

## ABOUT CORONAVIRUS

### WHAT IS CORONAVIRUS?

Coronaviruses are named after their surface projections resembling a crown that can be observed using electron microscopy. Coronavirus strains predominantly affect animals; some of them, however, are capable of causing an infection in humans as well.

### WHAT IS COVID-19?

The novel coronavirus (SARS-CoV-2) was identified in China in the end of 2019. By now, it has caused diseases in most countries of the world. Initially, it was named 2019-nCoV (novel coronavirus); then, as suggested by the World Health Organization (WHO), the name was changed to SARS-CoV-2 based on its relation to the earlier SARS-CoV (Severe Acute Respiratory Syndrome). The disease caused by it is called COVID-19 (coronavirus disease 2019).



### HOW DOES CORONAVIRUS SPREAD?

#### Human-to-human transmission

Its most common way of spreading is human-to-human transmission:

- ✚ In close contact among people within 1.5 to 2 metres from each-other.
- ✚ Through droplets when an infected person coughs, sneezes, or speaks. These droplets may make their way into the mouth of people close by, or they can be inhaled.
- ✚ According to the latest studies, COVID-19 may also be transmitted by people who appear to be completely symptom-free.
- ✚ In order to stop the virus from spreading, it is essential to maintain an appropriate distance (approximately 1.5 to 2 metres) from each-other.



#### Spreading through surfaces or objects contaminated with the virus

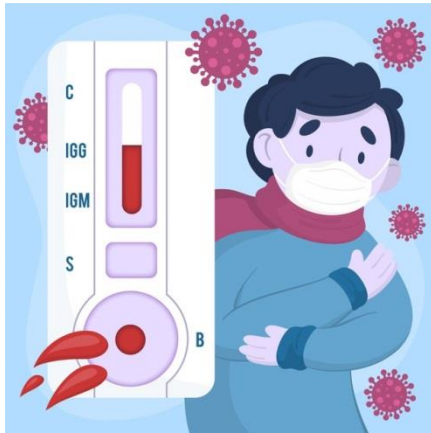
It is possible to become infected with COVID-19 by touching a surface or an object which the virus has already adhered to, then touching one's mouth, nose, or eyes. This is not the primary way the virus spreads, but we are still in the learning phase, and do not have all the completely accurate knowledge. "Hand hygiene" – that is, frequent and thorough hand washing or the use of alcohol-based hand sanitizers – is of crucial importance. Regular disinfection of frequently touched surfaces is also recommended.

## HOW EASILY DOES THE VIRUS SPREAD?

The virus causing COVID-19 infection spreads very easily and quickly among people. Based on the currently available information on the COVID-19 pandemic, this virus spreads faster and more efficiently than flu, but less than measles, which is much more contagious.

## WHAT ARE THE SYMPTOMS?

Coronaviruses generally cause common cold. However, when a new strain emerges, it may cause a more severe disease, as we have seen with the COVID-19 coronavirus epidemic. The most typical symptoms of COVID-19 include the following:



- Fever
- Cough
- Shortness of breath
- Shivering
- Sore muscles
- Headache
- Sore throat
- Other flu-like symptoms
- Nausea, diarrhoea, abdominal pain
- Losing the sense of smell and/or taste

Elderly people and patients with chronic pre-existing conditions (such as cardiovascular diseases, diabetes, or respiratory diseases) have a higher risk of developing severe complications from COVID-19.

*Find out how flu, COVID, and common cold are different.*

**SYMPTOMS OF novel coronavirus (COVID-19), a cold and the flu**

SYMPTOMS	COVID-19 Symptoms range from mild to severe	COLD Gradual onset of symptoms	FLU Abrupt onset of symptoms
Fever	Common	Rare	Common
Cough	Common	Common	Common
Sore throat	Sometimes	Common	Common
Shortness of breath	Sometimes	No	No
Fatigue	Sometimes	Sometimes	Common
Aches and pains	Sometimes	No	Common
Headaches	Sometimes	Common	Common
Runny or stuffy nose	Sometimes	Common	Sometimes
Diarrhea	Rare	No	Sometimes (especially for children)
Sneezing	No	Common	No

For more information, visit [www.health.qld.gov.au/coronavirus](http://www.health.qld.gov.au/coronavirus)  
Graphic: Illustration produced by Qld Health for the Queensland Government.

