



# What is 'ONE HEALTH'?

One Health is the concept that human health and animal health are interdependent and bound to the health of the ecosystems in which they exist.



## What is a zoonotic disease



A pathogen (virus or bacteria) that can be transmitted from animals to humans and vice versa

Often, animals and humans share the same diseases, and treating only one part of the patients, humans or animals, will not solve the problem. For example, it is important to vaccinate both humans and animals to prevent the spread of deadly diseases such as rabies. Today, we know that :

**60%** of existing human infectious diseases are zoonotic



At least **75%** of emerging infectious diseases of humans (including Ebola, HIV, and influenza) have an animal origin



**5** new human diseases appear every year. Three are of animal origin

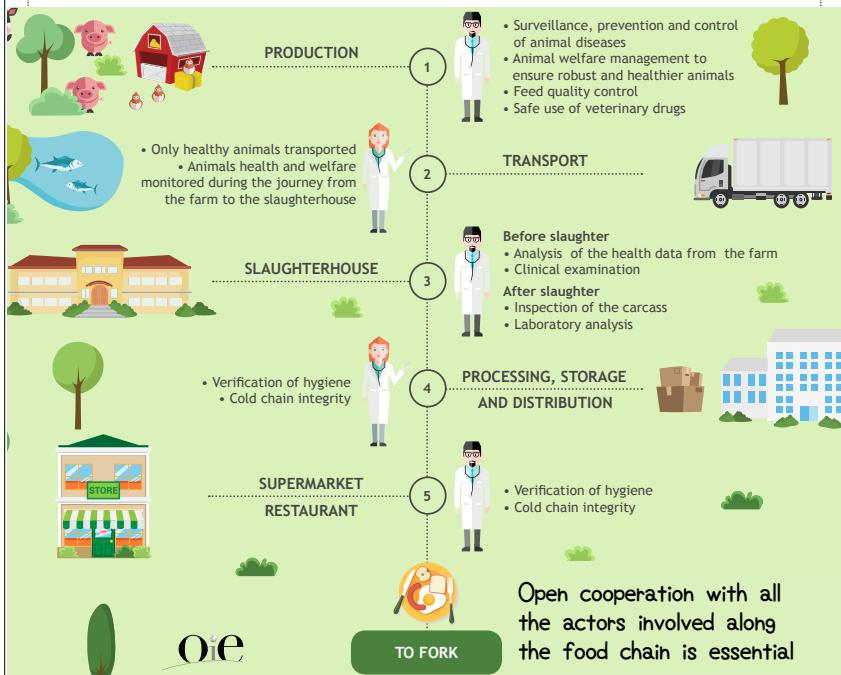


**80%** of agents with potential bioterrorist use are zoonotic pathogens





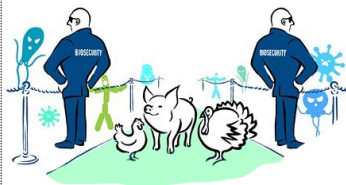
Many professionals with a range of expertise who are active in different sectors, such as public health, animal health, plant health and the environment, should join forces to support One Health approaches.



To effectively detect, respond to, and prevent outbreaks of zoonoses and food safety problems, epidemiological data and laboratory information should be shared across sectors. Government officials, researchers and workers across sectors at the local, national, regional and global levels should implement joint responses to health threats.



## What is 'BIOSECURITY'?



Biosecurity is the methods that are used to stop a disease or infection from spreading from one person, animal, or place to others.

Biosecurity is the key to keeping your animals healthy. It is what you do to reduce the chances of an infectious disease being carried to your animal facility, your house, your family, or your neighbours by people, animals, equipment, or vehicles, either accidentally or on purpose.

### How can a disease spread ?



**Humans**



**Soil**



**Animals**



**Water**



**Equipment**

- **Humans** - Humans can spread diseases through faecal material, saliva, or other fluids, usually with improper hand-washing & hygiene practices, illness, or injury.
- **Soil** - If an animal was sick, its surroundings, the place where it slept and lived will be contaminated.
- **Animals** - Both wild and domesticated animals can spread contamination through their faeces and sometimes when biting.
- **Water** - Water can carry and spread pathogens, contaminating animals through drinking water, washing & cleaning, etc.
- **Equipment** - Equipment, tools, and other food contact surfaces that aren't regularly cleaned and sanitised can harbour pathogens and pose a huge risk to animals and humans.



## What should I do? Personal Hygiene

Good personal hygiene means keeping your body looking and smelling clean and more importantly healthy. It protects both you and the others that will come in contact with you.

### Wash your hands

The most important way to avoid getting sick and spreading germs to others. Wash your hands after using the restroom, before, during, and after preparing food, before eating food, after blowing your nose, coughing, or sneezing.



### Shower daily

Get rid of any dirt, sweat, and/or germs that your body may have accumulated throughout the day, and prevent hygiene-related diseases. Don't forget to wash your hair !

