

MARCH 24<sup>TH</sup> 2020  
11:00 UTC VERS.1.1

COVID - 19



# CORONAVIRUS

Safety information - solidarity

*Protect yourself, protect us !*



 English Version



Capt. Edward E, Barbey



FACTEURS HUMAINS

Richard Bonnier

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*Health security, protect yourself, protect us! !*

If the flame of hope still shines today ...



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It's thanks to the medical profession, to the dedication of the front-line health operators against the virus. A chain of interventions from pre-hospital to hospitals fighting relentlessly and courageously against the pandemic, which is raging on a planetary scale!

working for several weeks now to assist patients affected by Covid-19

Congratulation and many thank's!



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## At our level of HF specialists, what can we do?

Our discipline allows us to understand, to explain and anticipate the mental and physiological functioning of an individual or a group in a work situation.

The development of awareness of Organizational and Human Risks that we have been developing in the aeronautical sector for years within the framework of the Crew Resources Management and the Safety Management System is part of a world pandemic today!

We have therefore decided to join those who are already dedicated to combating this scourge by carrying out an awareness and security information module.

**Humbly ... Just support and inform!**

Capt Edward E. Barbey & Richard Bonnier

***To dispense without moderation on behalf of safety!***

## Our approach is part of :

- To circulate the information on a large scale among the various populations of the Civil Aviation and military the safety principles in an operational context other than that to which we usually work;
- Contribute to the management of operational health risks
- Contribute to strengthening the level of health security of frontline operators and their relatives on a national scale
- Help strengthen COVID-19 safety information in order to reduce collateral damage.



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## Content

- The Covid-19
- What's a coronavirus?
- A disease that causes epidemics 2002 - 2012
- The third wave 2019
- How are emerging coronaviruses transmitted?
- Human-to-human transmission
- Environmental transmission
- The basic health & safety practices
- Should you worry about your pet?
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- Not all winter conditions are Covid-19!
- ... /...

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## Content

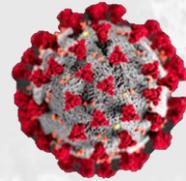
- ... /...
- What are the symptoms of Covid-19?
- A “nasopharyngeal” biological test
- Is there a vaccine for Covid-19?
- Are there people at risk?
- How to treat an infection with the new coronavirus?
- Anti inflammatory drugs not recommended
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- Special quarantine food
- Sound health crisis management practices!
- Stress management
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# COVID-19

A disease, which appeared in Wuhan in China in late 2019, is caused by SARS-CoV-2, a virus that belongs to a large family, the coronaviruses.

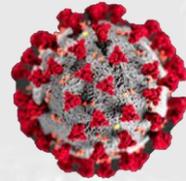
Very common, they can cause a simple cold as well as a serious respiratory infection such as pneumonia, causing fatal epidemics as was the case with Sras or Mers and now with Covid-19.

Symptoms, transmission, number of cases, preventive measures.



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## What is a coronavirus?

Coronaviruses, named after the crown shape of the proteins that coat them, are part of a large family of viruses, some of which infect different animals, others humans.

They are likely to cause a wide range of diseases. In humans, these illnesses range from the common cold to a severe lung infection, responsible for acute respiratory distress.

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## A disease that causes deadly epidemics

Two deadly epidemics have already occurred in the 21st century, involving emerging coronaviruses, hosted by animals and suddenly transmitted to humans :

**SARS-CoV (2002-2003)** : Coronavirus causing severe acute respiratory syndrome (SARS), which appeared in China: More than **8,000 cases** have been identified in **30 countries** and **774 people have died** (a death rate of nearly 10 %).

**MERS-CoV (2012-2013)** : Middle East respiratory syndrome coronavirus, so called because it was first detected in Saudi Arabia. **1,589 cases** and **567 deaths** in **26 countries** have been recorded (a death rate of around 30%).

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## THIRD WAVES OF CORONAVIRUS ?

This third waves deadly global epidemic is linked to SARS-CoV-2.

The first cases identified are people who went to a local market in Wuhan, Hubei Province in China.

Virologically, SARS-CoV-2 is very close to SARS-CoV, which is why it has been classified into the same species of coronavirus (followed by the number 2 to distinguish it from the previous one).

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### SRAS-CoV (2002-2003)

Origin : China  
8 000 cases  
30 countries  
774 deaths

Mortality rate 10 %

### MERS-CoV (2012-2013)

Origin : Saudi Arabia  
1 589 cases  
26 countries  
567 deaths

Mortality rate 30%



### SARS-CoV-2 (2012-2013)

Origin : China  
**383 944** cas  
**169** affected countries  
**16.595** deaths  
24/03/2020 | 11:00 AM. UTC

Mortality rate 4,4 %

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## How are emerging coronaviruses transmitted?

