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FOOD SAFETY RECOMMENDATIONS DURING THE ERA OF COVID-19 PANDEMIC

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Abstract

The coronavirus disease COVID-19 is a respiratory illness declared on March 11, 2020 as a pandemic by the World Health Organization due to its rapid spread among countries since it is very contagious. Data on COVID-19 has shown that there is no evidence that the virus is transmitted by food. To reduce the risk of COVID-19 infection, it is imperative to follow a list of recommendations. It is essential within food establishments to emphasize on food safety systems implementations, including pre-requisites programmes such as good hygienic practices, good manufacturing practices, pest control, cleaning and sanitation as well as implementing Hazard analysis and critical control points to keep the food supply safe. Finally, the COVID-19 pandemic has created barriers to international trade, consequently posing new challenges to the food sector, which may result in a need to review the food systems.

Keywords

COVID-19, Food safety, virus, hygienic practices

According to the WHO scientific brief report, COVID-19 is a respiratory illness that can be transmitted through person-to-person contact and through droplets of different sizes generated when an infected person coughs or sneezes (WHO, 2020a; WHO, 2020b). There is no evidence that this virus, including the new variants (Brazilian and South African), can be transmitted via food or food packaging, because it requires a host to grow and multiply (WHO, 2020a). This is supported by the European Food Safety Authority, the Centers for Disease Control and Prevention, the U.S. Food and Drug Administration that declared as well that there is currently no evidence that COVID-19 can be transmitted through food or food packaging (European Food Safety Authority (EFSA), 2020, CDC (Centers for Disease Control and Prevention), 2020, FDA, 2021). The scientific Roundtable of International Union of Food Science and Technology (IUFoST) and the Chinese Institute of Food Science and Technology (CIFST) on March 21, 2020, reported as well that the virus is not transmitted by food and no evidence was reported that COVID-19 has any effect on food security and safety (Shahidi, 2020).

Based on current epidemiological support, this virus is not foodborne, however, the virus can survive on surfaces and objects. Recent studies evaluating the survival of the COVID-19 virus on different surfaces reported that the virus can remain viable. This viability depends on the material of the surface. It can survive up to four hours on copper, up to 72 hours on plastic and stainless steel, and up to 24 hours on cardboard (Van Doremalen et al., 2020). Therefore, it is imperative to emphasize good hygienic practices to keep our food supply safe. Proper hygiene training and food safety practices should be delivered and practiced by everyone working in the food supply chain, including intermediaries from the food industry to the consumer (Shahidi, 2020). Like all the workers, food workers are considered at a risk of infection. Therefore, adequate precautions should be taken in retail food premises to reduce the risk of transmission of the disease (WHO, 2020a). Food workers should wear masks and gloves to reduce the spread of viruses within the food industry. Disposable masks or surgical masks are loose-fitting devices designed to be worn by food workers. They should be trained about correct techniques for wearing, removal, and disposal of face masks (Cheng, Lam, & Leung, 2020). With respect to the vaccination, food workers are not considered as a priority, compared to healthcare workers but have experienced a high mortality rate (Mills & Salisbury, 2021). The accompanying datasets analysis on deaths involving COVID-19 among men, showed that food, drink and tobacco process operatives noted 64.3 deaths per 100,000 men (Windsor- Shellard & Kaur, 2020). Therefore, their priority should be considered with respect to the vaccination against COVID-19.

There are no reports or any evidence of faecal-oral transmission of COVID-19 (WHO, 2020b). It is still essential, however for food handlers to wash hands after using the toilet (WHO, 2020a). Promoting effective and frequent handwashing and sanitation at all stages of food processing is crucial to avoid contamination. Proper handwashing consists of washing for 20 seconds with soap and water before and after preparing food as well as avoiding contact with someone who is presenting symptoms of coronavirus infection (WHO, 2020a). Besides hospitalized cases presenting symptoms, many individuals are likely asymptomatic but potentially carry the virus. However, managing the asymptomatic subjects, who can carry and likely transmit the virus, is still considered as a major healthcare challenge (Rahimi & Abadi, 2020).

Additionally, all surfaces that the food workers come into contact with should be subjected to a proper cleaning and sanitation protocols. Different sanitizers were shown to be effective. Alcohol-based sanitizers (70-80%) have been shown to reduce significantly the infectivity of enveloped viruses like COVID-19 virus (Peters, 2020). Chlorine and quaternary ammonium compounds are disinfectants presenting virucidal properties (Liang, 2020). Physical distancing is very important to be respected in food businesses to help slow the spread of COVID-19, with a minimum of 1 meter (3 feet) between fellow workers. (WHO, 2020a). According to WHO recommendation, food workers who are feeling unwell should stay at home (WHO, 2020a). WHO recommends that contacts be quarantined for 14 days from the last point of exposure to the confirmed case (WHO, 2020a). Personnel presenting symptoms or contracting the virus must report it immediately to their supervisors and remain self-isolated at home (Shahidi, 2020). This reflects the need to recruit and train new staff to avoid labor shortage in food establishments. The industry managerial level should revise the sick leave policy, as well as staggering the shifts to minimize contact among workers and spreading awareness among them (OSHA, 2020).

According to the Center for Disease Control and Prevention, the virus can be transmitted indirectly, by touching a surface contaminated with the virus, then touching the mouth, nose or eyes. ("www.cdc.gov" 2020). Furthermore, the CDC emphasized the importance of cooking since the viruses cannot withstand heat treatments. All cooked food should be safe to eat. It was also recommended to avoid raw or undercooked animal products (Shahidi, 2020).

Finally, it is to be noted that the COVID-19 pandemic has posed new challenges to the food sector, which may result in a need to review the food systems and protocols. The pandemic has created barriers to international trade, which oriented the industries to rely more on locally cultivated raw materials and the consumers to use more locally produced products. An emphasis on implementing Food Safety Management Systems based on HACCP principle should be done to manage the spread of COVID-19 among food workers in food industries. Prerequisites programs such as Good Manufacturing Practices (GMP), Good Hygienic practices (GHP), cleaning, sanitation, pest control and active packaging are also needed to reduce the risk of COVID-19 infection (Olimitat, Shahbaz, Fatima, Munir, & Holley, 2020).

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