### Cut your nails

Dirt and germs collect under long nails, and if not washed properly they can carry diseases around. Never bite your nails as you will eat the viruses and bacterias that live underneath ! Always use nail cutters instead.



### Things you should not share with others



Hats, Helmets, Hairbrushes & Combs - Antiperspirant & Deodorant - Nail Clippers & Files - Makeup - Razors - Drinks - Toothbrush - Earrings - Earphones - Forks, Knives, Spoons - Masks



Hygiene at work is essential to keep yourself, your co-workers, the public and the animals safe.

## Wash your hands

Before preparing food, before eating, after going to the bathroom, before and after touching animals. Wash your hands regularly during the day with soap.



## Use hand disinfectant



Depending on the type and age of animals, you might be required to use disinfectant before entering an animal enclosure, and when leaving the enclosure.

## Make use of the footbath

A footbath contains disinfectant to make sure you do not carry pathogens from the outside to the inside of the enclosure, and vice-versa. Always step in, never jump it !



## Keep your work clothes clean



Just like your other clothes, work clothes need to be cleaned regularly. Depending on your workplace rules, you might need to wash them yourself or give them to the cleaning staff. If you have boots, don't forget to give them a good clean at least once a week with soap, more if needed.

## Clean your tools

Clean tools regularly. Ideally, they should be disinfected once a week.





## What should I do? Hand Cleaning Routine

Hand washing is the most important step to protect everybody from diseases as it stops the transmission of pathogens. Make sure to follow this routine every time you wash your hands. The washing should last at least 30 seconds for it to be effective.





## What should I do? Quarantine Equipment

Depending on the type of disease you deal with, you might have to wear protective equipment. Protective equipment can be only a pair of boots and gloves, or the full quarantine suit.



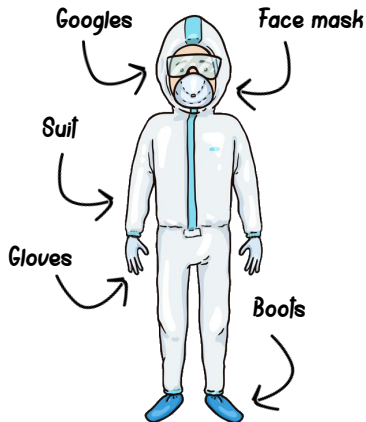
Make sure to always wear it properly and use it when instructed as it will protect not only yourself but also your co-workers, your animals and the members of the public.

### How to wear a mask ?

A mask should cover your nose and your mouth. When putting it on, gently open the front to cover both.



Always wash your hands **BEFORE** touching your mask, to put it on or to remove it. **NEVER** touch your mask otherwise.



### How to remove gloves ?

- 1 - Pinch one glove at the wrist without touching the skin of the forearm, and peel away from the hand (inside out).
- 2 - Hold the removed glove in the gloved hand and slide the fingers of the ungloved hand inside between the glove and the wrist. Remove the second glove by rolling it down the hand and fold into the first glove.
- 3 - Discard the removed gloves.





1 Keep your distance



Do not touch other animals if you are working with sick animals.

Do not go to the quarantine/vet section if not invited.  
Avoid visiting other animal facilities if they have sick animals or if you are working with sick animals yourself.

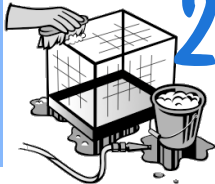
Keep it clean

Clean food & water containers daily.

Clean your equipment daily.

Disinfect your equipment regularly.

Wash your hands before entering and after leaving an enclosure and use a footbath.



3 Check your animals



Check all your animals daily, making sure they are in good health.

You need to know your animals to be able to tell when they act differently from usual.

Report any change

Immediately report any change in behaviour to your curator or manager. A change in behaviour is often the first sign of a disease. By reporting it as soon as possible, it gives the vet time to act and more chances to save the animal.





## What should I do? Isolation & Quarantine



Having animals in quarantine or in isolation is a way to protect other animals of similar species that might catch the same diseases.

### What is a Quarantine ?



A strict isolation imposed to prevent the spread of disease.

Animals are put in quarantine when they are not currently sick, but have been or may have been exposed to a communicable disease. It happens when a new animal is received by a zoo or an aquarium. It will remain separated from the others for several weeks in order to see if the animal carries any disease. If not, the animal is then placed with the others after the end of the quarantine period.



### What is Isolation ?

The complete separation from others of an animal suffering from contagious or infectious disease.

Animals are placed in isolation when they have been infected with a disease. By separating the sick animals from the others, it keeps the other animals healthy.

**NEVER** enter a quarantine or isolation area if not instructed to do so, especially if you are working with healthy animals outside. If you are working in a quarantine or isolation zone, **ALWAYS** remember to wear protective equipment (see Card 7).