Coronavirus are of animal origin:

one species ("reservoir") harbors a virus without being sick and transmits it to another species, which then transmits it to humans.

In the cases of SARS-CoV and MERS-CoV, the reservoir animal was the bat.

"The virus is asymptomatic in this animal. An intermediate host is therefore necessary for the transmission of these viruses to humans: the masked palm civet for SARS-CoV, sold on the markets and consumed in southern China, and the dromedary for MERS-CoV. "

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## Transmission versus SARS-CoV-2

### The feeder could also be the bat

In early February, a team of Chinese researchers from the South China Agricultural University estimated that the missing link could be the **endangered pangolin**, a small scale mammal.

But caution is advised, pending a final confirmation. The virus is said to pass to humans via animal secretions, under specific conditions that have yet to be identified.

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## Human-to-human transmission

The SARS-CoV, SARS-CoV-2, and MERS-CoV coronavirus are not only transmitted from animals to humans but also from humans to humans.

Concerning Covid-19 disease (formerly known as 2019-nCoV) due to SARS-CoV-2, it is transmitted by postillions (saliva droplets) projected by coughing or sneezing.

Close and prolonged contact is therefore necessary to transmit it (family, same hospital or boarding room) or to have had contact within 1 meter of the patient, in the absence of effective protective measures.

## Environmental transmission

One of the most important transmission factors appears to be hand contact with infected surfaces and then contact with the mouth, nose or eyes.

Depending on temperatures and humidity, the virus can survive for a few hours or several days on various surfaces if they are not disinfected.

Studies are underway to clarify these data.



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## The basic health and safety practices

### Protect your face ! :

It's essential to avoid touching your eyes, nose or mouth (which are potential entry points for the virus into your body) with contaminated hands.



So-called "barrier" measures are therefore essential to limit the impact of the virus: wash your hands frequently with soap or hydro-alcoholic gel.



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## The basic health and safety practices

Protect your face !



A healthy individual wearing a mask is more likely to touch his face and nose (tickling on the nose, mask edge, etc.) and therefore increases his risk of contamination if your hands are not disinfected.



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## The basic health and safety practices

- Sneez or cough in his elbow
- Use single-use tissues
- Don't shake hands with anyone
- Don't kiss anyone



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## Should you worry about your pet?

Certainly, coronaviruses are viruses of animal origin that are transmitted to humans by an animal vector. They thus touched bats, dromedaries and even civets.

However, **"there is currently no evidence"** that pets can be infected with Covid-19 or can be a source of transmission to the public.

Information confirmed by the World Health Organization and by ANSES (National Agency for Food, Environmental and Occupational Health Safety) in a notice published on March 11.



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## **Pregnant woman and dangerous or not coronavirus?**

The coronavirus does not circulate in the mother's blood, so there is no risk for there to be transmission through the placenta!

## **Transmission possible during or after childbirth**

Rather, it is a perinatal transmission (during or just after childbirth), rather than a mother-to-fetal transmission that would occur during pregnancy. If there is a transmission, it takes place at the time of delivery, because the patient can emit the virus into the air.

## **Feeding with milk :**

Attention, wear a mask because of the proximity of the faces, possible transmission of the virus by air. It is recommended to wear a mask and gloves.



## All winter or spring pathologies are not Covid-19!



- The flu is still in circulation in France
- With the beautiful days pollens invade the gardens with the return of seasonal allergies
- Weather changes are often the cause of colds
- If in doubt CALL your doctor, do not move, he will give you the recommendations to follow



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## What are the symptoms of Covid-19?

The most common symptoms of the virus are:

- fever and dry cough



Some people may also suffer from

- body aches
- headache
- feeling of tightness or shortness of breath

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## These symptoms evoke:

- acute respiratory infection or radiologically detectable lung abnormalities.

## In more severe cases, the infection can cause

- respiratory distress
- acute renal failure



- even a multi visceral failure which can lead to death

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## The fact to get a disease like coronavirus

In 80% of cases remains at the benign stage; it is severe in around 15% of cases and critical in 5% of cases.

Researchers estimate that the overall mortality rate from the virus is around 2 to 4%, with disparities depending on the country.

This rate is higher than that of the flu virus that kills one in a thousand people (0.1%).



