

## Update on COVID-19

Carolyn Ledowsky

# What is COVID-19?

Human coronaviruses, first characterized in the 1960s, are responsible for a substantial proportion of upper respiratory tract infections in children.

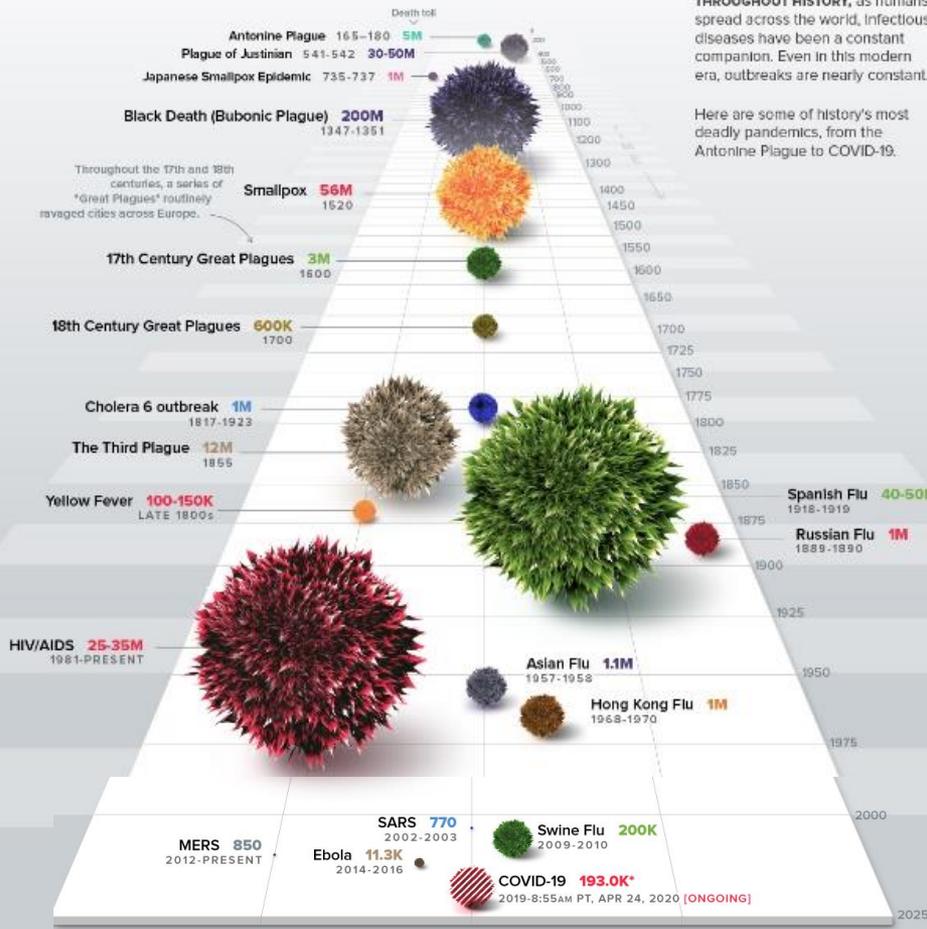
Since 2003, at least 5 new human coronaviruses have been identified, including the severe acute respiratory syndrome (SARS) coronavirus, which caused significant morbidity and mortality.

Coronavirus disease 2019 (COVID-19) is a respiratory illness that can spread from person to person. The virus that causes COVID-19 is a novel coronavirus that was first identified during an investigation into an outbreak in Wuhan, China.

[https://journals.lww.com/pidj/fulltext/2005/11001/history\\_and\\_recent\\_advances\\_in\\_coronavirus.12.aspx](https://journals.lww.com/pidj/fulltext/2005/11001/history_and_recent_advances_in_coronavirus.12.aspx)

# HISTORY OF PANDEMICS

PAN-DEM-IC (of a disease) prevalent over a whole country or the world.



THROUGHOUT HISTORY, as humans spread across the world, infectious diseases have been a constant companion. Even in this modern era, outbreaks are nearly constant.

