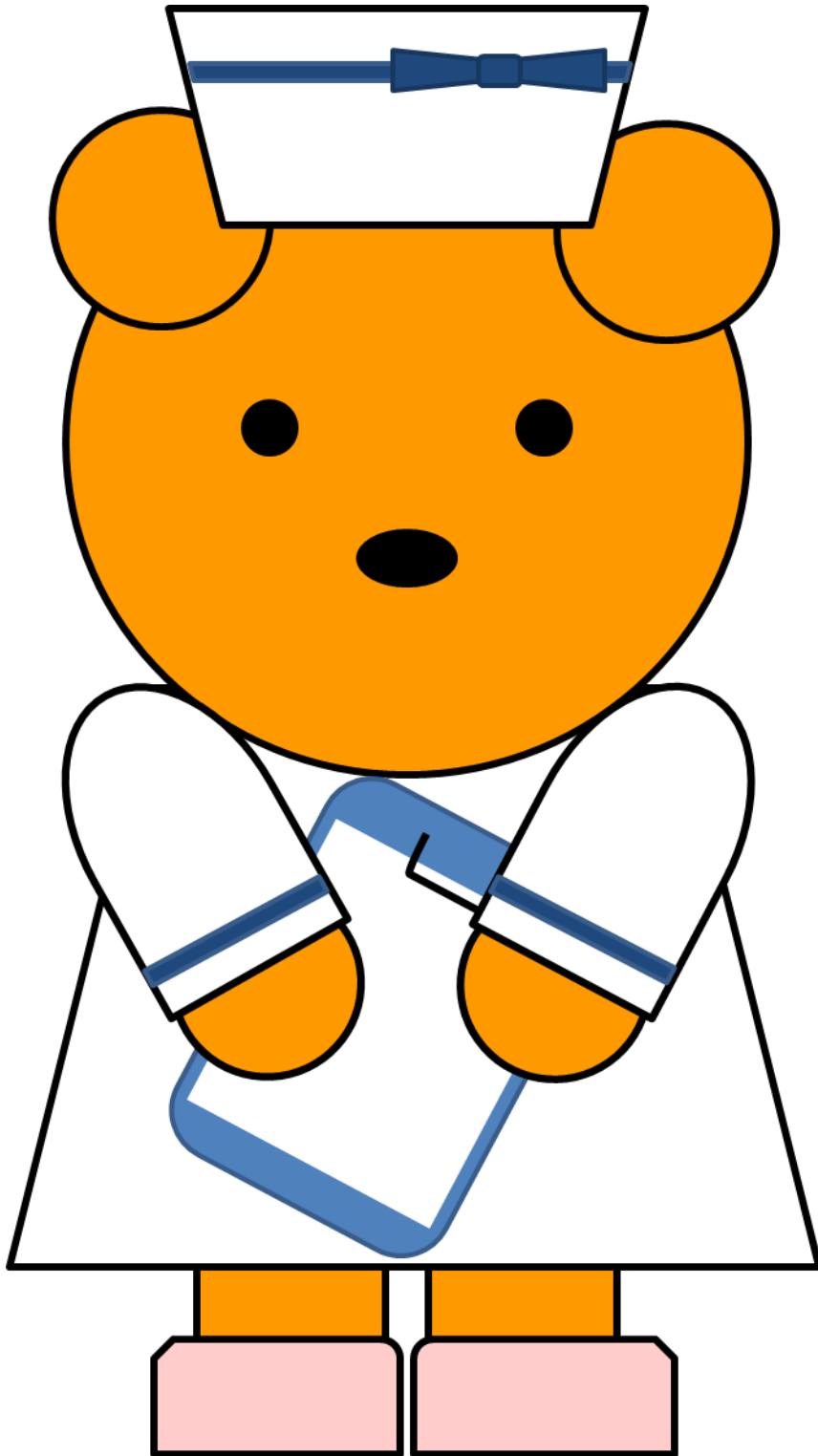


# Protection against Infectious Diseases



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# How Does Infection Occur?

## ◎The Process of Infection

**Source:** Items or people with germs or viruses (contaminated food, infected patients, etc.)



Countermeasure

- Early detection of infected patients
- Regular cleaning and disinfection, etc.



**Route:** The way in which the infection enters the body  
(Especially elderly persons, infants, etc. w/ low resistance)



Countermeasure

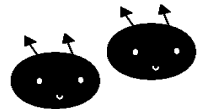
- Thorough hand-washing
- Proper disposal of discharged matter from patients

**Compatible person:** Person most likely to become infected  
(Especially elderly persons, infants, etc. w/ low resistance)



Countermeasure

- Thorough hand-washing and gargling
- Regular health monitoring



**Infection**

In order to prevent from formation and be able to intercept at anytime, please conduct proper countermeasures on a daily basis.