Some patients also have an asymptomatic form of the virus : they carry the virus, without declaring the symptoms, but they are contagious and can transmit it!

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## A biological test

Considering that the symptoms of Covid-19 can be confused with those of the flu!

The only way to confirm the diagnosis is to perform a biological test by "nasopharyngeal" sample.



The result is generally obtained in 3 to 6 hours

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## Is there a specific vaccine for **Covid-19**?

Vaccines against pneumonia, such as the pneumococcal vaccine and the Haemophilus influenzae type B (Hib) vaccine, unfortunately do not protect against the coronavirus.

Covid-19 is so new and specific that it is necessary to develop a vaccine of its own.

Dozens of clinical trials are currently underway. According to a researcher from the Institut Pasteur, **prototypes have been tested on mice since March 11.**

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## Are there people at risk of developing a more severe form of the disease?

Available information suggests that the virus can cause symptoms similar to those of moderate flu, but also more severe symptoms.

As with many infectious diseases, people with preexisting chronic diseases:

- hypertension
- cardiovascular illnesses
- diabetes
- liver disease
- respiratory diseases...)

These seem more likely to develop severe forms, as do the elderly and immunocompromised.

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## How to treat an infection with the new coronavirus?

Treatment is said to be **symptomatic** (it aims to relieve symptoms) fever medication (paracetamol).

In severe forms, sick people can receive **antibiotics** when a bacterial co-infection is present, be put on **respiratory assistance**...



The rule to follow: take the lowest dose, as short duration as possible!

Respect the maximum dose per intake (500mg or 1g of paracetamol, 1 to 3 times a day), i.e. the maximum daily dose in healthy adults over 50 kg (= 3g per day) as well as a minimum interval of 6 hours between shots.



Do not exceed the maximum recommended duration of treatment = 3 days in case of fever, 5 days in case of pain!

Be aware that paracetamol also has contraindications. It should not be used when you have hepatic impairment, severe renal impairment or alcoholism.

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## Anti-inflammatory drugs not recommended

To lower the fever, the Ministry of Health advises against starting a treatment based on anti-inflammatory drugs (ibuprofen, cortisone, etc.) or aspirin.

Taking this type of medication "could be a factor in worsening the infection". Taking paracetamol should be preferred.

People already on anti-inflammatory drugs due to a chronic disease should not stop their treatment without their doctor's advice.

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## Confinement to the home... how to manage?

When we stay locked up at home, we lack light, we lack space, we lack air, we lack to meet someone, we lack surprises, we lack activities.

To fill the gaps due to confinement for a while, let's take care of our physical and mental health.

- Maintain morale (by calling friends, family)
- Maintain sufficient physical activity (exercise bike, climbing stairs... )
- Devote yourself to reading, music or board games
- Communicate as a couple, as a family
- Take care of your diet (read following slides)

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## Special quarantine food!

We will have to eat differently. Maybe with a little less choice, because obviously, we won't be able to race as easily as we used to. And with slightly different objectives.

Our energy needs will be modified, we risk being subjected to certain deficiencies (for example vitamin D if we have to stay indoors). The stress linked to this situation will also have an impact which will have to be taken into account in the way we eat and drink (on this subject, I advise you to take care of your magnesium intakes to last; this supplement well dosed can be of great help).



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## Nutrition:

Food provides our body with vitamins, minerals, building substances, allowing us to have the energy required to live.