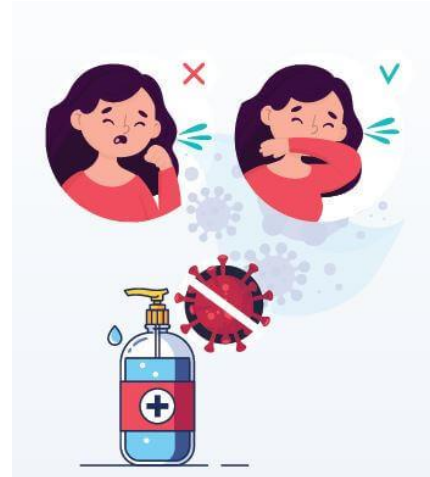
## PROTECTION AGAINST CORONAVIRUS

### How can you protect yourself and others?

Currently, there are no vaccines for coronavirus infection. The best way to prevent the disease is trying to avoid infection.

#### Wash your hands often

- ✚ Wash your hands often with soap and water, especially if you have been in public places, blown your nose, coughed or sneezed. Wash your hands for at least 20 seconds.
- ✚ If you do not have soap and water nearby, use a hand sanitizer with 60% alcohol or higher. Spread it over the whole surface of your hands and rub it in until your hands feel completely dry.
- ✚ Do not touch your eyes, nose, or mouth if you have not washed your hands.



#### Avoid close physical contact with others

- ✚ Avoid people if you know they are ill.
- ✚ Spend as much time at home as possible.
- ✚ Keep distance from others! Avoid handshakes, kisses, or hugging other people.
- ✚ Keep in mind that many people may spread the virus even without any symptoms.
- ✚ It is extremely important to keep a safe distance from those who are particularly at risk of infection.

#### **Protect others as well**

- ✚ Stay at home if you are ill!
- ✚ Cover your mouth when you sneeze or cough!
- ✚ Wear a face mask if you are ill!

#### ***The etiquette of coughing and sneezing***

Always cough or sneeze into a tissue or the crook of your arm! Then put the tissue right into the garbage bin. If you cough or sneeze, wash your hands for at least 20 seconds.

## SHOULD I WEAR A FACE MASK AND AVOID GOING TO CROWDED PLACES?

Transplant recipients generally need to be cautious, and they should avoid going to crowded places. Frequent hand washing or the use of hand sanitizers helps to prevent infection. The benefit of wearing a mask is still disputed in the case of transplant recipients as well, and it is not known to what extent wearing a mask may contribute to the prevention of the disease.

### According to the WHO recommendation:

- If you are healthy, wear a mask only if you are taking care of a person who is suspected of being infected.
- Wear a mask if you cough or sneeze often.
- Wearing a mask is only efficient if you also regularly wash your hands or use an alcohol-based hand sanitizer.



If you wear a mask, it is important to know how to use it properly, and also how to discard used masks.

- Before putting the mask on, clean your hands with an alcohol-based hand sanitizer, or wash your hands with soap and water.
- Cover up your mouth and nose with the mask, and make sure there is no gap between your face and the mask.
- Do not touch the mask while wearing it, and if you have to, disinfect your hands first with alcohol-based hand sanitizer, or wash your hands with soap and water.
- If your mask becomes moist, replace it with a new one, and never use a single-use mask several times.
- When removing a mask, take it off from behind (without touching the front part of it); discard it immediately into a closable garbage bin, clean your hands with an alcohol-based hand sanitizer, or wash your hands with soap and water.



## WHAT TYPES OF MASKS ARE THERE?

### Surgical mask

A surgical mask is a single-use medical device, which can be purchased in a pharmacy, and it protects the user from the infectious pathogens transmitted through droplets. These droplets may derive from saliva or the discharge of the upper respiratory track exhaled by the user of the mask. When worn by an infected person, it prevents the patient from infecting their environment. In addition, it also protects its user from various infections that can be transmitted through droplets.

## – FFP ('filtering face piece') mask

It prevents the user of the mask from inhaling tiny airborne particles. It is available in three categories: FFP1, FFP2, and FFP3. FFP3 offers the highest level of protection.

## – Cloth face covering masks

A face mask made from a piece of cheaper cloth available in people's homes. It may slow down the spreading of the virus and may prevent people who are unaware of being virus carriers from transmitting the infection to others.

**Surgical and FFP masks are critically important medical devices, which should to be retained for healthcare professionals.**

**Important: Masks alone do not offer a significant level of protection unless combined with adherence to the appropriate rules of hygiene.**

## HOW TO SANITIZE YOUR HOME?

### Why is this necessary?

Viruses adhered to the surface of objects (door handles, subway handrails, used tissues, telephones) stay infectious for days. A contaminated object can infect you too, if you touch it, and then touch your mouth, nose, or eyes.



The type of the surface determines how infectious the virus remains on it. Several studies have been conducted on this topic. In one of them, the virus was vaporized on different surfaces, then collected periodically to assess how much time later could virulent viruses still be retrieved.

