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Realising The Importance Of Your Immune System — Dr Ahmad Mahfuz Gazali

By CodeBlue | 22 April 2021

Immune systems are crucial in combating infectious diseases, but they have also been demonstrated to be involved in fighting cancer, autoimmune diseases, allergy, cardiovascular diseases and other ailments.



The first World Immunology Day was held on April 29, 2005 by the European Federation of Immunological Societies.

Since then, World Immunology Day has been officially adopted by the International Union of Immunological Societies (IUIS).

Since 2007, World Immunology Day has been commemorated by immunological societies around the world.

Immunology is not a new field in medicine. Thucydides, a Greek historian and general from 5 BC, noted the importance of immunity during the plague of Athens in 430 BC, as documented in his book, *The History of the Peloponnesian War*.

Other civilisations such as Chinese dynasties and the Ottoman Empire also acknowledged the importance of immunity, as demonstrated by the practice of variolation, or exposing healthy people to material from lesions caused by diseases.

Immunology continues to play an essential role in modern times. One of the most significant findings in immunology research was the discovery of vaccines by English physician Edward Jenner in 1768. He observed that patients who recovered and survived from cowpox infections developed immunity against subsequent infections.

Based on his observations, he inoculated the cowpox virus to induce immunity against smallpox infections. The cowpox virus belongs to the same family as the smallpox virus, but it causes milder disease compared to smallpox infections.

Soon after, Jenner started cowpox vaccination in England and his efforts in vaccination has since been recognised by the World Health Organization (WHO).

Smallpox infection was successfully eradicated in 1980, partly because of the success of worldwide vaccination. This is one example of how an infectious disease can be successfully controlled and eliminated by worldwide vaccination efforts.

Everyone was caught by surprise at the emergence of Covid-19 in 2020. Covid-19 is caused by a Severe Respiratory Acute Coronavirus 2 (SARS-CoV-2) infection first detected in Wuhan, China, in December 2019.

Since then, Covid-19 has spread worldwide, and it has been declared a pandemic by the WHO on March 30, 2020.

More than 219 countries and territories have recorded positive Covid-19 cases, and 138 million people worldwide have been infected, with close to three million deaths. This pandemic has negatively impacted everything from the economy to education to mental health.

Realising the impact of the pandemic, scientists around the world have been collaborating to produce a vaccine that aims to induce herd immunity, reduce viral transmission, and protect high-risk groups from being infected.

Due to the severity of Covid-19, clinicians, scientists, pharmaceutical companies and various governments have expedited their efforts to come up with a vaccine quickly.

Until April 20, 2021, four vaccines have passed clinical trials and have been approved by regulatory agencies in various countries.

Israel which has vaccinated almost 60 per cent of its population, recorded a 98 per cent reduction in new infections, a 93 per cent reduction of severe Covid-19 disease and an 87 per cent reduction in Covid-19-related deaths since January 2021.

The Israeli government could then reopen its economy after a strict two-month lockdown was implemented.

Similarly, we hope that the Malaysian government will lift movement restrictions after achieving at least an 80 per cent vaccination rate.

In addition to facing the Covid-19 pandemic, our country is also facing a dengue fever endemic. The Ministry of Health has reported more than 80,000 positive dengue cases in 2019 alone.

Dengue fever is caused by the dengue virus, transmitted by mosquitoes, and is endemic in Southeast Asian countries. No approved medication or drug has been used for the prevention or treatment of dengue fever.

Our immune systems play a vital role in combating dengue infection and producing antibodies against the virus. Antibodies that fight the dengue virus are now being used as diagnostic tools to confirm dengue infections.

Furthermore, immune cells such as T and B cells play an essential role in this disease, emphasising the importance of our immune systems in fighting this disease.

Immune systems are crucial in combating infectious diseases, but they have also been demonstrated to be involved in fighting cancer, autoimmune diseases, allergy, cardiovascular diseases and other ailments.

Realising the importance of our immune system, the IUIS has announced this year's World Immunology Day theme as Immunology in the time of Covid-19.

This theme aims to provide awareness about the importance of immunology research in combating infectious diseases, autoimmune diseases, cancer, cardiovascular diseases, etc.

We hope the public will realise the importance of understanding the immunology system.

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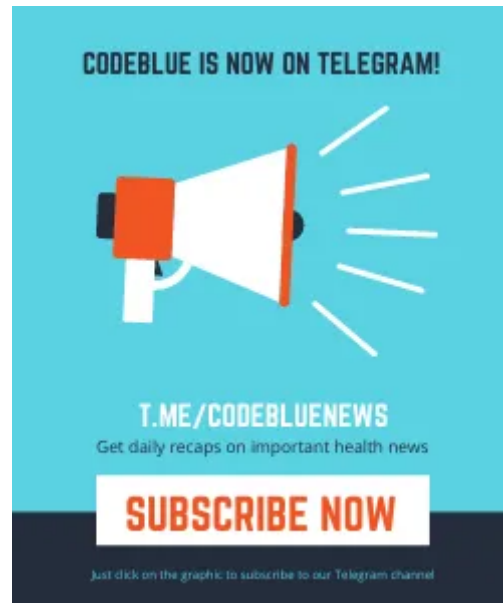
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