## ◎Contagious Illnesses

### ○Verotoxin-Producing Escherichia Coli (O157, etc.)

A person becomes infected from contaminated foods, or fingertips and items contaminated from coming in contact with something that is contaminated by the human waste of an infected person. Its infectability is very strong as even a tiny amount of the germs can cause as an onset.

### ○Noroviral Gastroenteritis (aka Stomach flu)

There is a large amount of this virus in the feces and vomit of an infected person. It is contracted through the mouth via contaminated fingertips and other things often having contact with the mouth. Even a very small amount of the virus will cause a full onset. Also, even after symptoms have disappeared, the virus is still discharged in feces for about 1 week and as a result can spread via secondary infection.

# Wash Your Hand and Gargle

## ★ Hand-washing and gargling are key to preventing infections.

Soap does not disinfect, however, washing your hands makes it easier for germs and viruses to fall off your fingertips, so make sure to wash with extra care. Also, in order to prevent germs from entering the body through the throat, make a habit of gargling after coming in from outside.

### ◎When Should I Do It?

#### 【Hand-washing and Gargling】

- When you come home
- Before you eat

#### 【Hand-Washing】

- After using the bathroom
- Before cooking
- After you've taken care of a vomiting or diarrheic person
- After changing a diaper

### ◎How to gargle properly

#### ① Swish Gargling

Take some water in the mouth, swish it around a little, and then spit out.



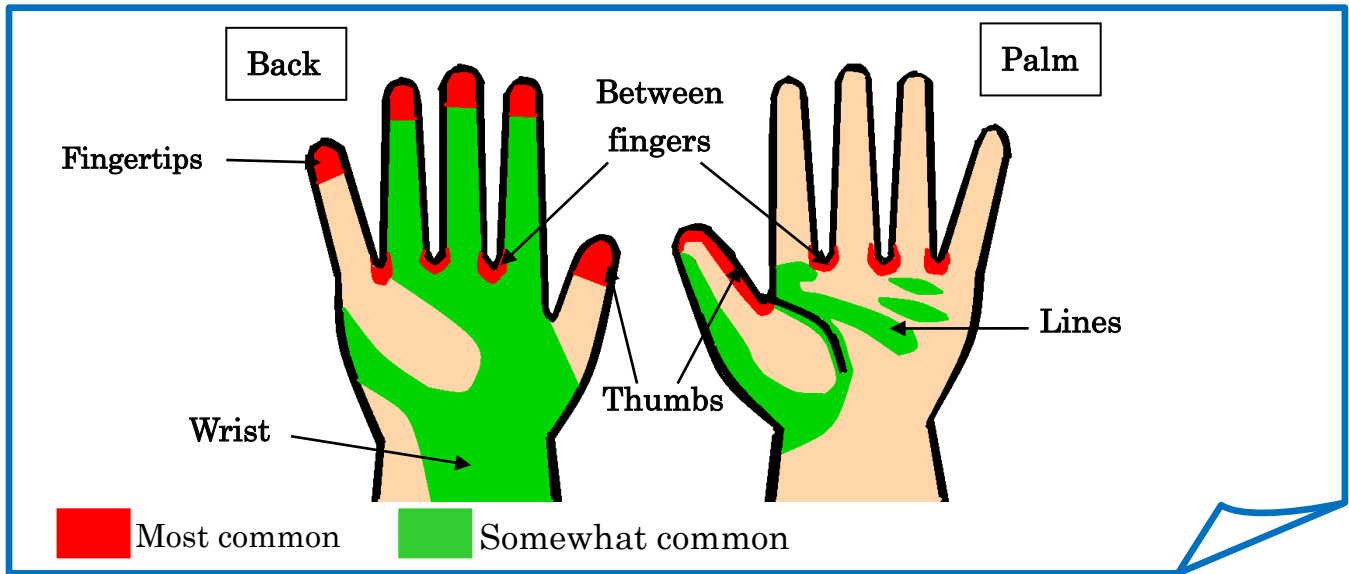
#### ② Open-mouth Gargling

Take some water in the mouth, tilt your head back so the water reaches the back of the throat, gargle for 15 seconds, and then spit out.



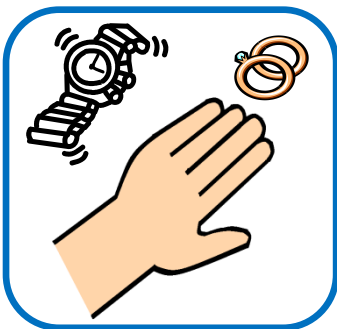
※You should swish gargle 1 time and open-mouth gargle 3 times.

