#### Norovirus

Norovirus is a viral infectious disease that causes acute gastroenteritis to various ages from infants to elderly.

The infection occurs in all the seasons. It mainly occurs in winter season and it begins from November. The peak comes during December to January. It often occurs in the emergency shelter facilities due to the bad environmental sanitation.

The virus grows in human intestinal tract; it shows resistance to high dryness and can survive even in a liquid for a long period. The virus is highly contagious and it causes infections and outbreaks with even a small amount of virus (10 to 100 unit).

Since the infection is caused by not only food, but also human-to-human transmission of the virus, therefore a surest sanitation management for protecting infections is important, especially in specific areas around customer gathering facilities such as eating places, food supply facilities, child care facilities, lodging facilities, elderly care facilities and hospitals.

### Points for Preventing Norovirus Food Poisoning

For persons preparing food

Health Management

- OIn everyday life, be careful about health state of family and food condition in order not to be infected.
- OWhen symptoms appear, do not handle food directly.
- OYou should make a system to inform a person in charge if someone is infected.

Before cooking

## Hand-wash

- OWashing your hands
  - OAfter using the toilet
- ©Before entering cooking facility
  - ©Before arranging dishes
- ©Before a next cooking step
- OTake care to wash your hands in places where the dirt is easy to be left
  - Ofingertips, between fingers, under nails, circumference of thumb, the wrist.

For cooking utensils

## Sterilization

Chlorine disinfection. Disinfect surely with a detergent and wipe cooking utensils with 200ppm chlorine concentration hypochlorous acid. \*ethanol for disinfection or soap are not enough to disinfect cooking utensils. To wash thoroughly with a detergent and sterilize with heat are also effective.

#### For preventing spread of Norovirus

#### Sterilization of eating utensils • environment • linens

- ©Items used by an infected person or with vomit should be washed and sterilized separately.
- ©Dipping food utensils into a chlorine antiseptic and sterilize it as soon as possible after eating and before returning them to kitchen.
- ©Sterilize curtains, clothes and door knobs with the chlorine antiseptic.
- ©When you wash cloths, wash them by softly rubbing them with detergent and give it a good rinse.
- Washing with 85°C hot water more than 1 minute or sterilization with chlorine antiseptic are effective.
  - Using high temperature drying machine improves antiseptic effect.

#### Treatment of Vomit

- ©Vomit and nappies of patients should be treated in a way shown below as soon as possible to prevent secondary infection. Norovirus suspends in the air in drying places and it can enter into your mouth and causes infection.
  - wearing disposable mask and gown or gloves.
- wipe it softly with paper towel and then wipe with water after disinfecting it with chlorine.
  - Vomit and used gloves should be sealed up in plastic bags and disposed of.
     At that time, put 1000ppm chlorine antiseptic in the bag.
  - Be careful to avoid inhaling splash of it and wash your hands throughly.

### How to make disinfection liquid

## For disinfection liquid, sodium hypochlorite is used.

Sodium hypochlorite is contained in the chlorine-based bleach sold for household use. You can use chlorine-based bleaching for either clothes or kitchen.

Since commercial liquid chlorine-based bleaching contains 5% of sodium hypochlorite, it needs to be diluted in dependence on the purpose. Incidentally, chlorine-based bleaching and oxygen-based bleaching are different. Household Chlorine-based bleach is sold as "Haiter" or "Kitchen Haiter". The bleaching named "Wide haiter" is oxygen-based bleaching, so do not use it.

## How to make disinfection liquid

#### (items to prepare)

- 5 0 0 mml pet bottle (use after washing it sufficiently)
- household chlorine-based bleach
- Funnel (Not made from metal)
- Absolutely wear rubber, vinyl gloves

When you handle vomit directly, use chlorine-based bleach with diluted with water 50 times. (The concentration of sodium hypochlorite is about 1 0 0 0 ppm)

- Pour a small amount of water to 5 0 0 c c pet bottle, then pour 10cc chlorine-based bleach with funnel to prevent it from spilling. The half of the cap of the chlorine-based bleaching is about 10cc. (This slightly differs between the companies, most of the capacity is about 22~25cc.)

  If it is the case of the cap of a pet bottle, about 2 cups of cap is needed(5cc/1cap).
- 2 Pour water until the bottle is full.

Close the cap tightly and shake it. That's all.

# About Norovirus infection

Infection route	Symptoms
$\langle \text{Infection from food} \rangle$	《Incubation Period》
· Infection can spread when infected	24 to 48 hours from infection to outbreak
people cook.	《Main symptoms》
• Bivalve containing the virus needed to	· nauseous, vomit, diarrhea, stomachache,
be heated sufficiently	mild fever for 1~2 days.
《Infection from person》	Sometimes you do not get symptom or just
• Second infection from feces and vomit.	slight cold. For infants and elderly people,
• Virus spreading from in house or some	pneumonia and suffocation can becaused by
facilities.	inhaling vomit.