

## 4 Routine cleaning and disinfection of stores and facilities is effective at combating the novel coronavirus!

普段のお店や施設の清掃・消毒は「新型コロナウイルス」対策に有効です!

Having everyone who runs environmental health businesses routinely undertake cleaning and disinfection at their stores through the use of cleaning agents and disinfectants is an effective way to combat the novel coronavirus to avoid contact infection.

生衛業事業者の皆様が、普段、お店や施設で行っている洗剤や消毒剤を用いての清掃・消毒は、「接触感染」を避ける新型コロナウイルス対策として有効です。



### Chlorine bleach 塩素系漂白剤

Chlorine bleach (an aqueous solution of sodium hypochlorite) destroys viruses and disinfects by harnessing the oxidative effects of hypochlorous acid.

塩素系漂白剤（次亜塩素酸ナトリウム水溶液）は、「次亜塩素酸」の酸化作用によりウイルスを破壊し無毒化します。

### Cleaning agents (surfactants) 洗剤（界面活性剤）

The surfactants that constitute the main ingredient in commercially available cleaning agents for home use are also partially effective. Surfactants destroy the membranes of viruses, thereby rendering them harmless.

市販の家庭用洗剤の主成分である「界面活性剤」も一部有効です。界面活性剤はウイルスの膜を壊すことで無毒化します。

## 5 Get a hold of sound information! 確かな情報を得よう!

### An initiative for thoroughly ensuring infection prevention guidelines for businesses

(From Tokyo Metropolitan Government website "Disaster Prevention Information")

\* Click the "Language" button with the earth symbol on the top right of the top page to convert to each language.

事業者向け感染拡大防止ガイドラインの徹底に向けた取組（東京都防災ホームページ）

※トップページの右上にある「Language」という地球のマークのボタンを押すと、各言語に変換できます。



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## Via Environmental Health-Related Business Activities

# Present Response to the Novel Coronavirus Disease

（生活衛生関係営業の）新型コロナウイルス感染症への当面の対応（英語版）

**Avoid the "Three C's" (closed spaces, crowded spaces, and close-contact settings) as well as droplet infection and contact infection !**

三つの密（密集・密接・密閉）と飛沫感染・接触感染を避けよう！



This pamphlet contains the latest basic knowledge that is needed by those businesses engaged in environmental health-related business operations in order to work to prevent the spread of infections from the novel coronavirus(COVID-19). Our hope is that you will refer to this to ensure that customers can make use of your services with peace of mind, with this including your employees as well.

本パンフレットでは、生活衛生関係営業事業者の皆様が、今回の新型コロナウイルス感染拡大防止に取り組むために必要な最新の基礎的知識を載せました。お客様に安心してご利用いただけるよう、従業員の方も含め、参考にさせていただけたら幸いです。



# 1 Novel coronavirus (SARS-CoV2) Novel coronavirus disease (COVID-19) 新型コロナウイルス(SARS-CoV2)。新型コロナウイルス感染症(COVID-19)

What have we  
learned so far?  
いままでに分かったことは？

## Routes of infection 感染経路

- ◇ "Droplet infection" is considered to be the primary vector for the novel coronavirus, with it believed that it can be transmitted in environments with poor ventilation (that are closed off), even if people don't cough or sneeze. It is believed that it also infects by "contact infection" on occasion.

新型コロナウイルスは、「飛沫感染」が主体と考えられ、換気の悪い（密閉）環境では、せき、くしゃみがなくても感染すると考えられています。ついで、「接触感染」もあると考えられています。

- ◇ In addition "droplet infection" and "contact infection", it has become clear that micro droplet infection involving tiny droplets that are emitted as a result of people conversing and talking that stay suspended in the air is also an important factor. The virus also infects the salivary glands, and so high concentrations of the virus are expelled in saliva.

