

CHAPTER 15

DRUGS

The stuff you need to know in this chapter:

15.1 DRUGS

Core

- Define a drug as any substance taken into the body that modifies or affects chemical reactions in the body

15.2 MEDICINAL DRUGS

Core

- Describe the use of antibiotics for the treatment of bacterial infection
- State that some bacteria are resistant to antibiotics which reduces the effectiveness of antibiotics
- State that antibiotics kill bacteria but do not affect viruses

Extended

- Explain how development of resistant bacteria such as MRSA can be minimised, limited to using antibiotics only when essential and ensuring treatment is completed
- Explain why antibiotics kill bacteria, but do not affect viruses

15.3 MISUSED DRUGS

Core

- Describe the effects of excessive alcohol consumption and abuse of heroin, limited to:
 - powerful depressant drugs
 - effect on reaction times and self-control
 - addiction and withdrawal symptoms
 - negative social implications, e.g. crime
- State that injecting heroin can cause infections such as HIV
- State that excessive alcohol consumption can cause liver damage
- State that tobacco smoking can cause chronic obstructive pulmonary disease (COPD), lung cancer and coronary heart disease
- Describe the effects on the gas exchange system of tobacco smoke and its major toxic components, limited to carbon monoxide, nicotine and tar.
- State that the liver is the site of break down of alcohol and other toxins



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Extended

- Explain how heroin affects the nervous system, limited to its effect on the function of synapses
- Discuss the evidence for the link between smoking and lung cancer
- Discuss the use of hormones to improve sporting performance, limited to testosterone and anabolic steroids



15.1 DRUGS

1. Define "drug"

2. Drugs can be used to treat illnesses and relieve pain. This is "medicinal" use. In what other way can drugs be used?

3. Some medicinal and recreational drugs can become addictive. What does this mean?



15.2 MEDICINAL DRUGS

1. Explain the way in which penicillin fights bacterial infections

2. Penicillin only affects bacteria cells. Why is this important when using it as a medicine?

3. Read the sentences below. There are 3 errors; circle/highlight them and make corrections.

Influenza or "the flu" is a disease caused by a bacterium. Antibiotics only affect cells without a cell wall. Because the influenza microorganism has a cell wall, antibiotics are not able to fight the disease.

4. Using MRSA as an example, explain why it is important that doctors limit the amount of antibiotics that are prescribed.



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5. Apart from limiting their use, what else must people do to limit resistance to antibiotics? Explain why.



15.3(A) MISUSED DRUGS - HEROIN

1. Heroin is very powerful depressant. Explain what this means.

2. Explain why a person who takes heroin may find it very difficult to stop.

3. Why might heroin use lead to crime?

4. What name is given to the extremely unpleasant effects a heroin user may feel when they stop using heroin?

5. Explain why blood-borne diseases such as HIV are more prevalent amongst users of heroin.



15.3(B) MISUSED DRUGS - SMOKING

1. Explain the effect of the following components of cigarettes on the gas exchange system

Component	Toxic Effect
Nicotine	
Tar	
Carbon Monoxide	

2. Explain how the immune response to smoke particles in the lungs can cause COPD.

3. State two other conditions that smoking can cause

i. _____

ii. _____



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15.3(C) MISUSED DRUGS - ALCOHOL

1. Explain why a person may choose to consume alcohol

2. Explain how alcohol can effect the following:

Reaction time	
Aggression	
Decision-making	

3. State the organ responsible for breaking down toxins such as alcohol in the body.

4. Explain what is meant by "cirrhosis of the liver".



15.3(C) MISUSED DRUGS - SPORTS ENHANCERS

1. Define "hormone"

2. Describe the role of anabolic steroid hormones in the body

3. Explain why an athlete might choose to take anabolic steroids as drugs