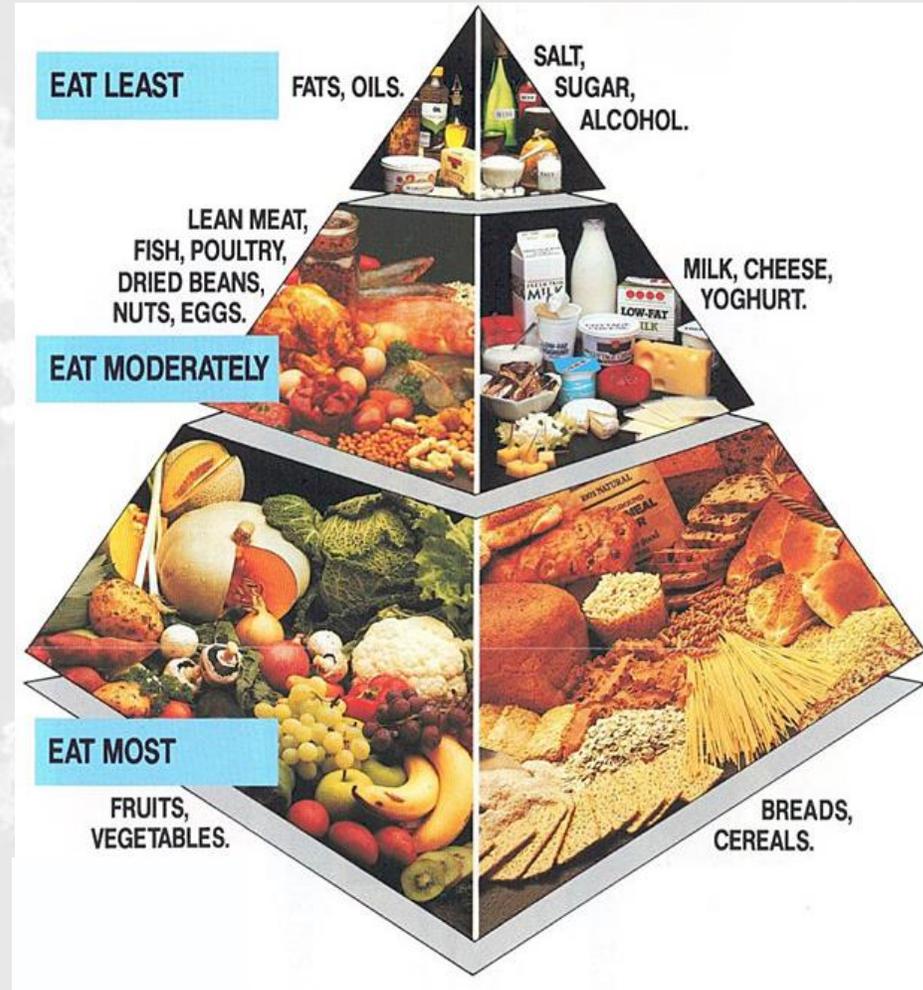
Our organism should evolve in the balance of **energy required** and **energy used**.



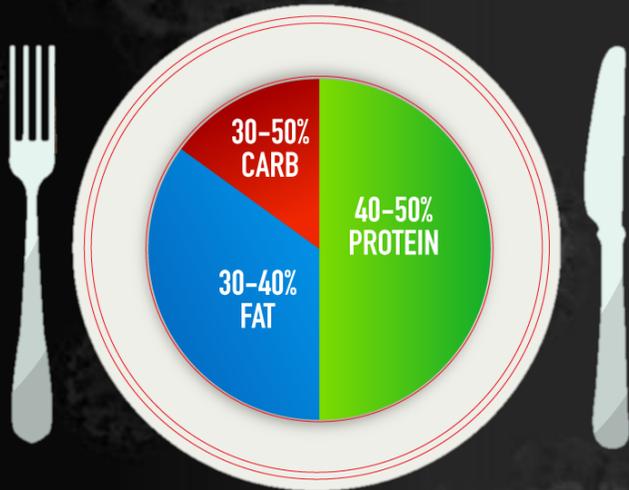
If this balance is upset, it can lead to weight loss, or, more often, weight gain.

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## Ration balance / Food pyramid



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### Daily amount in calories



2400	2800
2400	2600
2200	2600
2200	2400
2200	2400
2000	2400
2000	2200

Average  
2200

Average  
2600



21-25	2000	2200
26-40	1800	2000
41-45	1800	2000
46-50	1800	2000
51-60	1600	1800
61-65	1600	1800
66 and up	1600	1800

Average  
1800

Average  
2100



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## Daily food intake management



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## Relaxation

It is an integral part of a good stress management program :

- abdominal breathing
- relaxation techniques



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## Relaxation techniques

Jacobson progressive muscle relaxation (Feelings of gravity)

1. Review the different muscle groups in your body
2. Contract them one after the other for a short time then release quickly
3. Feel the difference in muscle tension at the end of the exercise

Reduction in insomnia, certain pains, feeling of well-being, calm.



## Relaxation techniques

### Basic element of relaxation, abdominal breathing...

Locate the tensions in your body by assessing their tensions then :



1. Place one hand on your stomach
2. Inhale slowly through your nose: inhale energy
3. Maintain your inspiration by counting to 5
4. Exhale slowly : expel all your tensions and negative thoughts.
5. Hold your breath with empty lungs, counting to 8
6. Repeat this cycle around 15 times

At the end of the exercise, reassess the tensions from 1 to 10



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## Seven: 7 minutes of quick exercise at home

The workouts offered by Seven, without any necessary equipment, aim to provide maximum benefits in the least possible time thanks to personalized programs to get back in shape, lose weight or become strong.