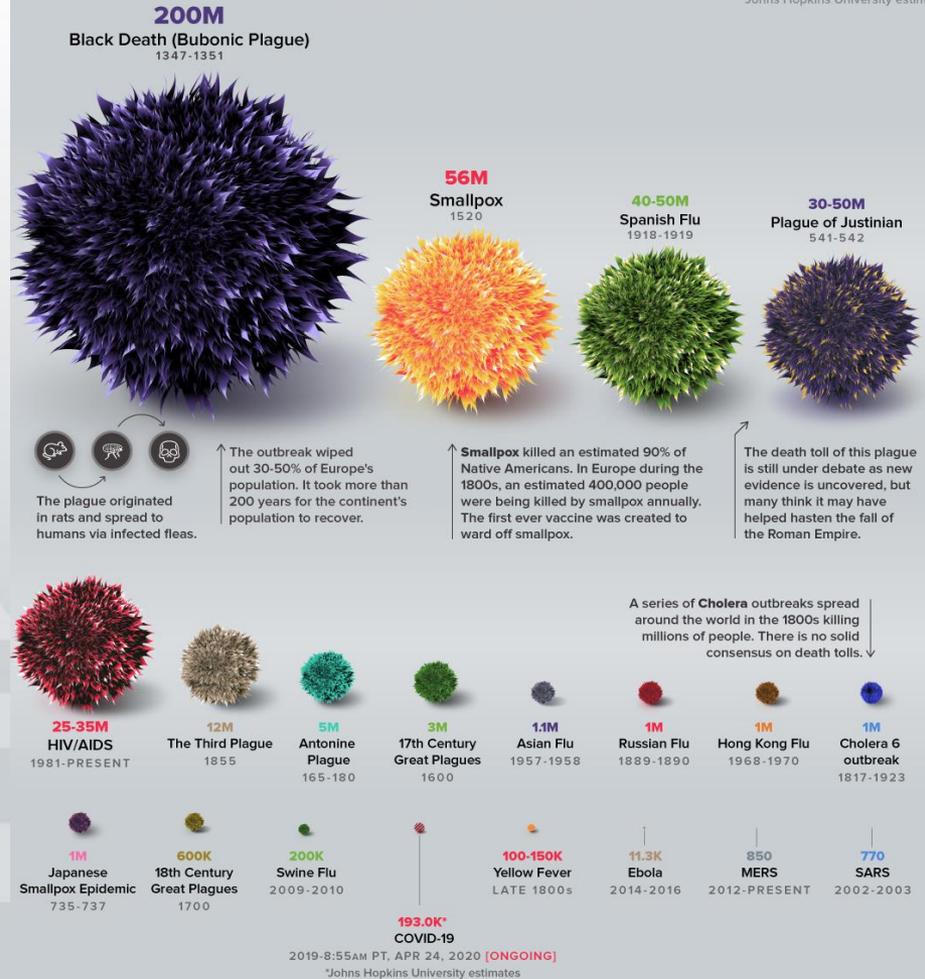
Here are some of history's most deadly pandemics, from the Antonine Plague to COVID-19.

\*As of Mar 23, officially a pandemic according to WHO  
It is hard to calculate and forecast the impact of COVID-19 because the disease is new to medicine, and data is still coming in.

## DEATH TOLL [HIGHEST TO LOWEST]

It is hard to calculate and forecast the impact of COVID-19 because the disease is new to medicine, and data is still coming in.

\*Johns Hopkins University estimates



## DEATH TOLL [HIGHEST TO LOWEST]

**200M**  
Black Death (Bubonic Plague)  
1347-1351

<https://www.visualcapitalist.com/history-of-pandemics-deadliest/>

## COVID-19 CORONAVIRUS PANDEMIC

Last updated: March 24, 2020, 02:33 GMT

[Graphs](#) - [Death Graphs](#) - [Countries](#) - [Death Rate](#) - [Incubation](#) - [Age](#) - [Symptoms](#) - [News](#)

### Coronavirus Cases:

**379,080**

[view by country.](#)

Deaths:

**16,524**

Recovered:

**102,423**

## COVID-19 CORONAVIRUS PANDEMIC

Last updated: April 25, 2020, 01:56 GMT

[Countries](#) - [Death Rate](#) - [Symptoms](#) - [Incubation](#) - [Transmission](#) - [News](#)

### Coronavirus Cases:

**2,830,051**

[view by country.](#)

Deaths:

**197,245**

Recovered:

**798,772**

# Signs and Symptoms?

The COVID-19 virus affects different people in different ways. COVID-19 is a respiratory disease and most infected people will develop mild to moderate symptoms and recover without requiring special treatment. People who have underlying medical conditions and those over 60 years old have a higher risk of developing severe disease and death.

