

# FOOD SAFETY 102

Brought to you by:



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# Foodborne Diseases



WHO ESTIMATES OF  
THE GLOBAL BURDEN  
OF FOODBORNE DISEASES

## The burden of foodborne diseases is substantial

Every year foodborne diseases cause:

almost  
**in 10**  
people to fall ill

**33 million**  
healthy life years lost

Foodborne diseases can be deadly, especially in children <5

**420 000**  
deaths

Children account for  
**1/3**  
of deaths from  
foodborne diseases

**FOODBORNE DISEASES ARE PREVENTABLE.  
EVERYONE HAS A ROLE TO PLAY.**

For more information: [www.who.int/foodsafety](http://www.who.int/foodsafety)

#SafeFood

Source: WHO Estimates of the Global Burden of Foodborne Diseases, 2015.



World Health  
Organization



WHO ESTIMATES OF  
THE GLOBAL BURDEN  
OF FOODBORNE DISEASES

## Foodborne diseases are a major global public health concern

Foodborne diseases are caused by types of:



Bacteria



Viruses



Parasites



Toxins



Chemicals

Some of these are a public health concern across all regions  
Others are much more common in middle- and low-income countries



But in a **globalized world** they can  
**spread quickly** along the food chain  
and **across borders**

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World Health  
Organization

(WHO, 2019)

# Where do foodborne microorganisms come from?

Food handlers



Fecal material



Utensils



Pests



Soil and water



Plants



Air and dust



# Did you know food handlers are one of the main sources of contamination?

## Food handlers



'Food handlers are responsible for around 97% of foodborne cases'  
(Egan et al., 2007)

- Do they have good personal hygiene?
- Do they wash their hands before handling food?
- Do they follow proper food handling practices?
- Do they know the tips to produce safe food?
- Are they vaccinated against typhoid?
- Have they done a medical check-up?

# The Food Hygiene Regulation 2009 requires food handlers to attend training and be vaccinated

## 30. Food handler training

All food handlers shall undergo a **food handlers training** in, and obtain a Certificate of Food Handlers Training from, an institution specified by the Director.

Any food handler who works in any food premise who fails to undergo a training or obtain a certificate referred to in subregulation (1) or fails to attend any additional training referred to in subregulation (2) commits an offence and shall, on conviction, be liable to a **fine not exceeding ten thousand ringgit** or to **imprisonment for a term not exceeding two years**.

## 31. Medical examination and health condition of food handler

A food handler shall be medically examined and **vaccinated** by a registered medical practitioner.

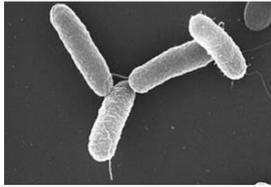
Any food handler who fails to comply with subregulation (1) or (2) commits an offence and shall, on conviction, be liable to a **fine not exceeding ten thousand ringgit** or to **imprisonment for a term not exceeding two years**.



# Why is vaccination against typhoid for food handlers needed?

## Kelantan records 151 typhoid cases as of Oct 31

Bernama | November 09, 2015 08:25 MYT



Typhoid fever is an acute illness associated with fever caused by the *Salmonella typhi* bacteria (pic). - <http://global.britannica.com>

**KOTA BHARU:** A total of 151 typhoid cases have been reported in Kelantan as of Oct 31 this year, an increase from only 35 cases reported in the same period last year.

Kelantan state health director Datuk Ahmad Razin Ahmad Mahir said the infection was believed to be caused by contaminated food and drink, besides the poor rate of treated water usage in the state.

He said the usage of treated water in the state was below 70 percent, but most of those who had the facility still chose to use water from wells, and investigations revealed that at least four wells were tested positive for the *Salmonella Typhi* bacteria.

- There is a surge in the incidence rate of typhoid cases in 2015 . Astro Awani (2015) reported that Kelantan had the highest number of cases with 151 typhoid case as of October 2015. Both Kuala Lumpur and Selangor made up a total of 55 cases.

# Why is vaccination against typhoid for food handlers needed?

- Typhoid is caused by *Salmonella enterica* serovar Typhi and *S. enterica* serovar Paratyphi A.
- *S. enterica* serovar Typhi is known to have a high transmission rate (Gopinath et al., 2012).
- The danger of contracting the bacteria is that some victims will develop typhoid fever and in some cases, victims can be asymptomatic carriers. Asymptomatic carriers may transmit the bacteria to another person and are usually unaware of the presence of the bacteria. This causes difficulty in taking preventive measures to stop the transmission of this disease (New et al., 2017).

In conclusion, food contamination can easily occur and the consequences can be unpleasant or deadly. In addition to the WHO's 5 simple steps, you need to ensure that your food handlers are certified and vaccinated today!



# References

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Thank You