「飛沫感染」、「接触感染」に加えて、会話・発声に伴い排出され空中に浮遊している小さな飛沫「マイクロ飛沫感染」も重要であることが明らかとなっています。このウイルスは、唾液腺にも感染することから、唾液中に高濃度のウイルスが排出されます。

## Incubation period / infectious period 潜伏期・感染可能期間

- ◇ The incubation period lasts between one and 14 days, with the onset of symptoms frequently occurring at around the fifth day following exposure.

潜伏期は1日～14日間、曝露から5日程度で発症することが多いようです。

- ◇ The infectious period is thought to last from two days before the onset of symptoms (in the middle of the incubation period) until about seven to ten days after the onset of symptoms. It is thought that the virus multiplies in the upper and lower respiratory tracts, and in serious cases there tends to be a high viral load and extended period over which the virus is shed.

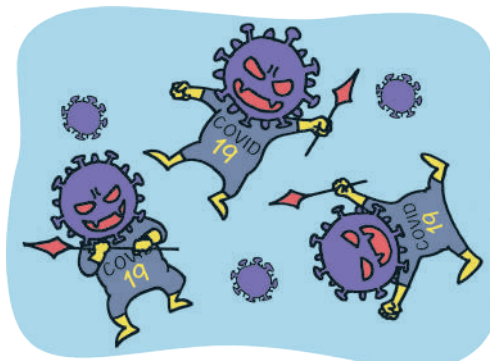
感染可能期間は、発症2日前（潜伏期間中）から発症後7～10日間程度と考えられています。「上気道」と「下気道」で増殖していると考えられ、重症例では、ウイルス量が多く排泄期間も長い傾向にあります。

## Existence of asymptomatic spreaders (carriers)

無症状感染者（キャリアー）の存在

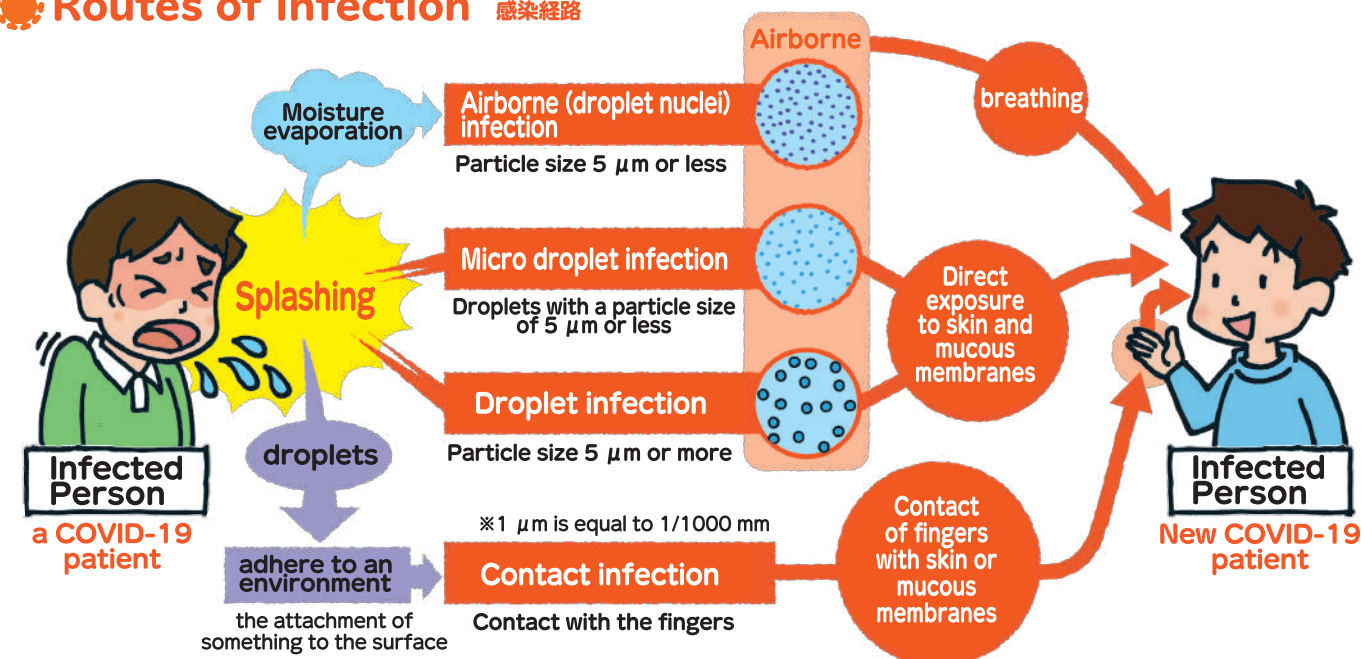
- ◇ It has become apparent that the novel coronavirus stays within the upper respiratory tracts of people who show absolutely no symptoms. As such, there is the possibility that asymptomatic spreaders may spread their infection to other people in dangerous situations, such as the Three C's. It is essential that you recognize that this is an infectious disease that anyone can catch (be infected by), and that anyone can spread.