Common symptoms include:

- fever
- tiredness
- dry cough
- Aches and pains
- Runny nose
- Sore throat
- Diarrhea
- Nausea

<http://www.ncbi.nlm.nih.gov/pubmed/26242570>

News > Medscape Medical News

## Hydroxychloroquine Ineffective for COVID-19, VA Study Suggests

Marcia Frellick

April 23, 2020

145

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*Editor's note: Find the latest COVID-19 news and guidance in Medscape's [Coronavirus Resource Center](#).*

Hydroxychloroquine (HCQ) with or without [azithromycin](#) (AZ) is not associated with a lower risk of requiring [mechanical ventilation](#), according to a

<https://www.medscape.com/viewarticle/929253>

## Journal Pre-proof



COVID-19 and Thrombotic or Thromboembolic Disease: Implications for Prevention, Antithrombotic Therapy, and Follow-up

Behnood Bikdeli, MD, MS, Mahesh V. Madhavan, MD, David Jimenez, MD, PhD, Taylor Chuich, PharmD, Isaac Dreyfus, MD, Elissa Driggin, MD, Caroline Der Nigoghossian, PharmD, Walter Ageno, MD, Mohammad Madjid, MD, MS, Yutao Guo, MD, PhD, Liang V. Tang, MD, Yu Hu, MD, Jay Giri, MD, MPH, Mary Cushman, MD, MSc, Isabelle Quéré, MD, PhD, Evangelos P. Dimakakos, MD, C. Michael Gibson, MD, Giuseppe Lippi, MD, Emmanuel J. Falaloro, PhD, Jawed Fareed, PhD, Joseph A. Caprini, MD, MS, Alfonso J. Tafur, MD, MS, John R. Burton, BS, Dominic P. Francese, MPH, Elizabeth Y. Wang, MD, Anna Falanga, MD, Claire McLintock, MD, Beverley J. Hunt, MD, Alex C. Spyropoulos, MD, Geoffrey D. Barnes, MD, MSc, John W. Eikelboom, MBBS, Ido Weinberg, MD, Sam Schulman, MD, PhD, Marc Carrier, MD, MSc, Gregory Piazza, MD, MS, Joshua A. Beckman, MD, P. Gabriel Steg, MD, Gregg W. Stone, MD, Stephan Rosenkranz, MD, Samuel Z. Goldhaber, MD, Sahil A. Parikh, MD, Manuel Monreal, MD, PhD, Harlan M. Krumholz, MD, SM, Stavros V. Konstantinides, MD, PhD, Jeffrey I. Weitz, MD, Gregory Y.H. Lip, MD

PII: S0735-1097(20)35008-7

DOI: <https://doi.org/10.1016/j.jacc.2020.04.031>

Reference: JAC 27284

To appear in: *Journal of the American College of Cardiology*

Received Date: 15 April 2020

<http://www.onlinejacc.org/content/accj/early/2020/04/15/j.jacc.2020.04.031.full.pdf>

[News](#) > [Medscape Medical News](#) > [Neurology News](#)

## COVID-19 Linked to Large Vessel Stroke in Young Adults

Damian McNamara

April 24, 2020

 Read Comments



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*Editor's note: Find the latest COVID-19 news and guidance in Medscape's [Coronavirus Resource Center](#).*

Physicians in New York City, which still leads the nation in reported COVID-19 cases, are reporting significantly more acute, large vessel strokes in young adults infected with COVID-19.

<https://www.medscape.com/viewarticle/929345>

# THE LANCET. RESPIRATORY MEDICINE

Elsevier

[Lancet Respir Med](#). 2020 Apr; 8(4): e21.

PMCID: PMC7118626

Published online 2020 Mar 11. doi: [10.1016/S2213-2600\(20\)30116-8](https://doi.org/10.1016/S2213-2600(20)30116-8)

PMID: [32171062](https://pubmed.ncbi.nlm.nih.gov/32171062/)

## Are patients with hypertension and diabetes mellitus at increased risk for COVID-19 infection?

[Lei Fang](#),<sup>a</sup> [George Karakiulakis](#),<sup>b</sup> and [Michael Roth](#)<sup>a</sup>

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See "[Clinical course and outcomes of critically ill patients with SARS-CoV-2 pneumonia in Wuhan, China: a single-centered, retrospective, observational study](#)" in *Lancet Respir Med*, doi: [10.1016/S2213-2600\(20\)30079-5](https://doi.org/10.1016/S2213-2600(20)30079-5).

