***6.3 Defence against infectious disease***

1. Define *pathogen*.
2. List some examples of illness which are pathogenic and non-pathogenic.

Pathogenic:

Non-pathogenic:

1. Outline one example of an infection by each of the following types of pathogens:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Type of pathogen* | **BACTERIA** | **VIRUS** | **FUNGI** | **PROTOZOA** |
| Example disease | Cholera |  |  |  |
| Pathogen | *Vibrio cholerae* |  |  |  |
| Method of transmission | Contaminated drinking water or food |  |  |  |
| Symptoms | Severe diarrhea and vomiting |  |  |  |
| Treatment | Urgent oral rehydration, antibiotics |  |  |  |
| Dangers | Death by dehydration |  |  |  |

1. What are the methods of transmission?

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1. Outline the role of skin and mucous membranes in primary defense (acting as barriers against pathogens):

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| Skin is a tough barrier |  |
| Hairs, e.g. nose |  |
| Mucous, such as in nose, airways |  |
| Acidic conditions (e.g. stomach and vagina) |  |
| Lysozymes |  |
| Natural organisms |  |

1. Cuts in the skin are sealed by blood clotting. What is the role of platelets in this process?
2. Show by means of a diagram the cascade of reactions that occur to prevent blood loss and the entry of pathogens.
3. What can cause a blood clot in the coronary arteries?
4. What are the consequences of this and possible treatments?
5. Outline some of the risk factors for coronary heart disease:

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| Genetic |  |
| Age |  |
| Sex |  |
| Smoking |  |
| Diet |  |
| Exercise |  |
| Obesity |  |
| Stress |  |