



# Proper Handling of Eggs to Reduce Microbiological Risk

Trade Consultation Forum

14 Jun 2019

# Scrambled/ Stir-fried Eggs

- Reported in the review of food poisoning outbreaks last year
- Related to consumption of various dishes with stir-fried eggs
- **Unpasteurised eggs** were used and then **cooked for a very short time** before serving

## Clusters of FPOs Related to Inadequate Cooking

From late February to mid March 2018, 6 clusters of FPOs related to a restaurant affecting a total of 16 persons were reported to the CFS. Stool specimens of 2 victims in 2 clusters were tested positive for *Salmonella enteritidis*. Epidemiological investigation of these clusters by the DH suggested that they were related to the consumption of various dishes with stir-fried eggs on the same day.

Field investigation found that unpasteurised eggs were used and then cooked for a very short time before serving. Inadequate cooking might have contributed to the outbreak. Health advice was then conveyed to the food handlers and the food premises was advised to suspend sale of the food items immediately and carry out thorough cleansing and disinfection. After irregularities such as inadequate cooking of food were rectified, no further outbreaks were reported afterwards.

[https://www.cfs.gov.hk/english/multimedia/multimedia\\_pub/files/FS\\_F152\\_2019\\_03\\_20.pdf](https://www.cfs.gov.hk/english/multimedia/multimedia_pub/files/FS_F152_2019_03_20.pdf)

# Recent Food Poisoning Outbreak

- Reported in the beginning of June
- 13 clusters involving 32 persons have been identified. The affected persons comprise 13 males and 19 females **aged 3 to 54.**
- The patients developed abdominal pain, vomiting, fever and diarrhoea about four to 27 hours after having meals at the restaurant or consuming meals bought from there on 2<sup>nd</sup> June.



Suspected food:  
Scrambled egg

# Suspected Contributing Factors

- **Inadequate cooking** of unpasteurised eggs
- **Improper holding temperature** of scrambled eggs

1. Unpasteurised  
eggs → Egg solution



2. Stored in the  
refrigerator



3. Scrambled eggs (semi-  
cooked) were prepared 3  
times per day



4. Stored in bain mair:  
Ready-to-serve

Refrigerator recorded 9°C

Unpasteurised eggs but  
not fully cooked

Temperature of food:  
30.4°C

# Even only 1 out of 100 eggs containing *Salmonella* .....



- Pooling of eggs together could allow the growth of *Salmonella* in the mix if **left without refrigeration !**
- Keep perishable food at 4°C or below.

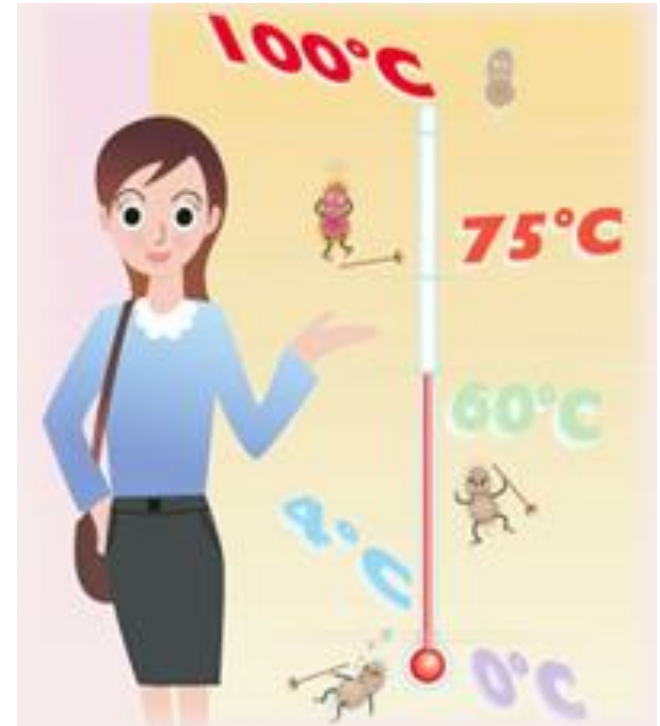
# Unpasteurised Eggs Were Used for Undercooked Food

- Eggs may be contaminated with *Salmonella* on the shell or inside the egg!
  - Thorough cooking can kill *Salmonella* effectively
- Should choose pasteurised eggs or egg products or dried egg powder to prepare dishes not requiring heat treatment.



