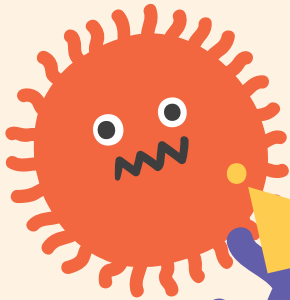
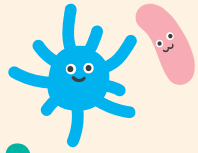


Know More about



‘Superbugs’

Hidden in Food

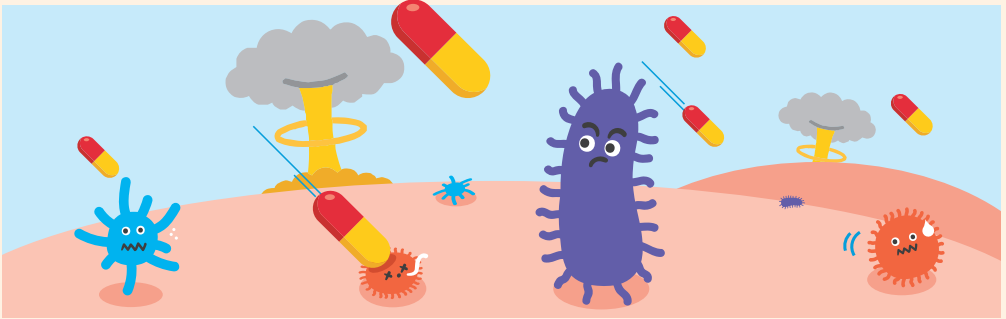


A Series on Antimicrobial Resistance

Bacteria are everywhere – in soil, water, plants, animals, people and food. There are 3 types of bacteria from the perspective of food safety:

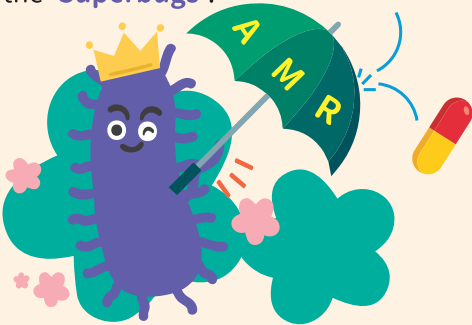


Disease-causing bacteria cause food poisoning (foodborne diseases) that may need to be treated with antibiotics.



Antibiotics kill most bacteria, but some can survive and gain **antimicrobial resistance (AMR)**. They are known as the **'Superbugs'**.

'Superbugs' can share resistance with all other bacteria.



'Superbugs' multiply and spread everywhere.



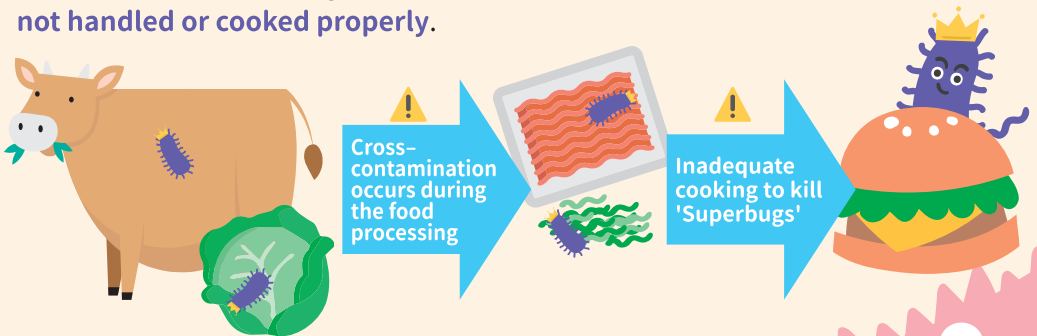
'Superbugs' can live in **food animals**, such as cattle, pig, poultry and fish.



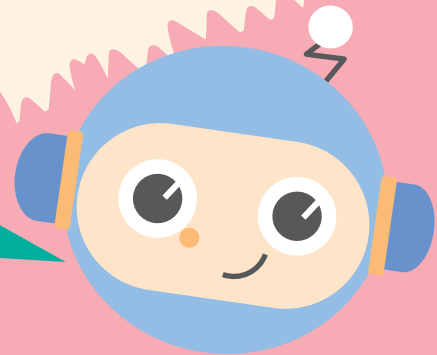
'Superbugs' can spread in the environment, such as through human faeces or animal manure, and contaminate **food plants**, including fruits and vegetables.








They can spread by eating contaminated food if the food is **not handled or cooked properly**.



The overuse and misuse of antibiotics in humans and animals leads to emergence of 'Superbugs', which can no longer be treated with antibiotics. **People will once again die from common infections.**



From food safety aspect, following “the five keys” can reduce the risk of both “superbugs” and foodborne illnesses.

Five Keys	Advice(s)	Why important?
<b>Choose</b> 	<ul style="list-style-type: none"> <li>● Avoid eating raw or undercooked food, especially for susceptible populations</li> </ul>	<ul style="list-style-type: none"> <li>● Without heat treatment, raw or undercooked food can contain “superbugs”</li> </ul>
<b>Cook</b> 	<ul style="list-style-type: none"> <li>● Cook food thoroughly before serving</li> </ul>	<ul style="list-style-type: none"> <li>● Cooking is effective to kill “superbugs” in food</li> </ul>
<b>Clean</b> 	<ul style="list-style-type: none"> <li>● Wash fruits and vegetables before eating</li> <li>● Clean hands and food preparation areas before handling foods</li> </ul>	<ul style="list-style-type: none"> <li>● Washing can partially remove “superbugs” from food’s surface</li> <li>● Prevent cross-contamination of cooked or ready-to-eat foods with “superbugs”</li> </ul>
<b>Separate</b> 	<ul style="list-style-type: none"> <li>● Store cooked or ready-to-eat foods and raw foods separately</li> <li>● Handle cooked or ready-to-eat foods and raw foods with separate utensils</li> </ul>	<ul style="list-style-type: none"> <li>● Prevent cross-contamination of cooked or ready-to-eat foods with “superbugs” from raw food</li> </ul>
<b>Safe Temperature</b> 	<ul style="list-style-type: none"> <li>● Keep cold food cold at 4°C or below and hot food hot over 60°C if not consumed at once</li> </ul>	<ul style="list-style-type: none"> <li>● Safe temperatures can avoid bacterial growth in food</li> </ul>

## What kind of food is riskier?

- ★ Foods of animal origin represent the major route of human exposure to foodborne pathogens with AMR.
- ★ **Raw or undercooked foods** are more likely to carry bacteria, including AMR bacteria, derived from the primary production than thoroughly cooked foods.
- ★ **Susceptible individuals**, including pregnant women, infants and young children, the elderly, and people with weakened immunity, are prone to contract foodborne pathogens, including ‘Superbugs’, by eating raw or undercooked foods, which **they should best avoid**.



Video on high-risk foods