## What should I do? Coming to the Workplace



### Do clothes spread diseases ?

Yes, clothes can be contaminated with pathogens. Do not mix work and home clothes, or you will transfer the diseases from one to the other.

It is not easy to keep your workplace and your home totally separated, especially when it comes to viruses and bacterias. But in the event of a disease at work or at home, you have to make sure you do not contaminate either your workplace or your family.

1

*Come to work in your normal clothing - do not wear work clothes to travel from home to work.*



2

*Use the entrance footbath before entering your workplace.*



3

*When arriving at work, before anything else, wash your hands with soap (and/ or use a disinfectant spray).*



4

*Change into your work clothes. Store your normal clothing away from your work clothes.*






## What should I do? Leaving the Workplace

Remember : by keeping your work and home outfits separated, you also protect your family from diseases that you can pick up at work !



### How do I clean my work clothes ?

 Your work outfit, including your boots, has to stay at your workplace. Depending on the rules of your facility, give it to the cleaning staff or wash it yourself. Often, clothes are washed with a little bleach added to the washing powder for disinfection. Ask your manager for protocols.



**1** Clean your work boots or shoes if needed. Remember that disinfection will work better on clean clothes.



**2** Remove your work clothes and change into your normal outfit.



**3** Wash your hands with soap (and/or use a disinfectant spray).



**4** Use the entrance footbath before leaving the workplace.

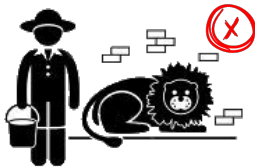




## What should I do? At Home - NOT to do

What we do at home also impact our work. It is important to remember that pathogens are not visible and cannot be detected without special equipment.

### Things you shouldn't do at home



*Visit other animal facilities that have sick animals, or visit other animal facilities if you have sick animals at work. You will spread diseases around.*

*Take care of animals for other persons (neighbours, family), especially if the animals are sick. By touching them you might spread the disease and bring it to your workplace.*



*Bring an animal from work to your house, even if it is to take better care of it. Animals usually feel better in their normal enclosure, and moving them will either spread pathogens or infect the animals with new diseases.*

*Lend or receive equipment from persons harbouring animals. These animals might be sick, and thus the equipment could be contaminated.*





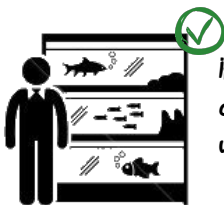
At home, most of the hygiene rules from your workplace should also apply. It will protect you and your family from most diseases.

## Things you should do at home



*Maintain good hygiene all year round in your house to limit the spread of diseases.*

*Teach your neighbours & family about proper animal husbandry and hygiene. It will help them as well as their animals and prevent from zoonotic diseases.*



*If you have animals at home, treat them with respect and keep their living space clean. Don't forget to vaccinate them and take them to the vet if needed.*

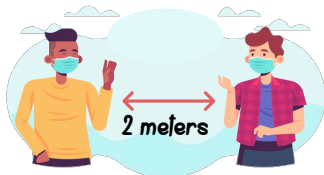
*Take care of yourself and follow the personal hygiene rules (Card 4). Sickesses also originate from bad personal hygiene.*





## What should I do? Physical Distancing

Physical distancing is a way to slow down or stop the spread of infectious diseases by limiting contact between you and other people.



Physical distancing is the act of keeping at least 2 meters between you and others. No touching is allowed, no handshakes, hugs or kisses.

Physical distancing also encourages people to stay at home instead of going out with others or taking part in group gathering events.

### Do



*Stay at home and read or*



*Clean the house  
DIY at home*



*Video chat with friends and  
family*



*Go shopping only for  
essential items*

### Don't



*Group gatherings*



*Unnecessary travels  
Public transport*



*Concerts & Theatres  
Stadium events*



*Going shopping with the  
whole family  
Non-essential shopping*



*Visit friends or family*



*Church / Mosque services*



You are a primate keeper. One of your family members is very sick, and you are not feeling very good yourself.



What is a Primate ?



Apes, monkeys and lemurs. These animals are very close to us, so much so that they are susceptible to the same diseases.

What should you do ?

- A.** Go to work as usual. You are not feeling so bad, it will pass in a few days.
- B.** Go to work but tell your supervisor that you are not feeling well and that someone in your family is very sick.

The correct answer is : B

Any disease that humans catch can affect primates. If a primate keeper is sick, he/she can't work with primates anymore or he/she will give the disease to the animals.

If you are sick, tell you supervisor and you will be moved to another section until you are healthy again. Depending on the disease, he/she might also ask you to stay home, providing you have a proper doctor letter. Do not decide on your own what to do, always ask your supervisor for directions.

If one of your family members is sick, also tell your supervisor. He/she will either move you to another section or give you protective equipment in order to prevent the spread of the disease to your animals.