## ©High-risk Areas Often Missed During Hand-Washing



Source: Japanese Society of Environmental Infection Supervision Hospital Infection Prevention Manual (2011)

## ©Hand-Washing Tips



**1** Take off watches, rings, etc.



**2** Wet hands under running water and lather soap.



**3** Wash palms and backs of hands.



**4** Wash between fingers.



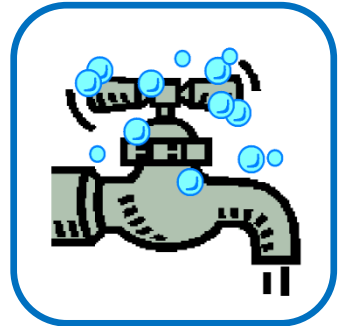
**5** Wash thumbs.



**6** Wash the fingertips and under nails.



**7** Wash wrists.



**8** Wash faucet handle with soap.



**9** Rinse hands well under running water.



**10** Dry hands with paper towel or handkerchief.

# Disinfection Tips

★ In case of Noroviral Gastroenteritis, Cholera, Shigellosis, Typhoid, and Paratyphoid  
**Invert soap, disinfecting Ethanol, chlorinated antiseptics** such as **Sodium Hypochlorite**, and **boiling (75°C, more than 1 minute)** is effective.

★ In case of Noroviral Gastroenteritis

**Chlorinated antiseptics (Sodium Hypochlorite)** and **boiling (at 85°C for more than 1 minute)** is effective. **Rubbing alcohol and invert soap do not have any effect.**

## ◎ How to Dilute Antiseptics

☆ For invert soap (Benzalkonium Chloride solution) (Dilute with water)

Purpose	Hand-washing	Bathrooms, tank levers, etc.
Concentration	100x (0.1%)	50x (0.2%)
If making 1ℓ of dilution (≈1/2 cup in basin)	10ml (2 capfuls) (cap of a 500ml bottle)	20ml (4 capfuls) (cap of 500ml a bottle)

☆ For chlorinated antiseptic (5%※) (Dilute with water)

Purpose	Eating and Cooking Utensils	Feces/vomit, contaminated clothes/floors/walls/etc.
Concentration	250x (200ppm)	50x (1000ppm)
If making 1ℓ of dilution	4ml (little less than 1 capful) (cap of 500ml plastic bottle)	20ml (4 capfuls) (cap of 500ml plastic bottle)

※ Most chlorine bleaches sold on the market have 5% concentration of chlorine.

### ※ Cautions when Using Chlorinated Antiseptics ※

- May cause fading in clothing items.
- May cause rusting and discoloration on metals.
- Do not use on hands or skin.
- Be careful it does not come in contact with skin or eyes.
- Use in a well ventilated area.
- Do not mix with acidic medical agents as it will produce a lethal gas.
- Long-term storage will decrease concentration, so use as soon as possible. Also, store in a cool dark place and keep out of reach of children.
- Dilute only at time of need. Avoid make-ahead dilutions.

## ©How to Dispose of Human Waste and Vomit

### Things You Will Need

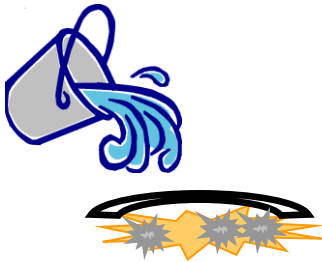
- ◆ Disposable gloves and mask
- ◆ Newspaper, paper towels, etc.
- ◆ 1000ppm chlorinated antiseptic
- ◆ 2 Sealable plastic bags

① Open mouth of plastic bags.



② Take off watches, rings, etc. and put on gloves and mask.

③ Cover the human waste or vomit with newspaper or paper towels, then pour the chlorinated antiseptic solution on top. Gently wipe up the mess and dispose inside the one of the open plastic bags.



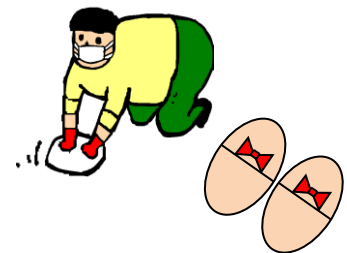
\* If human waste or vomit dries, the virus disperses into the air and can infect by entering the mouth, so clean it up quickly before it dries.

\* Be cautious when using the chlorinated antiseptic as it causes discoloration.