**Copper: 4 hours**  
**Cardboard: 24 hours**  
**Stainless steel: 48 hours**  
**Plastic: 72 hours**



Another study applied a method different from vaporization: virus particles were dropped on different surfaces, and the length of virulence was assessed periodically.

**Printing paper, tissue: 3 hours**  
**Treated wood, fabric: 24 hours**  
**Glass, bank notes: 4 days**  
**Stainless steel, plastic: 7 days**  
**Surgical mask: 7 days**

It was also concluded that the virus is virulent for longer on smooth surfaces.

## CLEANING AND DISINFECTING

- ✚ Wear single-use rubber gloves for cleaning!
- ✚ Clean the surfaces with soapy water, then disinfect them!
- ✚ Cleaning reduces the number of pathogens, the amount of dirt and contamination on surfaces. Disinfecting then kills the pathogens.
- ✚ Routinely clean and disinfect high-touch surfaces such as tables, door handles, hand grips, light switches, kitchen counters, telephones, keyboards, etc.

**The most effective surface disinfectant is alcohol. 70 percent alcohol or bleach applied in various surfaces destroys coronavirus within minutes.** A 0.1 percent bleach solution corresponds to a 50-fold dilution of the commercially available domestic bleach (most commonly, a 5 percent sodium hypochlorite solution).

## TRANSPLANT RECIPIENTS AND THE COVID EPIDEMIC

### Does the virus incur a higher risk to transplant recipients?

We do not have unambiguous evidence showing that COVID-19 infection is more dangerous for transplant recipients as opposed to healthy people, but we definitely know that other viruses cause more severe disease in people with a weaker immune system. – For this reason, it is especially important that transplant recipients on immunosuppressive medication also follow the protective measures.



### I AM A LIVING KIDNEY DONOR – AM I AT HIGHER RISK?

Living donation does not increase the incidence of more severe cases of COVID-19 infection, which is primarily due to the fact that kidney donation itself does not affect the immunity against infection. You might have developed some health condition earlier that puts you at higher risk; in this case, it is extremely important to follow the regulations recommended by the government as well.

## HOW TO PROTECT YOURSELF AGAINST THE CORONAVIRUS IF YOU ARE A TRANSPLANT RECIPIENT?

- ✚ Stay at home if possible and avoid crowds!
- ✚ If you have a scheduled appointment in the transplant outpatient clinic, please contact your treating physician to check if you really need to go.
- ✚ If you have to leave your home, wear a surgical mask in a way that covers your nose, too. Do not use a mask for longer than 4 to 5 hours.
- ✚ Never touch your face!
- ✚ Do not shake hands with, and do not kiss or hug other people to greet them now!

- ✚ Ask someone to do the shopping for you, or have your groceries delivered to you.
- ✚ Wash your hands frequently at home too, and air your home every hour!
- ✚ All the information you received earlier related to the organ transplantation (fluid intake, taking your medications, etc.) is applicable in these times as well.

## WHAT SHOULD I DO IF I SUSPECT HAVING COVID-19 SYMPTOMS?

### ***It is extremely important that you DO NOT go to the transplant outpatient clinic!***

Call your general practitioner and inform them about your symptoms. If they advise that you stay at home, please do so, and they can help you organize testing as well. Testing for the novel coronavirus (SARS-CoV-2) is not conducted by the transplant aftercare unit, but please call and inform them too, about your symptoms. Find out what to do to be safe. Also ask them who you can contact if your condition becomes worse based on the current protocol.

### Summary:

- ✚ Stay at home, and follow the guidelines for the cases or suspected cases of coronavirus (COVID-19) infection
- ✚ Please do not visit the transplant clinic or your general practitioner in person before you talk to your general practitioner and the transplant clinic on the phone.
- ✚ Do not change your medication unless your doctor prescribes so.

## What should I do if I have presumably been in contact with a person infected with COVID-19?

If you have been in contact with someone who has been diagnosed with COVID-19 infection, put yourself in voluntary quarantine, and contact the transplant team of the clinic about the next steps you need to take.

Watch yourself for symptoms and contact your treating physician immediately if you notice any symptoms!



## How can I get tested for COVID-19?

Coronavirus testing is available via different methods, in several locations. If you think you may have COVID-19 infection, please call your treating physician, who will assist you with the next steps to take. If you do not have any symptoms, but you would like to be tested, numerous private institutions offer screening for a fee.