It is time for the reptile contact session, and you promised the kids to take out the iguana today. But as you walk in its enclosure, you realise that it hasn't touched its food and it is not even reacting to your presence. It is not normal.

Visitors are waiting outside.

You need to make a decision.

*What should you do ?*



- A.** You decide that you should leave the iguana for now and instead pick up a snake. Before going to meet the children, you radio your supervisor to let him/her know about the iguana.
- B.** You promised to take the iguana out for the children. So you take it and you'll tell your supervisor later about the iguana not looking good.

*The correct answer is : A*

Any strange behaviour or sign that something is not right with an animal needs to be reported ASAP. You should have a mean to contact your supervisor immediately, such as a radio or a phone. Use it. He/she will assess the situation and contact the vet if needed. By reporting the problem immediately, you give more time to the vet to sort out the problem, and thus more chances to the animal to survive.

Contact sessions, especially with children, can be a source of stress for animals. If the animal is sick, it will definitely make it worse. Also, by letting other people touch a sick animal, it will spread the disease. Do not take chances, leave the sick animal alone and take another one, even if it means that the visitors will be disappointed. Always think of the well being of the animal first.



You are the hoof-stock keeper, working with buffalos, antelopes and goats from the petting farm. This morning you see that one of your goats is drooling and it is not very active. It is not eating either. But you can't stay with it because you have to go feed the springboks or you'll be late for tea time.

*What should you do ?*

- A.** You have read somewhere that this can be a dangerous disease. You radio your supervisor to say that one of your goats doesn't look OK. You give him/her the symptoms and you wait for further instructions.
- B.** It doesn't look too bad. You carry on with your feeding. You will see your supervisor at tea time, you will tell him/her then.

*The correct answer is : A*

Any strange behaviour or sign that something is not right with an animal needs to be reported ASAP. You should have a mean to contact your supervisor immediately, such as a radio or a phone. Use it. He/she will assess the situation and contact the vet if needed. By reporting the problem immediately, you give more time to the vet to sort out the problem, and thus more chances to the animal to survive.

When working with a certain group of animals, you need to be aware of the usual diseases and problems they can encounter. For example, here the goat is showing the symptoms of Foot-and-Mouth Disease (FMD), a highly contagious disease that can spread rapidly to all hoof-stock animals, such as springboks and buffalos. By touching the sick goat and then going to feed the other animals, you will spread the disease to the other animals. Always contact your supervisor if you are not sure about what to do. And read as much as you can about your animals.



Today is one of these days. You have a million things to do, you have to fill in those reports, it is your turn to do the cleaning of the keeper's room, and you have to help in the kitchen because the kitchen staff is on leave. You really don't have time to change the footbath. Or to clean your hands in-between each enclosure. Or to disinfect your tools like you do every week.

Cleaning & Disinfecting



Cleaning

- Removes dirt



Disinfecting

- Kills viruses and bacteria

What should you do ?

- A.** You will do the cleaning tomorrow. The footbath doesn't look too bad and your tools can wait another week without disinfection. No one will know.
- B.** You ask one of your co-workers to exchange your keeper room cleaning days. That will give you time to do the rest of the work properly today and tackle all the required cleaning.

The correct answer is : B

There is a reason why your supervisor said to disinfect tools regularly and to change the footbath daily. It is to lower the risk of infection for both animals and humans. Even if you don't see dirt on your tools or your hands, it doesn't mean that they are clean. There are always bacteria and viruses. Disinfection is essential to get rid of them, and it needs to be done properly and on time.

Rely on your co-workers for help. You are working together, as a team. You don't have to be friends, but at least try to work together towards a common goal, the welfare of the animals. Everything you do should be with the health and well being of the animals in mind.



## What should I do? Receiving a parcel

You have just received a parcel from a courier guy. Unfortunately, you can't be sure that this parcel hasn't been touched by someone carrying a disease, which means it might be contaminated.

*What should you do ?*

- 1** Your parcel comes in a box. First, disinfect your hands before opening it.



- Open the box. Take the contents out. Wipe down the contents with a cloth and disinfectant.

- 3** Discard the box in the appropriate container. Do not let it stand around for a while, always remove it ASAP.



- Wash your hands with soap or use hand disinfectant.



## What should I do? Disinfect all small items

We often forget that we have touched our keys or phone before properly cleaning our hands, and as a result these small items carry an enormous amount of bacteria and viruses.

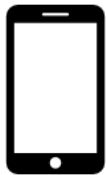
Is your phone clean ?



Not at all !

It is with your keys and door handles, one of the most dirty items, simply because we always have it in hands and as a result it collects every bacteria and virus that we touch !

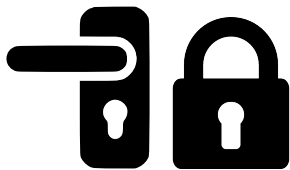
Which items do we need to disinfect regularly ?



