

Types of communicable and non-communicable diseases

[Health & Medicine](#), [Disease](#)



This essay will be exploring the main features of communicable and non-communicable diseases and go on to explain how some of these diseases affect how the body works and how they cause the body to react differently within these various situations. Diseases come in two different forms; communicable and non-communicable. A communicable disease is contagious and can be passed through many methods for example, through direct contact or indirect contact, for example through a vector or through air particles. A non-communicable disease (NCD) is not infectious and can be passed on through non-modifiable risk factors such as, genetics, gender, race and age.

There are also modifiable risk factors that can lead to an NCD, some examples of these being; lifestyle choices such as smoking, work conditions and access to health care. Communicable and non-communicable diseases all affect the normal functioning of the body, normal meaning the usual way certain parts of the body react to different situations within acceptable ranges. Three examples of a communicable disease are tuberculosis, Lyme disease and HIV. Tuberculosis (TB) is an infection caused by the bacteria *Mycobacterium tuberculosis*, which mainly attacks the lungs but can spread to any part of the body.

With TB a person can experience a persistent cough which often contains blood, swollen lymph nodes, a fever and severe headaches. TB is spread indirectly from person to person by inhaling or coming into contact with droplets from coughs and sneezes from an infected person. If inhaled the body cannot fight the bacteria however, can stop the disease from spreading, this is known as latent TB. However, if a person with a lowered

immune system inhales these droplets the body may not be strong enough to stop the bacteria from spreading, which could then lead to an active form of TB. This disease can be treated with anti-biotics if diagnosed quick enough (National Health Service, 2016).

Lyme disease is another bacterial infection but caused by the bacteria *Borrelia burgdorferi*. A person with Lyme disease can develop rashes, a fever, joint pain and neurological problems such as memory loss and muscle impairment due to inflammation in the brain (Mayo Clinic, 2018). A person can become infected with Lyme disease if they are bitten by an infected tick. Ticks are parasites that suck the blood of mammals. If the tick bites and sucks the blood of an infected mammal, the tick then becomes a vector of the disease. Lyme disease can then be passed onto a human by the tick biting and sharing the blood of the infected mammal. As this is a bacterial infection Lyme disease can be treated using anti-biotics (Paul Klennerman, 2012).

HIV is a virus that attacks cells in the body and because of this the immune system becomes extremely weak. When the immune system is damaged by HIV, the body then struggles to fight every day infections such as, the common cold or flu. It will also take someone with the virus longer to recover from infections than someone without the disease. HIV can be contracted in different ways; this can be through sexual contact without using a condom with an infected person, or a mother who is HIV positive can pass this on through pregnancy, birth or through their breast milk. The final way the virus can be spread is coming into contact with infected blood. This can happen

when people may share or re use needles that have come into contact with infected blood (Christian Nordqvist, 2018).

HIV can be treated using antiretroviral drugs. These drugs stop the virus from replicating in the body to stop the virus from spreading however, there is no cure. HIV has a high impact on the normal functioning of the body. As the virus attacks the T-helper cells, this stops the body from being able to make anti-bodies to protect from infection. If HIV goes untreated the cell count can drop dangerously low, at this point the virus can progress into the life-threatening condition AIDS. (Rachel Nall, 2018)

According to the National Aids Trust (2018) ‘ Between 70 and 90% of people experience ‘ acute’ symptoms one to six weeks after they have been infected with HIV. These symptoms last for a few days to weeks and include; severe flu-like symptoms, sore throat, fever and rash on the chest. ‘People who have contracted HIV will also feel extreme fatigue and muscle pain as the virus starts to break down the immune system. Three examples of non-comminicable disease would be asthma, Alzheimer’s and type 1 diabetes.

Asthma is a chronic disease of the airways that can cause problems with a person’s breathing. Asthma causes the airways to inflame and obstructs the persons breathing, as oxygen struggles to be carried to the lungs (WebMD Nayana Ambardekar, 2018). When a person has an asthma attack, they may experience shortness of breath, coughing, wheezing and their chest start to tighten. As asthma is a non-comminicable disease this is not contagious however, this can be passed through genetics or can be triggered through an

allergy. Asthma can be treated but not cured using inhalers and in some cases tablets. (Media release, 2004)

Alzheimer's is a physical disease and a form of dementia that attacks the brain cells. The disease causes memory loss and as it progresses a person can lose the ability to carry out daily life tasks, as well as causing a person's personality to change. As Alzheimer's causes memory loss, a person can forget that they have eaten, this can then lead into the person losing weight without intending to. A person may seem to get confused and disorientated easily whilst talking to someone or when undertaking daily tasks. As explained by Alzheimer's Society (2018) 'During the course of the disease, proteins build up in the brain to form structures called 'plaques' and 'tangles'. 'This leads to the loss of connections between nerve cells, and eventually to the death of nerve cells and loss of brain tissue.' Alzheimer's can be caused by various risk factors, this can be through genetics, lifestyle choices such as smoking and not exercising or environmental factors. There is no cure for Alzheimer's however, there is treatment available that can reduce symptoms. (Mayo Clinic, 2017)

Type 1 diabetes is a disease which attacks the pancreas and stops it from producing insulin. Insulin plays a big part in the functioning of a person's body and day to day life. It is a hormone that regulates blood sugars throughout the day and night, mainly when we eat, drink and exercise. Insulin also allows glucose to enter blood cells, which then produces energy (Mayo Clinic, 2017). Without insulin blood sugars can become dangerously high (hyperglycaemia). When the blood sugar levels are not regulated with

insulin, there is no hormone in the body to allow glucose into the body's cells. When a person is having a hypoglycaemic attack, they can feel hungry, feel dizzy and start to sweat. If a hypoglycaemic attack is not treated, this can cause the person to lose consciousness and can end up being fatal. Before diagnosed a person can experience a loss of energy therefore making them feel tired often. They may also lose weight without dieting or exercise and need to drink more, which then leads to the person needing to urinate more than normal. Also, as the person's body is lacking in energy, cuts and bruises may take longer to heal (National Health Service 2018).

According to Mayo Clinic (2016) doctors are not completely sure what causes type 1 diabetes. However, diabetes is usually passed through genetics. There are certain conditions and diseases that are connected to type 1 diabetes, like underactive thyroid and vitiligo. If family members have diabetes or any other linked diseases, there will be a higher chance that a person may be diagnosed with diabetes at some point in their life. Type 1 diabetes cannot be cured however, can be treated by injecting insulin or using an insulin pump to manage blood sugar levels. Type 1 diabetes has a major impact on the functioning of a person's body.

Once diagnosed and managed well people with type 1 diabetes can live a long, healthy life however, if not managed effectively diabetes can affect other parts of the body other than just the pancreas. For example, diabetes can damage nerve endings causing some people to experience 'pins and needles' or even lose feeling in parts of their body. If a person's blood sugars are too high, the body loses fluids quicker which can lead to dry and cracked

skin. High blood sugars can also lead onto strain on the heart, as blood pressure rises which can eventually lead to heart disease. People with diabetes are at a higher risk of kidney damage, as the disease can stop the kidneys from filtering out waste products therefore, leaving toxins in the blood (Ann Pietrangelo and Kristeen Cherney, 2017).

Overall, this essay has explored the main features of commincable and non-commincable diseases, how they can be contracted and how and if they can be treated. The essay has also gone into further detail on how two of these diseases affect what we perceive as the 'normal' functioning of the body. It has been found within this essay that many diseases have similar characteristics, examples of these being, change in temperature and change in blood pressure. This also shows that many characteristics remain the same whether the disease is commincable or non-commincable.