## What happens during coronavirus testing?

There are currently two kinds of testing options available. In the first case, the discharge from the throat or nose is sampled with a device resembling a cotton swab used for ear cleaning (on a longer stick), and the sample is assessed for the presence of coronavirus

using a procedure called RT-PCR. To increase the chances of seeing whether the virus is present in your throat, please do not eat, drink, rinse your mouth, or brush your teeth before the test. A PCR test detects whether you are infected at the moment of testing.

The other method of testing is the serology method, when a blood sample is drawn, and the antibodies produced by the immune system in response to the virus is detected in the blood. A serology test can be used for detecting the infection that has already taken place.

### **HOW CAN I PREPARE FOR A QUARANTINE?**

Besides following the safety measures listed, it is important that you have a plan for the time spent in quarantine due to COVID-19:



- Make sure you have emergency reserves of all your medications.
- Make sure you have all the important phone numbers and email addresses (transplantation institute, healthcare and social services) at hand.

Plan ahead how you will keep contact with the outside world: discuss with your family or friends who will provide you with food and household products you need during the quarantine.

### **HOW DOES MY USUAL CARE CHANGE DURING QUARANTINE?**

The usual care you have had so far might undergo some changes. Please contact the transplant centre for the requirements to follow. Check-up examinations are being minimized now so that patients on immunosuppressive medication do not have to wait together in waiting halls. Only patients who recently had transplantation need to attend check-up examinations (those who are supposed to have check-ups weekly or every other week during this period), and only the minimum number of check-up examinations is recommended. Prescribing medications occurs mainly via electronic prescriptions or the prescriptions are mailed to patients, and consultations are mainly carried out over the phone.

### **In case you do have to visit the transplant centre:**



Please avoid close contact with others.

Always have a hand sanitizer with you in case there is no soap and water and use it whenever you touch a potentially infected surface.

Wear a mask.

Do not touch your face, especially your eyes, nose, or mouth.

Wait in your car rather than in the waiting hall.



## HOW SHOULD I TAKE MY IMMUNOSUPPRESSIVE MEDICATION DURING THE EPIDEMIC?

Please do not change the dosage of your medications without consulting your doctor! If you stop taking your medication without proper medical guidance, you risk transplant rejection, and put yourself at an even higher risk of infection. For infected patients, the administration of immunosuppressants is generally modified under close supervision by medical specialists.

### Can I take vitamins?

Certain vitamins contribute to strengthening immunity against infection. Contact your treating physician to select the multivitamin products with the optimal ingredients.

### How can I cope with stress during the epidemic?

Stress provoked by the COVID-19 epidemic is completely natural, and the experience differs from person to person, such as:

- ✚ You may worry for your own health or that of a loved one.
- ✚ You might experience difficulty to sleep, or your sleeping habits might change.
- ✚ Your eating habits may change.
- ✚ It may become difficult to focus.
- ✚ Your chronic complaints may intensify.



**You might smoke more or consume more alcohol.**

### What you can do against these:

- ✚ Do not continuously watch the news or read social media.
- ✚ Take good care of yourself.
- ✚ Take deep breaths or meditate.
- ✚ Eat in a healthy and balanced way.
- ✚ Do regular physical exercise.
- ✚ Get enough sleep.
- ✚ Rest, and spend your time with activities you enjoy.
- ✚ Talk to other people about your feelings.

## WHAT TRAVEL RESTRICTIONS APPLY TO TRANSPLANT RECIPIENTS?

COVID-19 has been declared a pandemic, meaning that it is now present in most countries of the world. In these times, transplant recipients should – as much as possible – avoid travelling.

## HOW DOES THE EPIDEMIC AFFECT PLANNED ORGAN TRANSPLANTATIONS?

SARS-CoV-2 epidemic affects transplantation programmes as well, and the related decisions are made by the responsible ministry based on recommendations by professionals working in the organ transplantation field.

As the COVID-19 situation changes from week to week, please visit Ministry of Health Website, or contact your treating physician for information for the current update on transplantation.

## ARE CORONAVIRUS TESTS PERFORMED ON ORGAN DONORS?

Yes. Only organs of donors with a negative COVID test result are accepted.

## How can you protect your transplant recipient family member or friend?

- Do the shopping and go to the pharmacy for them!
- Always wash your hands very carefully, and disinfect the door handles after you arrive!
- Use your own hand-towel only!
- Keep the required distance from everyone and avoid direct contact with other people!
- Being in the fresh air is important now too, but please avoid crowds and public transportation.
- If you have a child in the same household with the transplant recipient, pay particular attention to make them follow the requirements as well.
- Do not take your child with you now when you go shopping!
- When you arrive home from a crowded place, take your shoes off, and also wash your hands and face very carefully!

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