Phone



Keys



Door handles and locks



Watch



Bags



Glasses



Masks



Have you left your mug for others to clean after tea time ? Have you left your personal belongings laying everywhere in the common room ? Is the fridge a mess after your passage ?

Then you might need some Tea Time Etiquette to help keep your relationships with others in the happy zone, and the diseases at bay !

### *I clean after myself*

Don't leave your mug for others to clean. If you have used it, you clean it. And with soap ! Don't forget the soap !

### *I don't let the dishes pile up*

The dishes are to be done at least once a day. Keeping a workplace clean starts by cleaning in the common room.

### *I participate in cleaning duties*

The common room, or tea room, has to be cleaned regularly (at least once a week). Make sure you help others to do so. Remember that appliances such as fridge, microwave and kettle also need cleaning !

### *I keep my things out of the way*

Don't leave your boots where they shouldn't be. Keep your personal belongings in your locker or in your bag and store it away.

### *I encourage good behaviour in others*

By doing things properly, you will be an example to follow.

**IMPORTANT : Do NOT share cutlery sets, bowls, plates or drinking glasses !**

**These items carry diseases if they are not properly cleaned !**



## Good to Remember



Do everything possible **OUTDOORS**



Open **WINDOWS**



Wear **MASKS**



Keep 2 meters **DISTANCE**



Avoid **CROWDED** spaces



Be **QUICK**

## What causes the problem ?

When we cough, sneeze, talk, sing or simply breathe, we spray very small drops of moisture into the air; these are respiratory particles. If someone is infected, the virus will be present in these particles.

The virus spreads when these droplets get into your:



**SICK PERSON**

**EYES**



**NOSE**



**MOUTH**

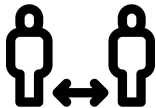


**HEALTHY PERSON**

These particles in our breath can spray quite far (several metres). If there is poor ventilation and no air movement, they can hang around in the air. They can land on surfaces (where the virus may survive for some hours) and if you are close to someone they can land on your eyes, nose or mouth.



### What are the 3 Ds ?

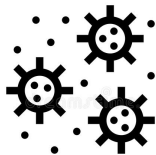


#### Distance

The further away you are from someone who is infected, the less likely you are to be infected by them or to breathe in particles they have breathed out.

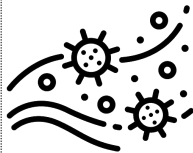
#### Dose

To become infected you need to have contact with a minimum dose of virus, which takes time and exposure to people with the virus. The longer you are exposed to an infectious person, the more people you are exposed to, and the fewer barriers (like cloth masks) between you, the more likely you are to be exposed to the virus. People who have symptoms or are about to develop symptoms, including mild illness, are generally more infectious.



#### Dispersion

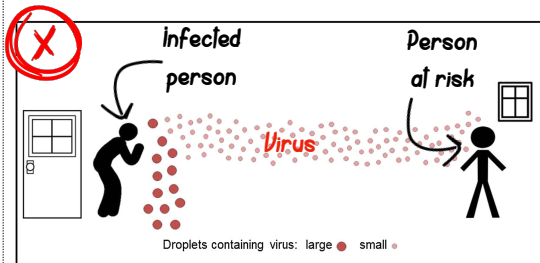
Because smaller particles hang around in the air, the movement of air makes a really big difference. The particles disperse quickly if you are outside, particularly if there is a breeze or wind. We also know that sunlight breaks down the virus. Small, enclosed spaces with closed windows are high risk, especially when they are crowded.





### The 3 Ds interact!

If you are outdoors, at least 1m (but preferably 2m) apart from others, for less than 10min, your risk of becoming infected is very low.



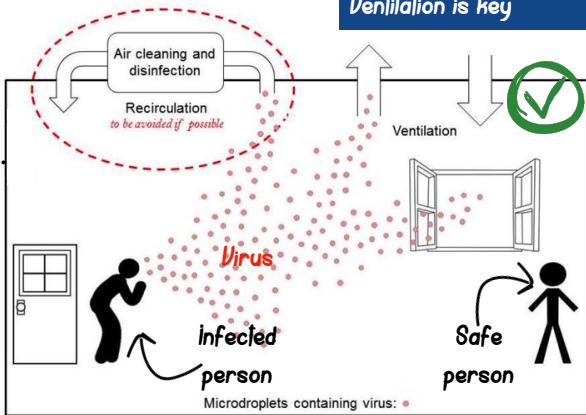
If you are stuck in a room with closed windows, with someone with symptoms, your risk of getting the disease increases, whether or not you wear a cloth mask.

### Most dangerous locations

Churches, weddings, businesses, family reunions, funerals, music events, restaurants or bars

### Ventilation is key

Physical distancing is very effective when outdoors or for short encounters (10min). In a closed space, its effectiveness dramatically diminishes. Masks and 2m distance are not enough if you are in an unventilated space all day.





