**Topic 15. Drugs**

**15.1 Drugs**

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

**15.2 Medicinal drugs**

* **Describe the use of antibiotics for the treatment of bacterial infection**
* **Explain why antibiotics kill bacteria, but do not affect viruses**
* **State that some bacteria are resistant to antibiotics which reduces the effectiveness of antibiotics**
* **Explain how development of resistant bacteria such as MRSA can be minimised, limited to using antibiotics only when essential and ensuring treatment is completed**

**15.3 Misused drugs**

* **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 excessive alcohol consumption can cause liver damage**
* **State that the liver is the site of break down of alcohol and other toxins**
* **State that injecting heroin can cause infections such as HIV**
* **Explain how heroin affects the nervous system, limited to its effect on the function of synapses**
* **State that tobacco smoking can cause chronic obstructive pulmonary disease (COPD), lung cancer and coronary heart disease**
* **Discuss the evidence for the link between smoking and lung cancer**
* **Describe the effects on the gas exchange system of tobacco smoke and its major toxic components, limited to carbon monoxide, nicotine and tar**

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| Chemical | Effects on gas exchange system |
| Carbon monoxide | A poisonous gas; combines with hemoglobin in RBC, preventing them from transporting oxygen |
| Nicotine | Addictive; increases heart rate & blood pressure |
| Tar | A carcinogen - increases the risk of lung cancer; lines the air passages, increasing mucus production and paralyzing and damaging cilia, causing bronchitis. |

* **Discuss the use of hormones to improve sporting performance, limited to testosterone and anabolic steroids**