Available on App Store and Google Play

## 7 minutes work out

This application offers a complete exercise program that allows you to lose weight and improve cardiovascular function in just a few minutes a day with 12 exercises of 30 seconds and breaks of 10 seconds between each.

Available on Google Play.



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The Sports Union of First Degree Education (USEP) offers a recreational challenge carried out in collaboration with the athlete Christophe Lemaitre, an athletic challenge situation to be implemented in a space of 4 m<sup>2</sup>, for all ages and all levels.

<https://usep.org/index.php/2018/01/20/la-boite-a-defis-recre/>

You can also find a file gathering traditional games from all continents for children from 3 to 12 years old on the address :

<https://usep.org/wpcontent/uploads/2019/09/Jeuxtraditionnels.zip>

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## **Deal with stress**

Ultimately, in a case of confinement, experiencing sadness, stress, confusion, fear or anger during this endemic crisis is conceivable and completely normal. So ... get ready!

## **Communicate!**

You can find comfort by talking to people you trust. Get in touch with your friends and family members.

## **Maintain social contacts**

With your loved ones at home or by email or phone with the rest of your family and friends.

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## If you feel discouraged ...

Above all, don't give in to the temptation to channel your emotions into ...

- consuming more alcohol than usual
- resuming smoking or smoking more than usual
- consuming narcotic drugs.

Despite the good practices in place, if you feel overwhelmed by the events, contact your doctor.





## Calm your concern

Calm your agitation by spending less time, you and your loved ones, watching or listening to TV News that disturb you in the media.

## Keep you busy

Take advantage of the skills that have helped you cope with other hardships in the past and use them to help you manage your emotions during this unusual period of this pandemic.



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## You have to go out?

- long hair tied, no rings no necklace

## Wear

- long sleeve clothing
- mask just before going out
- gloves or use tissues to touch anything

## Avoid

- public transportation
- avoid currency and pay by card

## Maintain

- social distance of 2 meters



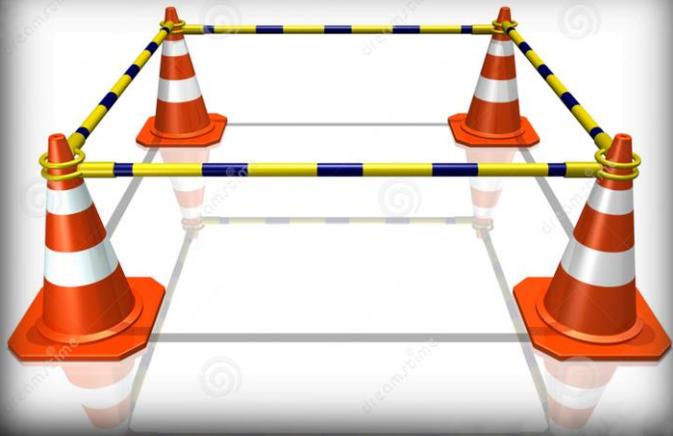
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*Create a Home Safety Area !*



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## When you return at home

Place your external clothes in a isolate space

Jacket, scarf and shoes on a chair at this location

If you went out with your pet

Wash his face and then the paws with a wipe

Deposit any purchases for decontamination

**Perishable foods**

Pass the containers with a wet wipe and store them

**Non-perishable food or provisions** must remain in place

48 to 72 hours and then you can store them

Decontaminate your keys, wallet and phone

Place the contaminated wipes in a bag

The bag must remain in the decontamination space

**Finally remove your gloves and wash all handle that your touched and wash carefully your hands !**



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POUR SE PROTÉGER ET PROTÉGER LES AUTRES



Se laver  
très régulièrement  
les mains



Tousser  
ou éternuer  
dans son coude



Utiliser un mouchoir  
à usage unique  
et le jeter



SI VOUS ÊTES MALADE  
Porter un masque  
chirurgical jetable

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## In summary, apply sound health crisis management practices!

- Stay at home and no unnecessary trips
- Keep your distance (2 meters minimum)
- Wash your hands thoroughly with soap.
- Wear gloves in store, elevator and keyboards ...
- Give up contacts (handshakes, kissing)
- Cough and sneeze in a tissue or in the crook of the elbow



### In case of :

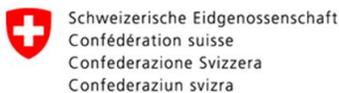
- - fever and cough, stay home and tell your doctor
- - breathing difficulties call your national number



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## Information base



Office fédéral de la santé publique OFSP



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