This article has been [cited by](#) other articles in PMC.

The most distinctive comorbidities of 32 non-survivors from a group of 52 intensive care unit patients with novel coronavirus disease 2019 (COVID-19) in the study by Xiaobo Yang and colleagues<sup>1</sup> were cerebrovascular diseases (22%) and diabetes (22%). Another study<sup>2</sup> included 1099 patients with confirmed COVID-19, of whom 173 had severe disease with comorbidities of hypertension (23·7%), diabetes mellitus (16·2%), coronary heart diseases (5·8%), and cerebrovascular disease (2·3%). In a third study,<sup>3</sup> of

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7118626/>

## Lactoferrin as potential preventative and treatment for COVID-19

Raymond Chang<sup>1</sup>, Wei-Zen Sun<sup>2</sup>, and Tzi Bun Ng<sup>3</sup>

<sup>1</sup>Institute of East-West Medicine

<sup>2</sup>National Taiwan University Hospital

<sup>3</sup>Chinese University of Hong Kong

April 4, 2020

### Abstract

#### Abstract

The novel coronavirus 2019 (COVID-19) pandemic is rapidly advancing across the globe despite drastic public and personal health measures. Antivirals and nutritional supplements have been proposed as potentially useful against SARS-CoV-2 (virus that causes COVID-19), but few have been clinically established. Lactoferrin (Lf) is a naturally occurring and non-toxic glycoprotein that is orally available as a nutritional supplement and has established *in vitro* anti-viral efficacy against a wide range of virus including SARS-CoV, a closely related corona virus to SARS-CoV-2 (virus that causes COVID-19). Furthermore, Lf possesses unique immunomodulatory and anti-inflammatory effects that may be especially relevant to the pathophysiology of severe COVID-19 cases. We review the underlying biological mechanisms of Lf as antiviral and immune regulator, and propose its unique potential as a preventative and adjunct treatment for COVID-19. We hope that further research and development of Lf nutritional supplementation would establish its role for COVID-19.

[https://www.researchgate.net/profile/Raymond\\_Chang4/publication/340464937\\_Lactoferrin\\_as\\_potential\\_preventative\\_and\\_treatment\\_for\\_COVID-19/links/5e8ba8c2a6fdcca789fbd46/Lactoferrin-as-potential-preventative-and-treatment-for-COVID-19.pdf](https://www.researchgate.net/profile/Raymond_Chang4/publication/340464937_Lactoferrin_as_potential_preventative_and_treatment_for_COVID-19/links/5e8ba8c2a6fdcca789fbd46/Lactoferrin-as-potential-preventative-and-treatment-for-COVID-19.pdf)

# New Understanding by scientists

The virus according to scientists that investigated an Australian woman with the disease who travelled home from Wuhan, causes the following:

- Increased antibody-secreting cells, follicular cells, activated CD4+ T cells and CD8+ T cells and immunoglobulin M and G antibodies. (IgM and IgG)
- CRP elevated
- Normal lymphocytes and neutrophils

According to Dr Rob Grenfell, a coronavirus is an RNA virus, which is not as stable as DNA and this is the reason it can mutate quite rapidly. The virus has changed and now there are about 115 genetic sequences globally of this new virus published.

According to Prof SS Vasani the virus is evolving into a number of distinct clusters in different parts of the world which makes vaccines and therapies and diagnostics more difficult.

<https://www.nature.com/articles/s41591-020-0819-2>

<https://www.csiro.au/en/News/News-releases/2020/Covid19-expert-commentary>

# Vaccine update

**April 9** – The journal ‘Nature’ reported that 78 vaccine projects had been launched around the globe with 37 more in development.