④ Disinfect the wider area by wiping the floor and walls from the farthest point inward with paper towels soaked with chlorinated antiseptic. Immediately dispose the dirty paper towels in the first plastic bag and close the opening tightly.

\* Metals may rust from exposure to chlorinated antiseptics. If the area to be cleaned is made of metal, wait 30 minutes and then wipe with water.

\* The virus from the sick person may also be on the bottom of their slippers/indoor shoes. After disinfecting the floor, disinfect the bottom of their slippers/indoor shoes as well.



⑤ Put the plastic bag containing the mess into the other plastic bag. Take off the gloves turning inside out, put them in the bag, and without touching the inside of the bag close it tightly.

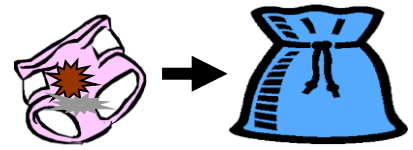


⑥ Finally, wash your hand really well.



## ©How to Dispose of Diapers

Disposal is the same as with feces and vomit. To prevent the contents from splattering about, after taking off the diaper quickly roll it up and put it in a plastic bag. When changing several diapers, wash your hands after each change.



## ©How to Dispose of Contaminated Clothing

Soak them the items in about **500-1000ppm chlorinated antiseptic** for 30 minutes or more, then wash them normally but make sure to wash them separately from other's clothing.

Or soak the items in boiling water for more than 1 minute (**85°C for 1 minute or more for norovirus**).

**\* Be cautious as chlorinated antiseptic can cause fading in clothes.**

## ©How to Disinfect Toilets, Doorknobs, etc.

### ○Daily Disinfection

Regularly clean toilet seats, flush handles, doorknobs, floors and walls around the toilet bowl, railings, etc. by carefully wiping with **approximately 500-1000ppm diluted chlorinated antiseptic**.

### ○For Verotoxin-producing Escherichia Coli (0157, etc.)

Sponge bathe toilet seats, flush handles, doorknobs, floors and walls around toilet bowl, railings, etc. with **0.2% diluted inverted soap**.

### ○For Noroviral Gastroenteritis

Sponge bathe the toilet seat, flush handle, doorknob, floor handle and walls around toilet bowl, railings, etc. with **1000pm diluted chlorinated antiseptic**.

## ©How to Disinfect Eating and Cooking Utensils

After thoroughly washing utensils with dish detergent, soak in approx. **200ppm diluted chlorinated antiseptic** for 5 minutes or more, or in **boiling water (85°C for 1min or more for norovirus)**.





## Other Things to Be Careful Of

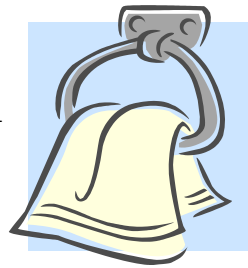
### ○Bathing

Wash your buttocks well before getting in. If you're showing symptoms of illness, only shower only or use the bath last. Even after 1 week of recovery, your feces still contain the virus so be the last to use the bath.



### ○Towels

Use ones for yourself only, and refrain from sharing others' towels.



### ○Pools

- Before entering, wash your body well, especially your buttocks.
- When using inflatable/plastic pools, change the water frequently.
- People feeling unwell should not get in the pool.



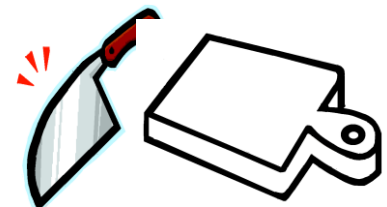
### ○Health monitoring

Pay attention to your daily health. When you are feeling unwell, do not overexert yourself, get plenty of good rest, and see a doctor as soon as possible.



### ○Cooking

If you are showing symptoms of illness, refrain from work involving cooking, meal assistance, and serving. (Even after the symptoms disappear, be cautious for about 1 week.)



Verotoxin-producing *Escherichia Coli* (0157, etc.), Shigellosis, Cholera, Typhoid and Paratyphoid are designated as Type 3 Infectious Diseases by the Infectious Disease Law. Work restrictions will apply towards duties involving food production until negative reaction is confirmed from feces examination.

# If an Outbreak Occurs at a Social Welfare Facility, etc.

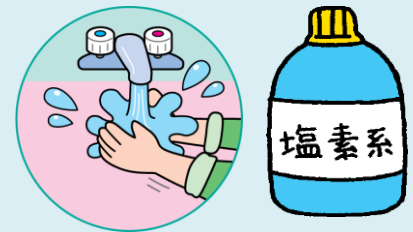
## ◎Countermeasures at time of outbreak

### ① Assess the situation

- Confirm symptoms (diarrhea, vomiting, fever, etc.)
- Gather facts (number of patients, day of onset, time of start of outbreak, floor/room deviations, etc.)
- Confirm status of diagnosis (presence, name of diagnosis, examination status, etc.)

