained in Agar?

Carbohydrates

22. What is a pandemic?

A worldwide outbreak of a disease. (involves several countries)

23. Why could a mutation of the influenza virus cause a pandemic?

The new strain is different from the old one. A new vaccination or new antiviral drugs have not yet been developed so people are not immune yet. The virus is not yet recognised by the white blood cells. As infected people travel from one country to another they spread the mutated virus.

24. What are the three main stages of drug testing before a drug can be sold to the public.

Test on tissues or animals to test for toxicity, test on a small number of healthy volunteers to determine side effects, testing on patients to determine optimum dose and see if it is effective.

25. Why is it difficult to treat diseases caused by viruses?

Viruses live inside body cells so are inaccessible to antibiotics. Viruses also mutate frequently.

26. There are no cases of Polio in the UK, yet people are still vaccinated against it. Explain why.

Polio is still found abroad. If people travel abroad and contract the Polio virus, they could re-introduce it to the UK where it would spread quickly. A pandemic/epidemic can only be prevented if a large proportion of people are vaccinated.

27. Define obese.

Being overweight

28. Why does MRSA cause problems in hospitals?

MRSA is resistant to antibiotics; it is easily passed from one patient to the next; patients are too ill to fight the disease caused by MRSA or their own disease.

29. How does penicillin help to treat infections?

It kills the bacteria/prevents growth of bacteria.

30. Why should drug users not share needles?

Because viruses are transferred in body fluids such as blood and saliva.

31. Why is an inoculation loop heated in a Bunsen burner flame?

To sterilise it and kill any bacteria found on it.

32. Why is an inoculation loop that was heated in a Bunsen burner flame allowed to cool before being dipped into a bacterial culture?

Because the heat would destroy the bacteria.

33. Should farmers be allowed to put low doses of antibiotics in animal feed?

Yes, to keep the animals free of disease OR No, as antibiotic-resistant bacteria could develop which would cause harm to animals and/or humans.