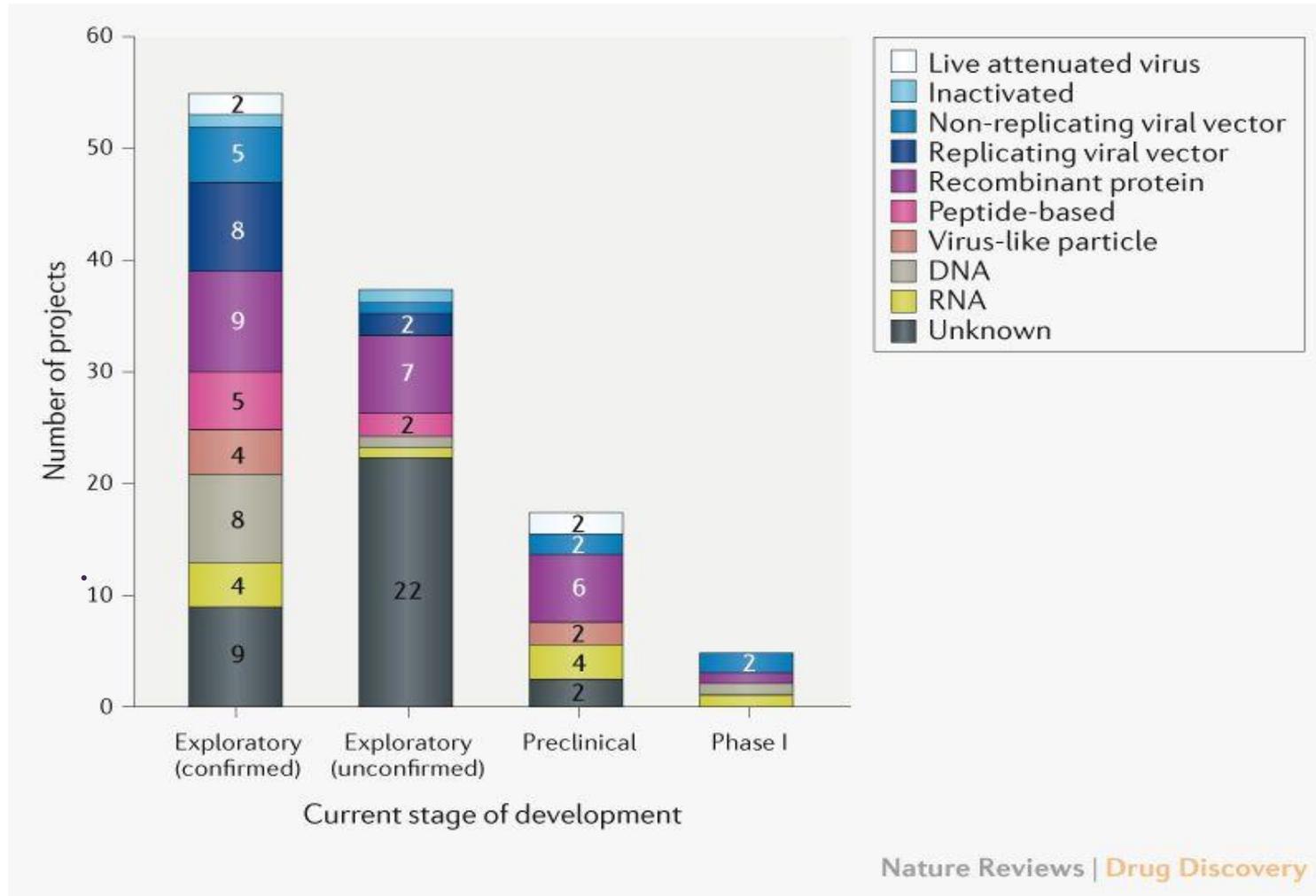
Vaccines require large-scale safety and efficacy studies. Issues that are arising according to Nir Eyal, a professor of bioethics at Rutgers University – because the virus is spreading quickly some scientists have proposed that we deliberately expose volunteers to the virus to determine a vaccine's efficacy. The risk is however, if they get it how sick will they get?

Also ethically giving people a placebo while infecting them is high risk.

Of the confirmed active vaccine candidates 56 are being developed by private/industry developers and 22 are academic/private sector and other non-profit organisations.

<https://www.nature.com/articles/d41573-020-00073->

# Vaccine update



<https://www.nature.com/articles/d41573-020-00073->

# Vaccine update

**April 2 – CSIRO** announces it begins testing COVID-19 Vaccines

1. Oxford – intranasal administration to clear the infection more readily and rapidly

## **2. QLD University begin small scale testing**

According to Prof Trevor Drew : ‘it is very new to its human host and we don’t know how the virus will behave. It could evolve and become more dangerous. We do need to be alert to the possibility it could get more virulent as it gets used to its new host”.

