Autumn 2

Year 10 B6 Preventing and treating disease and B7 Non-communicable diseases

Aiming for Grade 6

Extended Homework Assignment

Name: _____

Set: _____

Instructions

A printed copy should be handed into your teacher.

The knowledge required to complete this assignment will be supported in class in lessons of the half term.

B6 Preventing and treating disease and B7 Non-communicable diseases extended homework – Aiming for Grade 6

Aims

The aim of this homework is to help you revise the main topics in this chapter. By the end of this lesson you should know the differences between vaccination, antibiotics and painkillers. You should also be able to describe how vaccination works and the stages involved in developing new drugs.

Learning outcomes

After completing this activity, you should be able to:

- describe the differences between vaccination / antibiotics and painkillers
- describe how vaccination protects against disease
- describe the stages of drug development.

Task

1 You will be completing a comic strip to describe how vaccination works.

2 You will produce a timeline to show the stages that a drug goes through before a doctor can prescribe it.

Questions/task output

1 You will be producing a comic strip to show how vaccination works.

Your comic strip should include a written description and pictures to go with your descriptions. You can use the template on the final page of this homework to help you.

1. Vaccine is injected with a dead / attenuated pathogen.
2. White blood cells recognise antigens on pathogens surface.
3. White blood cells produce antibodies that destroy pathogen.
4. Some white blood cells left behind as memory cells.
5. If re-infected memory cells will remember these antigens
6. Antibodies and made quickly and pathogen destroyed before you get ill.

Task 2 Produce a timeline to show the different stages in drug development in the space below. You can use your class notes and the internet to help you.

Remember to include information on:

- What a good drug needs to be
- What drugs are tested on
- What clinical trials are
- What double blind trials are
- What happens after the drug has been made.

Task 3

You will be taking on the role of a GP and reviewing the profiles of six of your patients and giving them advice.

There are six profiles one for each of your six patients on page 6. You will need to give advice to each patient.

Complete the tables below for each patient.

Paul	Mary
Tick the risk factors that apply: smoking drinking age family history obese lack of exercise gender	**Tick the risk factors that apply:** smoking drinking age family history obese lack of exercise gender
At risk from what diseases:	**At risk from what diseases:**
Advice on prevention of these diseases: • • •	**Advice on prevention of these diseases:** • • •

Ali	Yasmin
Tick the risk factors that apply: smoking drinking age family history obese lack of exercise gender	**Tick the risk factors that apply:** smoking drinking age family history obese lack of exercise gender
At risk from what diseases:	**At risk from what diseases:**
Advice on prevention of these diseases: • • • • •	**Advice on prevention of these diseases:** • • • • •

Juan	Emma
Tick the risk factors that apply: smoking drinking age family history obese lack of exercise gender	**Tick the risk factors that apply:** smoking drinking age family history obese lack of exercise gender
At risk from what diseases:	**At risk from what diseases:**
Advice on prevention of these diseases: • • •	**Advice on prevention of these diseases:** • • •

Patient profiles:

Paul: • Age 70 • Male • Enjoys walking and gardening • Has a meat-heavy diet • Has the occasional pint of beer • BMI in normal range	**Mary:** • Age 40 • Female • Fitness instructor • Vegan • Has a glass of wine every day • BMI is less than normal • Mother has type 2 diabetes
Ali: • Age 30 • Male • Rugby player • BMI above average • Drinks heavily after a match • Has a meat heavy diet	**Yasmin:** • Age 19 • Female • Student who cycles to college • Smokes 3–5 cigarettes a day • Rarely drinks • BMI in normal range
Juan: • Age 25 • Male • Enjoys clubbing and pubbing • BMI is less than normal • Smokes 10 cigarettes a day • Drinks heavily at the weekends	**Emma:** • Age 60 • Female • Works in an office • Loves junk food • BMI is above average • Does not drink any alcohol • Parents had cardiovascular disease