

# Medical microbiology and immunology

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Topic: Medical Microbiology and Immunology Affiliation: Infection diseases are myriad, diverse, and dynamic from time to time. These results from their respective causal agents that vary across the numerous infection diseases that exist or those that emerge over time. In this respect, Zoonoses are common and reported cases keep emerging across both existing and emerging infections. In the U. K, campylobacteriosis has emerged and become a significant health issue that the relevant agencies must address.

### Topic 1

Campylobacteriosis is caused by *Campylobacter jejuni* bacteria (DuPont, 2011, p. 291). The figures below show these bacteria:

The bacteria are found in contaminated animal food products or in infected persons. The *Campylobacter jejuni* bacteria are primarily the causal agent behind *Campylobacter* infections. In the U. K, the primary responsible animal for *Campylobacteriosis* is poultry.

### Topic 2

Immune defences against the infection can be both innate and adaptive. In most cases, *Campylobacter* infections are not medically treated. The infection is known to disappear on its own without necessarily having to undergo clinical procedures. However, severe cases are medically dealt with, where antibiotics are used to treat most cases. On the other hand, adaptive immune responses also apply. Frequent occurrences of the infection can cause the body to adapt to the infection and respond to its presence in the body in its own way. In such instances, the body develops its own defence mechanism to tackle *Campylobacteriosis*.

### Topic 3

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Quite a substantial number of animals can cause Campylobacteriosis. In the case of U. K, poultry ranks number one. In this regard, the primary concern revolves around poultry and poultry products in relation to bacteria entry into the body, infection occurrence, and transmission of the infection.

Intestinal tracts of poultry are the common grounds where *Campylobacter jejuni* bacteria are found (DuPont, 2011, p. 307). Entry of the bacteria into the body follows consumption of contaminated or infected products. Since the bacteria can also be found in untreated water, drinking untreated water could also cause the infection. The life cycle of the bacteria primarily depends in the host environment, and is it passed through feces. The transmission of the infection occurs between animals and humans, specifically poultry in the U. K.

#### Topic 4

There are a number of clinical features associated with *Campylobacter* infections. These are: fever, nausea, vomiting, cramping abdominal pain, and watery and sometimes bloody diarrhoea (DuPont, 2011, p. 318). The infection manifests itself in a minimum of two days and a maximum of ten days. The infection can last for a period of up to seven days, with or without treatment. This is because some cases do not call for medical attention, although severe infections are treated.

#### Topic 5

The diagnosis of *Campylobacter* infections follows food poisoning procedures. Tests conducted for *Campylobacter* infections diagnosis include complete blood count differential, testing stool sample for white blood cells, and carrying out stool culture for *Campylobacter jejuni* (DuPont, 2011, p. 329). Strategies employed to deal with the infections include advocating for <https://assignbuster.com/medical-microbiology-and-immunology/>

hygiene at all levels of food consumption, drinking treated water, handling animals in the proposed and require manner, food safety agencies working with farmers and other stakeholders to deduce measures that will alleviate infection prevalence, and preventing food poisoning in general.

#### Reference List

DuPont, H. L. (2011). Approach to the patient with suspected enteric infection, In: Goldman L, Schafer AI, eds. Cecil Medicine, 24th ed., Philadelphia, Pa: Saunders Elsevier.