新型コロナウイルスは、症状が全くない人が、「上気道」に保持していることが明らかとなってきたので、3密などの危険な状態においては、無症状感染者が他の人に感染を広げてしまう可能性があります。だれもが感染する（感染している）可能性があり、だれもが感染を広げてしまう可能性がある感染症であることを認識する必要があります。



# 2 Basic knowledge on routes of infection 感染経路の基礎知識

## Routes of infection 感染経路



### ① Droplet infection 飛沫感染

This is when pathogens are emitted together with droplets of bodily fluids from an infected person (droplets that are 5μm or larger that are emitted when the person sneezes, coughs, or produces spittle, etc.), which the infectee then breathes in through their nose or mouth

感染者の「体液の飛沫（くしゃみ・せき・つばなどから発生する5μm以上の大きさのもの）」と一緒に病原体が放出され、被感染者が鼻や口から吸いこんで感染すること

- ◇ (Generation of droplets) Approximately 3,000 droplets are dispersed every time a person coughs, or over a five-minute conversation.

（飛沫の発生）1回のせき、5分間の会話で約3,000個の飛沫が飛散。

- ◇ (Persistence in droplets) The novel coronavirus can persist for three hours in droplets that are about 5μm.

（飛沫中の残存）新型コロナウイルスは5μm前後の飛沫で3時間残存。

### ② Contact infection 接触感染

This is when droplets that have been dispersed by or shed from an infected person adhere to an environment (such as the surfaces of objects, etc.) that the infectee then touches with their fingertips or the like and infect themselves with by touching their fingertips to the mucous membranes of their mouth, nose, eyes, and so forth.

感染者から飛散し落下した飛沫が、環境（物の表面など）に付着したものを被感染者が手指などで触って、その手指が口・鼻・目などの粘膜に接触して感染すること。

- ◇ (Survival within an environment) The novel coronavirus can survive for up to 72 hours on plastic and stainless steel surfaces, and up to 24 hours on cardboard.

（環境中の生存）新型コロナウイルスは、プラスチック表面、ステンレス表面で最大72時間、ボール紙では最大24時間残存した。



### ③ Micro droplet infection\* マイクロ飛沫感染※

\* This is not an official term, but the one used by the Japanese Association of Infectious Diseases

※ 正式用語ではない：日本感染症学会で使用

This is when someone becomes infected by breathing in droplets that are smaller than the droplets emitted during conversation, heavy breathing, and so forth that are suspended in the air (which are no larger than  $5\mu\text{m}$  in size).

空中に浮遊している会話・荒い息使いなどで放出された「飛沫より小さい飛沫（ $5\mu\text{m}$ 以下の大きさのもの）」を吸い込んで感染すること。

- ◇ (Airborne) Droplets and droplet nuclei around  $5\mu\text{m}$  large can hang suspended in the air for some time.

(空中浮遊)  $5\mu\text{m}$  前後の飛沫や飛沫核は、ある時間空中を漂う。

### ④ Airborne (droplet nuclei) infection 空気（飛沫核）感染

Infection by inhalation of evaporated droplets (droplet nuclei) from airborne droplets dispersed by an infected person.

