

Malaria: the deadly disease

Malaria is an infectious disease that is fatal if the person who was infected didn't receive treatment for about 24 hours. This infectious disease is especially hard to control as it spreads via vector, meaning it is transmitted through mosquito bites. As stated by the National Health Society (NHS), symptoms of this fatal disease include; 'a high temperature of 38c or above, feeling hot and shivery, headaches, vomiting, muscle pains and diarrhoea'. Plasmodium is a type of parasite which causes Malaria, there are only 5 main Plasmodia that cause malaria but there are many, many more. Parasites are passed on from one person to another via Anopheles mosquitoes which insert the parasite into the body's bloodstream when bitten.

Stopping the spread of Malaria should be a priority as the disease has already taken a lot of lives. Every time a new person gets infected with another plasmodium, the higher the chances of mosquitoes spreading this plasmodium to other people. Therefore, if there are no new infections, mosquitoes won't be able to spread the Plasmodium to people. The disease is common in LIC (low-income countries) especially Africa because people in this region are vulnerable as they have a shortage in water, food and sanitation. They also do not have enough money for treatment of Malaria and some people may not even be educated, know how to read and write and speak a language. As said by the NHS, Malaria is also found in; Asia, Haiti, Dominican Republic, Central and South America and some pacific islands.

Malaria should be dealt with as soon as possible because antimalarials and insecticides still work but mosquitoes are learning to survive against them, [1]The WHO Global report on insecticide resistance in malaria vectors: 2010-2016 showed that resistance to the 4 commonly used insecticide classes - pyrethroids, organochlorines, carbamates and organophosphates - is widespread in all major malaria vectors across the WHO regions of Africa, the Americas, South-East Asia, the Eastern Mediterranean and the Western Pacific. The only thing that carries Malaria is airborne and small so it is really hard to stop from spreading Malaria, It isn't the same thing as self-isolating for two weeks as Malaria is brought right to you and inserted into your bloodstream whilst you are sleeping. Screening may also be difficult as diagnostic tests need to detect low levels of infection. As said on the CSIS website, 'With the

malaria parasite, however, the body can't develop this same immunity because the malaria parasite continually changes. The parasite's ability to evolve also enables it, over time, to become resistant to treatment medicines.' This means that in a matter of time Antimalarials won't have an effect anymore and a Malaria vaccine is hard to create as this non-stop changing parasite is hard to get a hold of.

Malaria can be stopped by the use of antimalarial drugs, insecticides, mosquito nets that are placed on doors and windows, insect repellent, bed nets, and general knowledge of how malaria spreads. Antimalarials are tablets that reduce your risk of getting Malaria by 90%, these tablets are prescribed to you specifically as they are based on information about you including, where you're going, any relevant family medical history, your medical history, including any allergies to medication, any medication you're currently taking, any problems you've had with antimalarial medicines in the past, your age and whether you're pregnant or not. [3] Among the commonly used antimalarial drugs are 'chloroquine (Aralen), mefloquine (Lariam), primaquine, pyrimethamine (Daraprim), and quinine'. Other drugs are constantly in development.

Insecticides are also used as they kill out mosquitoes that try to sneak into your homes and infect you with this infectious disease. Insecticides make it easy to control the mosquitoes population without any new infections. The insecticide is sprayed on people's bed nets and all over the walls. Touching on the topic of bed nets, bed nets are '[2]Bed nets form a protective barrier around people sleeping under them. However, bed nets treated with an insecticide are much more protective than untreated nets. The insecticides that are used for treating bed nets kill mosquitoes, as well as other insects'. Bed nets are cheap which means that they can be afforded in LIC countries and continents like Africa. They are also really effective, especially when it is sprayed down with something like an insecticide.

Education is an important topic on how to counter Malaria. If a child or adult isn't educated about Malaria then they are vulnerable as they do not know where this disease spreads, how to counter it, what to do if you are affected and some might not even know it exists. Governments should ensure that people in areas that are highly affected by Malaria get the right education about the disease and prevention,

charities also help this cause by donating and supporting governments who want to help stop the spread of such a fatal disease.

There are some companies, like Sanaria, that are developing a vaccine that will be used to fight against the fatal disease. Sanaria states that their vaccine 'has proven to be highly protective against *Plasmodium falciparum* infections in the human body' but some people think that the Malarial vaccines are not safe as the disease is constantly changing and others think that vaccines are terrible for you in general. For example, when some of the first vaccines were given to the public people accused vaccines of creating autism, autism is a 'developmental disorder of variable severity that is characterized by difficulty in social interaction and communication and by restricted or repetitive patterns of thought and behaviour'. This was later disproved, but people keep endangering themselves by not vaccinating their children. I am sure that we can stop the spread of this deadly disease by ensuring that we teach people about not only malaria itself but also how we can prevent them from catching and spreading it.

[1] Stated by the WHO (World Health Organization)

[2] Stated on the CDC website

[3] Stated on a 'encyclopedia' website

<https://www.encyclopedia.com/medicine/encyclopedias-almanacs-transcripts-and-maps/antimalarial-drugs>