### ② Prevent further spreading

- Notify all employees
- Increased thoroughness of hand-washing
- Properly dispose of human waste
- Disinfect facility when necessary



### ③ Notify other related facilities

- Facility doctors, Infection Control Doctors, etc. (Explain the situation and receive instructions)
- Contact and explain situation to patient's family (Outbreak status, how to prevent secondary infection at home, etc.)
- Report to each ward's public health and welfare center and the Head Office(※)

## ※Reporting Standards for Ward Public Health and Welfare Centers and Facility Head Office

“Regarding Reports of Infection Outbreaks at Social Welfare Facilities, etc.”

Notice from the Ministry of Health, Labour and Welfare (dated February 22, 2005)

In the following cases of A B, and/or C, the Director of the social welfare facility, etc. must take action by promptly reporting to every municipal social welfare facility head office of the number of persons believed to be infected, have food poisoning, etc., the symptoms, and countermeasures situation, in addition to reporting to the Public Health Centers (for Osaka city, the Public Health and Welfare Center of each ward), and request instructions.

- A. If **more than 2 deaths and/or severely ill persons appear within 1 week** as a result of the same infection, food poisoning, or both.
- B. If **more than 10 patients or individuals believed to be ill, or more than half of persons using the facility** appear as a result of the same infection or food poisoning.
- C. If neither case A nor B, if a report by the director of the facility is believed necessary due to the belief that the outbreak of infection, etc. exceeds normal circumstances.

## ◎How to Dilute Chlorinated Antiseptic (for large amounts)

### ○ For 200ppm

• Concentration (5%): 12ml →

• Concentration (6%): 10ml →

### ○ For 1000ppm

• Concentration (5%): 60ml →

• Concentration (6%): 50 ml →

**Water 3ℓ**

## ◎ Infection Prevention Checklist for Social Welfare Facilities, etc.

### ① Health Assessment

- Assess daily health states of patients and employees
- Regular health check-ups of facility users and employees (Stool examinations as well for employees)
- Consultation at medical facility for unwell patients

### ② Thorough Hand-washing

- After every patient check-up
- After taking off disposable gloves
- Do not use communal towel after washing hands
- Encourage patients and visitors to do the same

### ③ Disposal of body waste (including diaper changes)

- Wear disposable gloves and mask (a gown in case of vomiting)
- Proper sanitization after disposal

### ④ Facility Management

- Regular cleaning and sanitization
- Clear-cut classification such as clean areas (cooking room, formula room, etc.) and unclean areas (Toilets, Hand-washing stations, etc.)

### ⑤ Training

- Hold training courses for employees
- Share information among employees

### ⑥ Manual

- Compose infection prevention manual specific to facility (daily prevention measures, outbreak counter-measures, etc.)
- Confirm role divisions and communication system
- Inform all employees about its existence
- Conduct regular revisions

Ward	TEL	FAX
Kita Ward	6313-9882	6362-1099
Miyakojima Ward	6882-9882	6925-3972
Fukushima Ward	6464-9882	6462-4854
Konohana Ward	6466-9882	6463-1606
Chuo Ward	6267-9882	6267-0998
Nishi Ward	6532-9882	6532-6246
Minato Ward	6576-9882	6572-9514
Taisho Ward	4394-9882	6554-7153
Tennoji Ward	6774-9882	6774-9866
Naniwa Ward	6647-9882	6644-1937
Nishiyodogawa Ward	6478-9882	6477-1649
Yodogawa Ward	6308-9882	6303-6745
Higashiyodowagwa Ward	4809-9882	6327-3462
Higashinari Ward	6977-9882	6972-2781
Ikuno Ward	6715-9882	6712-0652
Asahi Ward	6957-9882	6954-9183
Joto Ward	6930-9882	6930-9936
Tsurumi Ward	6915-9882	6913-8140
Abeno Ward	6622-9882	6629-1349
Suminoe Ward	6682-9882	6673-0220
Sumiyoshi Ward	6694-9882	6694-6125
Higashisumiyoshi Ward	4399-9882	6629-1265
Hirano Ward	4302-9882	6702-4315
Nishinari Ward	6659-9882	6659-9085

**\*Publication\***

**Osaka City Health Center**  
**Infectious Disease Countermeasures Department**  
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