空中に漂う、感染者から飛散した飛沫から水分が蒸発したもの（飛沫核）を吸引して感染すること。

- ◇ A look at the infection status within Japan leads us to believe that airborne infection of the novel coronavirus is not taking place.

新型コロナウイルスは国内の感染状況を見ても、空気感染は起きていないと考えられています。

## 3 Basic knowledge for preventing infection through a New Normal

「あたらしい生活様式」による  
感染防止の基礎知識

### Fundamentals for preventing infection

感染防止の基本



Crowded spaces  
密集



Close-contact settings  
密接



Closed spaces  
密閉



② Coughing etiquette  
咳エチケット



③ Hand-washing  
手洗い



④ Ventilation  
換気

#### ① Avoid the “Three C’s” 3密(3つの密)の回避

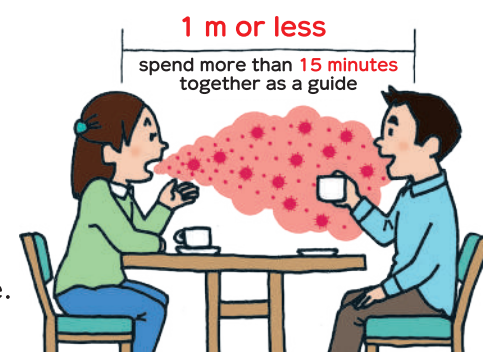
### ① Avoid the “Three C’s,” droplet infection, and micro droplet infection by ensuring physical distance!

身体的距離の確保で「3密」・「飛沫感染」・「マイクロ飛沫感染」を避けよう！

- ◇ Close contact (example) are both : ①Face to face, within reach of each other's hand (within about 1 meter); and ② Contact for more than 15 minutes

「濃厚接触者（例）」①対面で互いに手を伸ばしたら届く距離（1m程度以内）で、②15分以上接触があった場合

- ➔ Avoid directly facing others to the extent possible. 可能な限り真正面は避けます。
- ➔ At counter-style establishments, arrange it so the seats are parallel to one another. カウンター形式で平行の座席とします。
- ➔ Use acrylic plates and the like to serve as shields. アクリル板などによる遮蔽を行います。



examples of close contact 濃厚接触の例

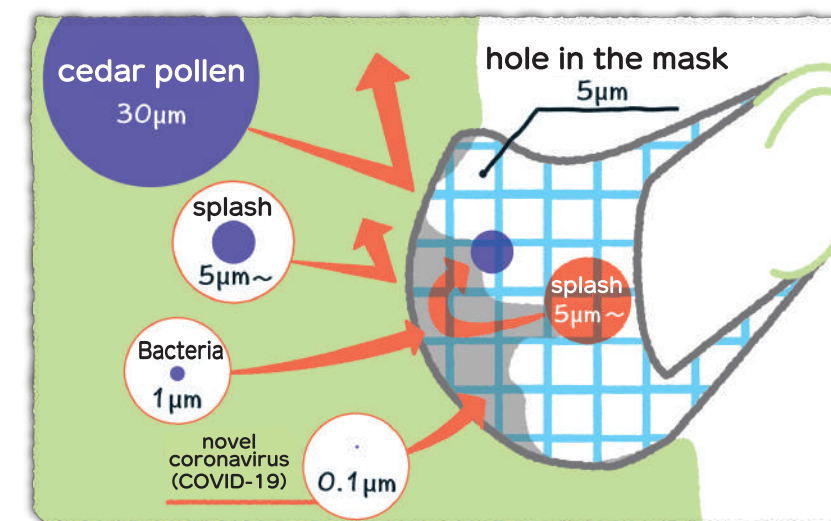
## ② Avoid droplet infection, micro droplet infection, and contact infection by thoroughly following coughing etiquette and wearing masks!

咳エチケットの徹底・マスク着用で「飛沫感染」、「マイクロ飛沫感染」、「接触感染」を避けよう！

### Effectiveness of masks マスクの効用

Masks do not protect against the entry of bacteria and viruses, but they are effective as a means of preventing the dispersal of droplets and micro droplets emitted while talking or coughing. People touch their faces without being consciously aware of doing so (Average 23 times per hour). Times when they touch the mucous membranes of their eyes, nose, mouths, and so on account for 44% of these! Wearing a mask can also prevent contact infection where the person touches their fingers to their mouth, nose, and so forth without even realizing it.

