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HOW TO PREVENT FOODBORNE DISEASE

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Bacteria are by no means the only pathogenic foodborne microorganisms. Mycotoxin producing moulds, human enteric viruses, protozoan parasites and marine biotoxins also are of importance. Food safety nowadays starts with pre-harvest and harvest conditions, which is almost impossible in certain countries. In the post-harvest environment food safety becomes less commodity oriented, as the food moves through processing into the distribution and retail sectors. The microbial controls applied in the post-harvest environment are often designed to be (partly) lethal (pasteurization, sterilization) or may be intended to limit the growth of microorganisms. The latter often used with a combination of growth limiting factors (hurdle technology). Globalization of the world's food supply has contributed to changing patterns of food consumption and foodborne illness. Developing economies represent major sources of certain imports. For many of these countries, infectious diseases (diarrhea) still represent a significant burden of illness. From 1990, a number of methods have been described to detect foodborne pathogens, to decrease the microbial contamination of various food products. Numerous studies have been published on the effect of preservatives (i.e. bacteriocins) and new techniques (i.e. ultra high pressure) on foodborne pathogens and spoilage organisms, Moreover, an army of risk assessors tries to formulate Food Safety Objectives in order to reduce the burden of foodborne diseases. Do we have to continue in this way to improve food safety, or do we have to shift the helm?

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