

Avoiding antibiotic resistance through food safety

FOOD safety is a scientific discipline describing handling, preparation and storage of food in ways that prevent food-borne illnesses or food poisoning.

Most food-borne illnesses are caused by harmful bacteria and viruses. They can also be caused by parasites and chemicals.

Food is the most common medium for the growth of bacteria and parasites. Thus, consumption of contaminated food can transmit disease from one person to another.

More than 250 different food-borne diseases have been identified. Food can be contaminated at any time, either during growth, harvesting or slaughter, processing, storage and shipping. Raw foods such as meats, unpasteurised milk and raw vegetables are most associated with food-borne diseases because they have been contaminated with pesticides and chemical fertilisers to maintain their freshness. Some of the farmers and retailers would inject the food with antibiotics to prevent and control common diseases, and to enhance animal growth.

Apart from that, antibiotics are used to improve the quality of the product, with a lower percentage of fat and higher protein content. However, the over-usage of antibiotics in agriculture has led to the emerging public health crisis of antibiotic resistance.

Antibiotic resistance occurs when an antibiotic has lost its ability to effectively control or kill bacterial growth. In other words, the bacteria are becoming more



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“resistant” to the antibiotic designed to cure or prevent infection. The resistant bacteria can have a greater chance of survival as they will find ways to survive in the human body and continue to multiply, causing more harm.

Antibiotic resistance poses a health risk to humans in two ways. Direct effects are through the consumption of food infected with the antibiotic-resistant bacteria.

Indirect effects are those that result from contact with resistant organisms that have been spread to various components of the ecosystem, such as water and soil.

Bacteria can travel in any medium so people could transmit the antibiotic-resistant bacteria to others by coughing or contact with unwashed hands. Antibiotic-resistant bacteria can spread to family members, schoolmates and co-workers.

Overall, it may even threaten the community.

Antibiotic resistance has become one of the world's most pressing public health problems as it may cause illnesses that were once easily treatable with antibiotics to become dangerous, prolonging suffering for children and adults. Antibiotic-resistant bacteria are often more difficult to kill and need expensive treatment. In some cases, the infections can lead to serious disability or even death.

There are a few important ways to avoid antibiotic resistance.

- Identify restaurants that serve poultry injected with antibiotic.
- Avoid consuming fast food regularly as most of the restaurants serve poultry, fish and vegetables routinely injected with antibiotics.
- Inform the authorities of any retailer who inject drugs or antibiotics into vegetables, fruits and meat to make them last longer.

Antibiotic resistance is present in all parts of the world, thus making it a serious threat to global public health which requires action across all government sectors and society.

Since food-borne diseases and antibiotic resistance are mostly transmitted via food, keeping food clean and safe should be a priority for all food manufacturers, the government and consumers.

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