マスクで細菌やウイルスの侵入は防げませんが、会話・せきなどで発生する「飛沫」「マイクロ飛沫」の拡散防止用として有効です。人は無意識に顔を触っています。（平均 23 回 / 時）そのうち、目・鼻・口などの粘膜を触ることは 44% を占めています！マスク着用は、無意識に手指が口・鼻などに触れる「接触感染」も防ぎます。



Comparing the size of the openings in non-woven masks against the size of microscopic substances

不織布マスクの目の大きさと微小物質の大きさとの比較

- ◇ (Wearing masks when temperatures / humidity are high) There are concerns that wearing masks in the summertime will trap heat within the body and could increase the risk of heatstroke. Masks can be taken off in cases where physical distance can be ensured in open, outdoor spaces such as terrace seating.

(高温・多湿時のマスク着用) 夏場のマスク着用は、体内に熱がこもり、熱中症のリスクが高くなる恐れがあります。テラス席など外部の解放空間で「身体的距離」が確保できる場合は、マスクをはずすことが可能です。

### Three tips for coughing etiquette 3つの咳エチケット

⚠ When there is no mask  
マスクがない時

⚠ instant moment  
とっさの時



① Wearing a Mask (Cover the mouth and nose)  
マスクを着用する (口・鼻を覆う)



② Cover your mouth and nose with a tissue or handkerchief.  
ティッシュ・ハンカチで口・鼻を覆う



③ Cover your mouth and nose with your sleeve  
袖で口・鼻を覆う



### ③ Avoid contact infection through hand washing and hand sanitizing! 手洗い・手指消毒で「接触感染」を避けよう

#### Hand washing 手洗い

Washing your hands through the use of soap, hand wash, and other hand cleaning agents are effective at destroying the membranes of the novel coronavirus and depriving it of its infectious capacity.

せっけん、手指用洗剤などの「界面活性剤の洗浄剤」を使用する手洗いは、新型コロナウイルスの膜を壊し感染力を失わせるため有効です。



◇ (Hand washing effectiveness) Rubbing your hands together with hand soap to clean them for 10 seconds and rinsing them off under running water for 15 seconds reduces the viral load to 1/10,000 (手洗い効果) 洗浄剤でもみ洗いを10秒、流水で15秒するとウイルス量が1万分の1に

◇ Even just rinsing your hands under running water for 15 seconds reduces the viral load adhering to your hands to 1/100.

手指に付着しているウイルス量は、流水15秒の手洗いでも100分の1になります。

◇ Rub soap into your hands for 10 seconds to clean them, then rinse them off under running water for 15 seconds in 2 sets will reduce the amount to 1/1 million.

せっけん10秒もみ洗い、流水15秒すぎを2セット行くと百万分の1に減らせます。



#### Antiseptic disinfection (rubbing method) 擦式消毒 (ラビング法)

In locations that lack handwashing facilities, use hand-sanitizing alcohol. Apply an appropriate amount of disinfectant to the palm of one's hand and start by applying the solution to the fingers of both hands. Then thoroughly work the disinfectant in until it is dry in the same way as you would if you were washing your hands. You do not need to wipe it away.

手洗い設備のないところでは、手指消毒用アルコールを使います。消毒薬適量を手のひらにとり、まず、両指先を薬液につけた後、手洗いと同様な手法で、消毒薬が乾くまでよく擦り込みます。ふき取りはいりません。

◇ Hand sanitizing alcohol destroys the membranes of the novel coronavirus, thereby depriving it of its infectious capacity.

手指消毒用アルコールは、新型コロナウイルスの膜を壊すことで感染力を失わせます。

◇ Medical and pharmaceutical products and quasi-drugs are used on the fingers and other parts of the body.