### Physical Distance

This is your major defence from infection. The good news is that although the virus spreads easily, short periods of contact will not get you infected.

#### To do



Quickly passing someone in a supermarket or paying for groceries



Brushing past a runner in a park

#### Not to do



Sitting in a taxi with closed windows



Being alongside a sick co-worker at work



Singing in a packed church

### Go for outdoors and open all windows

Open windows whenever possible on public transport, in shops or at work. Unfortunately, the interaction of the three Ds means that taxi rides of more than 15min are risky, even if everyone is wearing a mask, unless the windows are open.

Businesses, factories, offices, open all windows and utilise outside space. Restaurants, bars and shebeens should consider outdoor seating wherever possible.

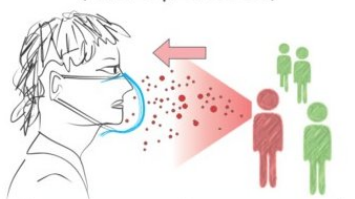
Socialise outside if you can, keeping a 2m distance. An outside braai or picnic is much safer than visiting someone in their house. Avoid visiting people or being visited inside homes for more than a few minutes. Have work meetings outdoors, if possible. If you want to have a gathering, such as a religious gathering or funeral, do it outside.

Outdoor sport is very low risk, unless involving close prolonged contact.

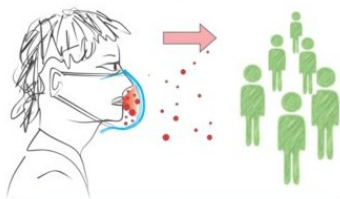


There is now lots of evidence on the effectiveness of wearing cloth masks in the community. A cloth mask traps the virus-containing respiratory particles during breathing, coughing or talking, and helps prevent them from moving away from the mask-wearer.

protecting yourself  
(inward protection)



protecting others  
(outward protection)



People who have very mild symptoms or are about to develop symptoms can spread the virus this means that each of us might spread the virus unknowingly. If everyone wears a mask the amount of virus in the air is much reduced, we all protect each other.

***Always wear a mask whenever you are close to people other than those in your household, especially indoors***

Wear your mask correctly. It must cover from the bridge of your nose to over your chin at all times. Wash your mask daily with soap or detergent.



As important as masks are, in an indoor space they are not a substitute for ventilation and distancing, you need all 3.



The virus is incredibly fragile, and washing your hands with any soap for 20 seconds kills the virus.



### At the workplace



Make soap and water (or hand sanitisers with an alcohol solution of at least 70 percent) as widely available as possible at workplaces, malls, shops, transport and offices. Soap works much better than alcohol-based sanitiser, is cheaper, and will result in less cracked hands.



Invest in mobile handwashing stations in areas with a high concentration of people, like hospitals and clinics.

### Do you need gloves ?

Gloves are unnecessary for most people. You still need to wash them so you may as well just wash your hands. The one exception may be someone who handles lots of items like a dishwasher or a cashier, where exposure may be higher (and they must wash their hands after taking the gloves off).



### Good hygiene practices (hands)



Wash your hands often with soap or hand sanitiser



Do not touch your face



Minimise contact with others and devices / furniture



Clean commonly touched workspaces and public areas often. Minimise touching and wipe down frequently touched surfaces.

### How long does Covid-19 last?



**3 hours**

**In the air**  
(droplets from coughs, sneezes etc)



**4 hours**

**Copper**  
(taps etc)



**4 days**

**Non-porous surfaces**  
(doorknobs, elevator buttons, light switches etc)



**24 hours**

**Cardboard**  
(mailed packages unlikely to have)



**2-3 days**

**Plastic**



**9 days**

**Glass**  
(includes mobile phones. use disinfectant wipes)

### What to disinfect ?



**Door handles**



**Lift button**



**Keys**



**Phones**



**Railings**



**Card machine**

The virus dies quickly on surfaces. In laboratories it has been found in low doses beyond 24h on plastic and steel.



### Going shopping

Washing your clothes after going out, or washing your car, and wiping all your groceries is not necessary. Just wash your hands and keep surfaces around you clean and dry.

### In case of an outbreak / person infected

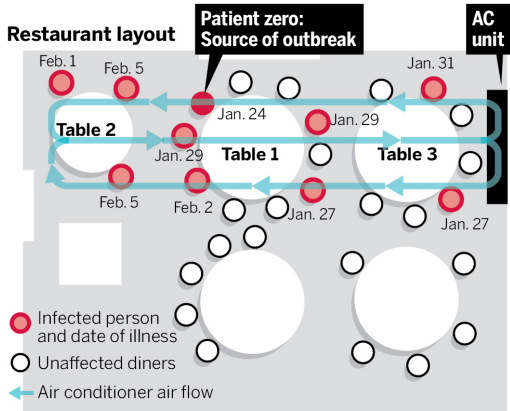
Wipe surfaces down with soap and water, followed by bleach, or other common disinfectants. If you can, leave the venue open and ventilated for 24h. There is no need for special chemicals, or “deep cleansing” or “fogging”, they are no more effective than soap and water, and are associated with other health risks. There is no need to shut down a facility. Once surfaces have been cleaned, disinfected, and spaces ventilated, work can continue.