# Storage Temperature – Temperature Danger Zone

- **Perishable food** stored at the "Temperature Danger Zone" between 4°C and 60°C allows various types of bacteria, including *Salmonella* to grow rapidly.
- *Salmonella* surviving the inadequate cooking process can grow to large number, under improper storage temperature.





# Protect Consumers Enhance Food Safety Control !





# Scrambled/ Stir-fried Eggs

## – Food Safety Tips (I)

- May be of higher risk for pooling eggs
  - Avoid using cracked eggs as they are more likely to be contaminated.
  - Keep pooled liquid egg in the fridge and only take out small amounts as needed. (4°C or below)
  - Use all pooled liquid egg on the day of pooling and don't add new eggs to top it up.
- Undercooked egg is of higher risk
  - Choose pasteurised eggs or egg products or dried egg powder to prepare dishes not requiring heat treatment.
- Keep perishable ready-to-eat food at 60°C or above for hot holding

# Scrambled/ Stir-fried Eggs – Food Safety Tips (II)

## ○ Food Hygiene:

- Observe the expiry date on the package/label of eggs and store eggs under refrigeration.
- Avoid cross-contamination between raw eggs and other food.
- The food contacting surface and utensils used for preparation of raw eggs should be cleaned thoroughly.

## 煮蛋還是養菌？



### 給業界的建議

5°C - 60°C 稱為「危險溫度範圍」，在這個溫度範圍細菌容易大量繁殖。易壞的食物如蛋類，應盡量即煮即食，不要長時間貯放在室溫下。



食物安全中心  
Centre for Food Safety



夏日預防  
食物中毒系列

# THANK YOU

# What About For Food Stored Under Temperature Danger Zone

- Storage or display perishable food under temperature danger zone (4°C to 60 °C)
- **TIME CONTROL**

0 to 2 hours

2 to 4 hours

>4 hours

(i) Use within the four-hour limit; or  
(ii) Keep refrigerated for final use later

Use within the four-hour limit

Discard



After proper cooling

# For Example: Delivery without Temperature Control



**Time control of perishable food kept under temperature danger zone (4°C to 60°C)**

► Example: Scrambled egg on rice

Timing should start from finishing preparation of ready-to-eat ingredients, but not right before delivery



cooking scrambled egg in advance



keeping without temperature control



order received



placing egg on rice



pending for pick up by delivery person



transportation

Food handling

Awaiting

Delivery



Start



Let's work together to minimise the duration

# Alternative choices for runny eggs?

- Certain eggs produced under a certified system can be eaten raw or lightly cooked, in which a range of interventions have been put in place across the food chain.
- Check carefully and obtain proof before use !



The screenshot shows the Food Standards Agency (FSA) website. The header includes the FSA logo and navigation links for Home, News & updates, Business & industry, Enforcement & regulation, Science & policy, and About us. A breadcrumb trail reads: Home > News and updates > News Centre > New advice on eating runny eggs. The main content area features a green header for 'News and updates' with a dropdown menu for 'News centre' containing links to Food alerts news, Allergy alerts news, Consultations, Campaigns, and Help shape our policies. The article title is 'New advice on eating runny eggs', dated 11 October 2017. The text states: 'The Food Standards Agency has today announced a change to its advice about eating eggs - infants, children, pregnant women and elderly people can now safely eat raw or lightly cooked eggs that are produced under the British Lion Code of Practice.' An image of a soft-boiled egg in a white egg cup is shown next to a spoon.