

Modes of Transmission of Corona Virus by Housefly (*Musca domestica*)

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DESCRIPTION

Musca domestica (Diptera: Muscidae) is the most common and widely spread fly species on the earth. This species is extremely adaptive to its environment, and it can be found in huge numbers in both human and animal populations in both rural and urban areas. The presence of risk characteristics in domestic flies, such as manners of behavior, high flying strength, rapid movement, and high olfactory and visual power, could indicate that *M. domestica* is a possible vector for spreading a variety of infections (bacterial, viral, and parasitic).

Transmission of corona virus

Houseflies can assemble on the surfaces of infected things and meals and later transfer a various infections through several biological regions like legs, wings, mouth parts, abdomen, and hair on the surface of the body. According to [1], typhoid, TB, polio, cholera, salmonellosis, dysentery, anthrax, diarrhoea, viral hepatitis, Rota virus, poliomyelitis, and other diseases have been related to houseflies.

Coronaviruses are enclosed viruses with a single-stranded positive-sense RNA genome that belong to the *Coronaviridae* family [2]. Coronaviruses (26–32 kbp) are the biggest RNA viruses that may infect mammals and birds. In the late 1920s, coronavirus was first discovered in hens suffering from acute respiratory distress in North America. The first human coronavirus was discovered in the United Kingdom and the United States in 1960. Later on, other coronaviruses were discovered and isolated in the same way. In late 2019, a new strain of coronavirus (COVID-19) was found in Wuhan, China, and it quickly spread over the world through *Musca domestica*, causing moderate symptoms such as a simple cold to severe respiratory symptoms. This disease can be spread via respiratory secretions, contact with infected surfaces (eyes, hands, mouth), and other unknown mechanisms. The coronavirus can survive for a long time on various surfaces (several hours to several days). The long-term stability of the coronavirus, as well as the behavioral and dietary properties of houseflies, allows the virus to be transmitted mechanically [3]. Because the COVID-19 sickness is rapidly spreading, there are many distresses regarding the virus's

undiscovered transmission channels, which is a major and persistent concern for the World Health Organization. As a result, extra attention and research should be continue on the disease's transmission and spread channels so that the appropriate steps can be taken to limit and control the disease based on a correct and precise understanding of the disease's transmission routes [4]. Some insects, such as flies and cockroaches, can be potential mechanical vectors of infections, particularly coronavirus, based on their behaviour and biology, as well as their contact with human beings. Scientists are studying the transmission of the coronavirus by many insect species. However, the virus's transmission by bloodsucking insects has not been documented or proven [5].

CONCLUSION

Since there is no definitive cure for the disease, the only way to prevent it is to obtain a vaccine that is effective. As a result, methods of control and removal of vectors, such as mechanical and physical methods (placing nets on doors and windows, ventilators), improving the environment (correct garbage collection, preventing the accumulation of human and animal waste), chemical methods (spraying surfaces and space), and others, are effective in controlling coronavirus disease.

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