Infection Control against Covid-19

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### Gargle just after you get home, and also before going to bed

When you get home, wash your hands, gargle, and wash your face. Before going to bed, gargle to reduce the virus in your mouth.
Coronavirus disease 2019 is thought to have occurred around November 2019, when a coronavirus of the bats began to infect humans.

The first case in Japan was confirmed in January 2020. Of the 3713 passengers aboard the Diamond Princess (a cruise ship) that came to Yokohama Port in February, 712 (about 20%) were infected. There were many findings by analyzing and investigating the infection on this cruise ship.
Three infection patterns of Covid-19

① Droplet infection

When speaking loudly, aerosols (very small droplets that are less than 1/100 mm) are spread. They float in the air for approximately 20 minutes. If you inhale them, you may get infected.

② Contact infection

Wash hands to prevent contact infections.

③ Aerosol infection

Closed space is dangerous! Ventilate to blow out aerosols.

※ Aerosols are more widespread than droplets.

Wear a mask
The infection risk is not so high, when just walking around in the city or shopping, as long as everyone is wearing a mask. (Dr. Shigeru Omi)

Avoid the 3 Cs!
Confined spaces
Crowded places
Close contact

Do not Speak loudly

Follow the infection control measures

These three are the points of countermeasures

When speaking in a loud voice, both droplets and aerosols spread out.

Aerosols

In the locker room of a fitness gym

You too

Droplets

Be careful not to get Covid-19!
“Five situations” that increase the risk of infection

Conversation without a mask, in cars and buses

Let's wear a mask

Let's ventilate

Social gatherings with drinking alcohol
Five scenes of the infection risk

1. Social gatherings with drinking alcohol
2. Long feasts in large groups
3. Conversation without a mask
4. Living together in a small limited space
5. Switching locations

Ministry of Health, Labor and Welfare, October 23, 2020
Mechanism and symptoms of novel coronavirus

The Covid-19 virus enters the body by binding to special receptors on the mucous membranes. This receptor is for regulating blood pressure, however the virus happens to stick to it.

Receptors on the facial mucosa are on the nasal mucosa, eye conjunctiva, oral mucosa, and the surface of the tongue. As the skin has no mucous membranes, there are no receptors.

The skin is a natural barrier
Symptoms of Covid-19

- Cerebral infarction (cerebral thrombosis)
- Runny nose / Smell disorder
- Taste disorder
- Sore throat
- Pneumonia
- Pulmonary embolus
- Myocardial infarction
- Kidney failure
- Diarrhea
- Lower Limb Deep Vein Thrombosis

※As inflammation progresses, blood tends to clot in the blood vessels throughout the body, resulting in secondary symptoms such as shown in red letters.

Children are less susceptible to infection due to the smaller number of receptors.

Children may be infected when they are exposed to large number of virusus in a short time, even though they have fewer receptors.
Infection control against Covid-19

Basic Precaution
Always wear a Mask and Wash your Hands

“Hand washing before meals” has always been important, from long long ago.

Droplet Infection ➡️ Mask

Wear a mask when you can't keep a distance from people
Aerosols generated by a loud voice can stay in the air for a long time in poorly ventilated space. In such space, there is a risk of infection even for people who are sitting far away. Ventilate the room well to blow out these aerosols.

Disinfect the parts where everyone touches often.

Let's clean our hands.

Contact Infection  Hand washing and Disinfection
One among three people infected with Covid-19 had no symptoms

104 definitely PCR-positive patients (Diamond Princess cruise ship)
Average age 68 years (47-75 years)
(reporting by the Self-Defense Forces Central Hospital)

We have no way of knowing who is spreading Covid-19!

Why is universal masking necessary?

When you can’t keep distance (1 to 2m), wear a mask

Keep a sufficient distance when you are without a mask
The peak of the viral shedding of Covid-19, is before the onset of the symptoms.

Wear a mask even if you have no cough

It is said the period to time that Covid-19 patients may spread the infection to others is from 2 days before, to 7 to 10 days after the onset of the symptoms.
When you have a cough, wear a mask

① Mask
② Cover your mouth and nose with soft paper
③ Cover your mouth and nose with sleeves

3 ways to ‘cover your cough’

Regardless of coughing

Before

Now

When you can't keep a distance from others, wear a mask

Hey, you two are too close. Wear masks, please!
When you can't keep a distance from others, wear a mask regardless of coughing.

Universal-kun is giving masks to everyone.
※ Also called “Universal Masking”

**Surgical Mask (Non-woven cloth)**
- Nose wire
- Absorbs moisture from exhaled breath
- Catches virus by attaching particles
- Blocks droplets

**Cloth Mask (cotton, gauze, etc.)**
- Cloth masks may make you feel easier to breathe, but they may pass small droplets when you speak loudly.
The skin is okay!
But my nose is itchy ...

Oh this feel good

At this very moment ...

Covid-19 virus binds to receptors on the mucous membrane of the nose, and invades into the body.
What to do against the floating viruses

The Covid-19 virus cannot infect you while it is on your hands. Wear “Glasses for hay fever” and “Mask” to prevent the virus from binding to the receptors!

Disinfect or wash off the virus that may be on your hands before touching nose, eyes and mouth

The fingertips carry the Covid-19 virus to the nasal receptors

It is important to fit the mask snugly on the face, and make sure that there are no open space around the nose and cheeks.

Be especially conscious to clean your fingertips

@ crowd of people
Hand wash with soap and running water

Disinfect hands with alcohol based hand rub

First, sterilize your fingertips in a pool of alcohol based hand rub

In order not to hurt the surface of your skin ... Foam the soap well. Do not scrub strongly. Gently wash on the skin. Do not wipe strongly. Moisturize well.

1. Foam well and wash both hands

2. Wash by twisting around your thumb

3. Wash your fingertips

4. Wash the base of your nails
The correct way to disinfect hands

① Use enough alcohol based hand rub to disinfect your entire hand
② At first disinfect your fingertips, nails, and thumbs, that are most likely to be forgotten, but are very important
③ Then rub both hands thoroughly until they are completely dry

1

① Make a “Big Pool" on the palm of your hand

“Big Pool" of alcohol based hand rub

2

② Put your fingertips in the pool and disinfect your nails.

3

③ When the right hand is finished, move the liquid to the right hand palm to disinfect the left hand by adding one push

④ Disinfect the thumb, between the fingers, palm, back of the hand, and wrist

⑤ Disinfect thoroughly until both hands dry up completely
When a family member is infected ...

Covid-19？

Isolation

Influenza？

Covid-19 infection

| The initial symptoms may be similar to the flu and the common cold. The main symptoms are fever, cough, malaise, and respiratory distress. Diarrhea (10%), Taste disorder (17%) Smell disorder (15%) |

Influenza infection

| Onset with a sudden fever of 38-39°C or higher. In addition to respiratory symptoms, it is often accompanied by systemic symptoms such as headache, lumbago pain, muscle pain, arthralgia, and general malaise. |

No one can tell if it is Covid-19 or influenza

Call a local clinic or hospital

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