手指など人体に用いるものは「医薬品」「医薬部外品」を使用します。



### ④ Avoid enclosures (closed spaces), droplet infection, and aerosol infection via ventilation!

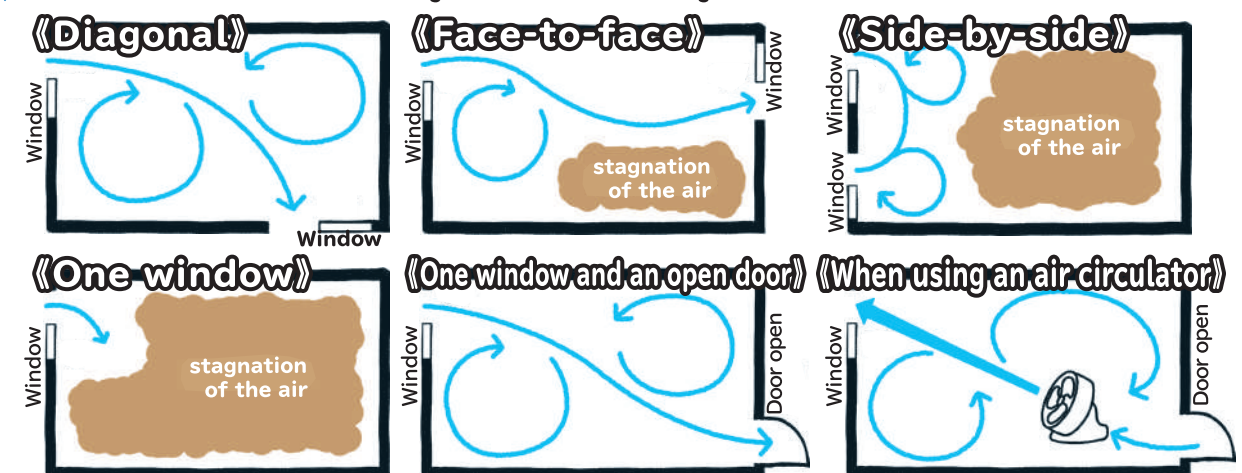
換気で「密（密閉）」・飛沫感染・エアロゾル感染を避けよう！

#### Basic knowledge regarding ventilation 「換気」の基礎知識

This refers to replacing the air indoors with outside air. The objective is to evacuate and dilute contaminants. 室内の空気と外気とを入れ替えることをいいます。汚染物質の排出・希釈が目的です。

#### Ventilation prevents enclosures (closed spaces) 密（密閉）を防ぐ換気

◇ Ventilation is effective for ensuring that air flows at a diagonal. 換気は、「対角線の空気の流れ」を確保すると効果的です。



#### Facilities like stores must be equipped with mechanical ventilation systems

店舗などの施設は機械換気設備が必ずついています。

**Continuous ventilation must be performed during operating hours!**

営業時は常時換気をしましょう！

#### Open window ventilation 窓開け換気

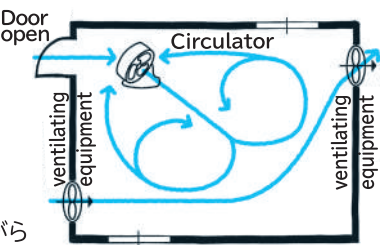
Ventilate rooms by opening the window for five minutes every 30 minutes while continuously running ventilating equipment!

換気設備を常時運転しながら30分毎に5分間の「窓開け換気」！

#### Store with shut windows Store without windows

Opening the door while continuously running ventilating equipment is effective!

換気設備を常時運転しながらの「ドア開け」が有効！



◇ Air conditioners do not have ventilating functionality. Ventilating equipment must be continuously run.

エアコンには換気機能はありません。換気設備の常時運転が必要です。

◇ Total heat exchangers (which recover 70 - 90% of heat) offer a form of continuous ventilation.

全熱交換器（熱を70～90%回収）では常時換気となります。

◇ Special caution is required for smoking rooms and restrooms (where air is not recycled)

喫煙室・トイレは要注意（空気を再利用しない）