Understand your air-conditioning system. A system that recirculates air is very risky, and has been linked to several call centre and restaurant outbreaks. You are essentially guaranteeing that everyone breathes everyone else's air. On the other hand, an air-conditioning system that extracts air and brings in air from outside makes an indoor space safer. But simply opening windows, where possible, especially if combined with use of a fan, may be more effective if it increases the movement of air. If well ventilated, a room can be safe in minutes, even if someone is coughing and highly infectious.

### How the AC could spread a virus

A COVID-19 outbreak was attributed to air conditioning at a restaurant in China (Jan. 24th). Here is how the virus spread from 1 infected person to 9 others, at 3 different tables.



#### Table 1

Patient 0 has lunch with family. 4 other family members become sick afterwards.

#### Table 2

3 people next to the infected table, in the path of the air flow from the AC are sick a week later.

#### Table 3

Air is recirculated and 2 people at table 3 get sick later.



### *Distancing*

Limit the number of people in shops. Lines on the floor to signal distancing requirements have been very successful

### *Pensioner only ' hours*

All shops should consider having a pensioner-only (or also people with a health-risk note) hour at the beginning of the day. Older people, and people with diabetes, hypertension, HIV, cancer and obesity may be more at risk (we are still learning about the extent of risk), and enabling them to shop when it is least crowded, and when other people have not yet been into the shop, helps protect them.

### *Hotel rooms*

Consider leaving hotel rooms empty and ventilated for a day after someone leaves, and ask guests to open the windows when they leave, to protect cleaning staff.

### *Change work hours*

Factories, mines, offices and other workplaces should consider staggering work hours or days so that not every employee comes in at the same time or on the same day.

### *Lifts and Common rooms*

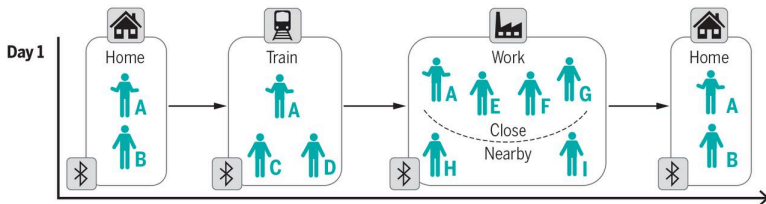
Take turns in lifts (and always wear cloth masks). Tea and break rooms must be well ventilated and break times staggered to reduce crowding.



We are social creatures, we need human contact. Many extended families have regular get-togethers. Unfortunately, if you are indoors with people who don't live in the same home, you are seriously increasing the risk of spread to your family.

### *Even without symptoms, you can infect others*

Subject  A has COVID-19 infection. No symptoms



***In just one day, Mr. A has come into contact and possibly infected 8 persons***

One person who was exposed in a shop or transport or work, who is not yet showing symptoms, can expose a whole extended family, who can then expose everyone they work with. A high percentage of people are infected in their own homes and take the virus to work. Vulnerable family members should consider wearing masks at home. Meet outdoors wherever possible.

### *Personal risk factors*

Some people are at much higher risk than others. The most significant risk factors for being badly affected are older age (especially over 65), diabetes, hypertension, HIV, uncontrolled asthma and obesity. If you or your family member has one of these factors, consider getting someone less vulnerable to do the shopping, consider going to shops at opening time, before anyone else has been in them. Vulnerable people should avoid taxis, trains, buses and gatherings if they can.



Children are much less likely to be infected with the virus and even when infected have no or mild symptoms.



### Is school OK ?

Going to school is unlikely to be dangerous for children (though schools have to think about protecting teachers).



### Grandparents

Sadly, you still may want to hold off from children hugging vulnerable grandparents for a while.

### Playing with other children

One of the hardest parts of the lockdown has been stopping children from playing together. From current knowledge it seems that there is likely to be some risk, and children's behaviour when they are together is a challenge to all three Ds. If children play together, encourage outdoors, masks or face shields and lots of handwashing (before, during and after). Consider who they come into contact with at home (an elderly grandparent, someone with diabetes) when deciding about play arrangements. Perhaps discourage hugging and kissing.



### Explain the situation and the new rules to children





### Protect others

Stay home if you have any of these symptoms. Encourage workers to stay home if they have these symptoms. When you are not at home, wear a cloth mask to protect others, especially indoors.



cough



fever



sore throat



body aches



loss of smell



difficulty breathing



### When should you test ?

Getting a PCR test for coronavirus is less useful than many people think. A test that comes back negative does not mean you don't have the virus ! It has a very high "false-negative" rate. Unless you need hospital care (in which case you will be tested), the test won't affect how you look after yourself, and if you have symptoms you should isolate anyway as you may be infected.

### How should you isolate ?

If you have symptoms or have been in close contact with someone who has tested positive, self-quarantine. If living with people, try to spend time in a room on your own or spend time outdoors. Avoid communal spaces wherever possible. When you can't avoid using these (the kitchen or bathroom), try to spend as little time as possible, wipe surfaces, wear cloth masks, and open windows.



Wash your hands often.



Wear a face mask around other people and pets.



Cover coughs and sneezes.



Isolate yourself from others in your home.



Use a separate bathroom, if possible.



### Public toilets

There is some evidence that flushing a toilet sprays particles in the air which can have the virus in them. Tell customers, employees, and passengers on planes to put toilet seats down before flushing. Consider adding signs in all public restrooms with this message.



### What about thermometers ?

Thermometers, especially the “point at your forehead” or oral ones, are actually very poor at telling your temperature, and may falsely create the impression that an infected person is not infectious. At a business or venue entrance they require close contact with the person with the thermometer. A person who has a fever from Covid-19 is likely to have other symptoms, so a simple symptom check is all you need.

### Can I fly ?

Planes have very good air-circulation systems with particle filters that remove the virus from the air, which means that they are very low risk during the flight. Be careful of surfaces, and on short trips avoid the toilet if you can. You are far more likely to contract the virus in the airport while queuing, or waiting in a lounge or restaurant, than on the plane.



Pre-screening protocols



Rigorous aircraft cleaning regime



Within the terminal



Cabin environment



Have clear communication about how to manage risk at work. Managers and policy advisers should realise that although policies need to be clear and not too complicated, at the same time advice that is nuanced but actually doable has better results than advice that is very simple but unrealistic in practice. Compare telling people they can prevent HIV by never having sex rather than by giving information about safe sex practices. The former is simpler but does not result in HIV prevention. It may be true but it doesn't help because it is not realistic.

Businesses should anticipate they might have to shut down for a day and openly communicate.



## No shaming !



Don't judge or stigmatise people with Covid-19. Getting infected does not mean they were careless or have bad hygiene. Anyone can get infected, millions of people worldwide have been, and in South Africa, for every case diagnosed there are likely to be 10 others who have it but have not been tested, and may not have symptoms. It may be you.

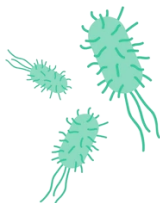
A workplace may have an outbreak despite taking all necessary measures. There is no need to shout at people exercising outdoors without a mask but at a distance, or in the park with their family. They are not going to infect you. Be kind.





E. coli occurs naturally in untreated water, plants and even our own intestines. Some E. coli are harmless while others are very dangerous.

The main problem with E. coli is its resistance to antibiotics. Antibiotics often don't work against this bacteria. As a result, it is difficult to cure an E. coli infection.



### What is a E. coli



E. coli is short for Escherichia coli, a family of bacterias that can be responsible for various diseases.

### Sources of contamination



Untreated water



Contaminated food



Infected animals



Infected people



Low fever



Nausea



Fatigue



Vomiting



Stomach cramps



Bloody diarrhea

### Symptoms



Simple actions can prevent E. coli infections and protect your family and yourself.

### Wash your hands

Before and after taking care of animals, before and after touching food items, and before eating.



### Cook your food

Cooking food, especially meat, is the best way to get rid of E. coli ! Make sure it is fully cooked before eating it.



### Separate meat and veggie preparation areas

If you don't plan to cook all your food, including your fruits and veg, use different knives/cutting boards for fruits and veg and for raw meat.



### Wash fruits and veg.

Thoroughly clean fruits and veggies with clean water to remove harmful bacterias.



### Keep food at safe temperatures

Preserve food at the right temperature in the fridge and don't use it past the Best Before date.





E. coli is easily killed by bleach or even soap. As long as you adhere to your usual disinfection protocols and hand washing, everything should be fine.



## Disinfection Protocols

For extra details on disinfection and proper hygiene practices at work, make sure you check the cards 5, 6, 10, 11, 19, 20 of this series.



## Working with contaminated sea water (aquariums)

In special circumstances, it won't always be possible to disinfect all water coming through to the aquarium. In this case, reinforce your usual disinfection protocols and strictly adhere to the following :



Use hand disinfectant if you can't wash your hands at a sink

Always wash your hands with soap



Clean tools everyday and don't share tools between enclosures/tanks

Never jump the footbath !



Wash your hands before/after touching food, animals and enclosures