Queensland Universities vaccine will be in human trials later this year – this vaccine locks the ‘spike’ protein into a shape that allows the immune system to be able to recognize and neutralize it.

# So what now?

1. 6,711 cases Australia wide and 5,539 have recovered
2. The average increase in infections has fallen to 0.2 percent
3. Deaths in Australia = 83

This means that restrictions will be lifted in the coming weeks.  
There will be new outbreaks

.



CURRENT STATUS OF CONFIRMED CASES



42

CURRENT CASES  
INTENSIVE CARE UNITS (ICU)

ACT	NSW	NT	QLD	SA	TAS	VIC	WA
0	19	0	6	2	0	11	4

138

CURRENT CASES  
ADMITTED TO HOSPITALS

ACT	NSW	NT	QLD	SA	TAS	VIC	WA
0	43	10	18	4	16	27	20

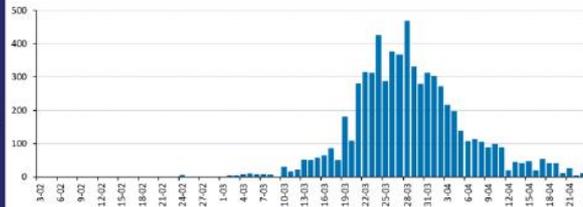
482,370

1.4% POSITIVE

TOTAL TESTS  
CONDUCTED

ACT	NSW	NT	QLD
7,440	188,416	4,120	94,977
POSITIVE	POSITIVE	POSITIVE	POSITIVE
1.4%	1.6%	0.7%	1.1%
SA	TAS	VIC	WA
50,396	7,883	96,000	33,138
POSITIVE	POSITIVE	POSITIVE	POSITIVE
0.9%	2.6%	1.4%	1.7%

DAILY NUMBER OF REPORTED CASES

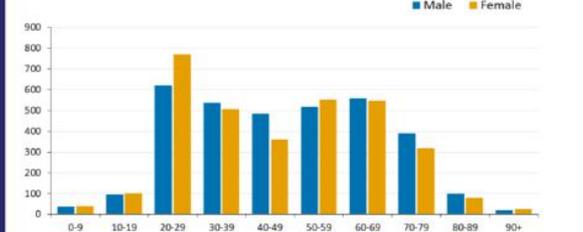


CASES IN AGED CARE SERVICES

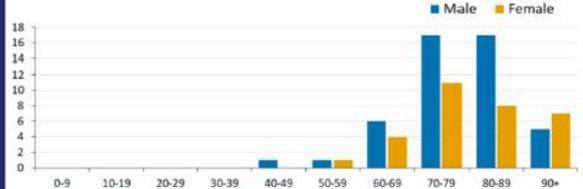
Confirmed cases	Australia	ACT	NSW	NT	Qld	SA	Tas	Vic	WA
Residential Care	56 [14] (15)	0	54 [14] (13)	0	1 (1)	0	1 (1)	0	0
In Home Care	29 [9] (2)	0	12 [2] (1)	0	7 (5)	1	5 (1)	3 (2)	1

Cases in care recipients [recovered] (deaths)

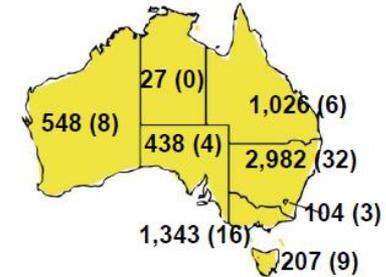
CASES BY AGE GROUP AND SEX



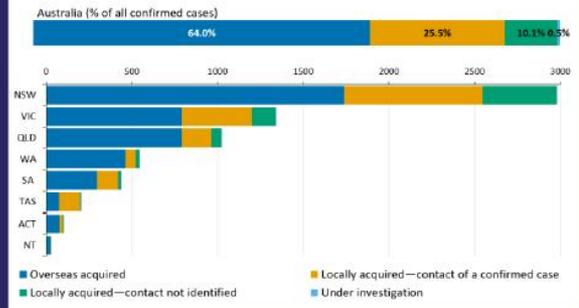
DEATHS BY AGE GROUP AND SEX



CASES (DEATHS) BY STATE AND TERRITORIES



CASES BY SOURCE OF INFECTION



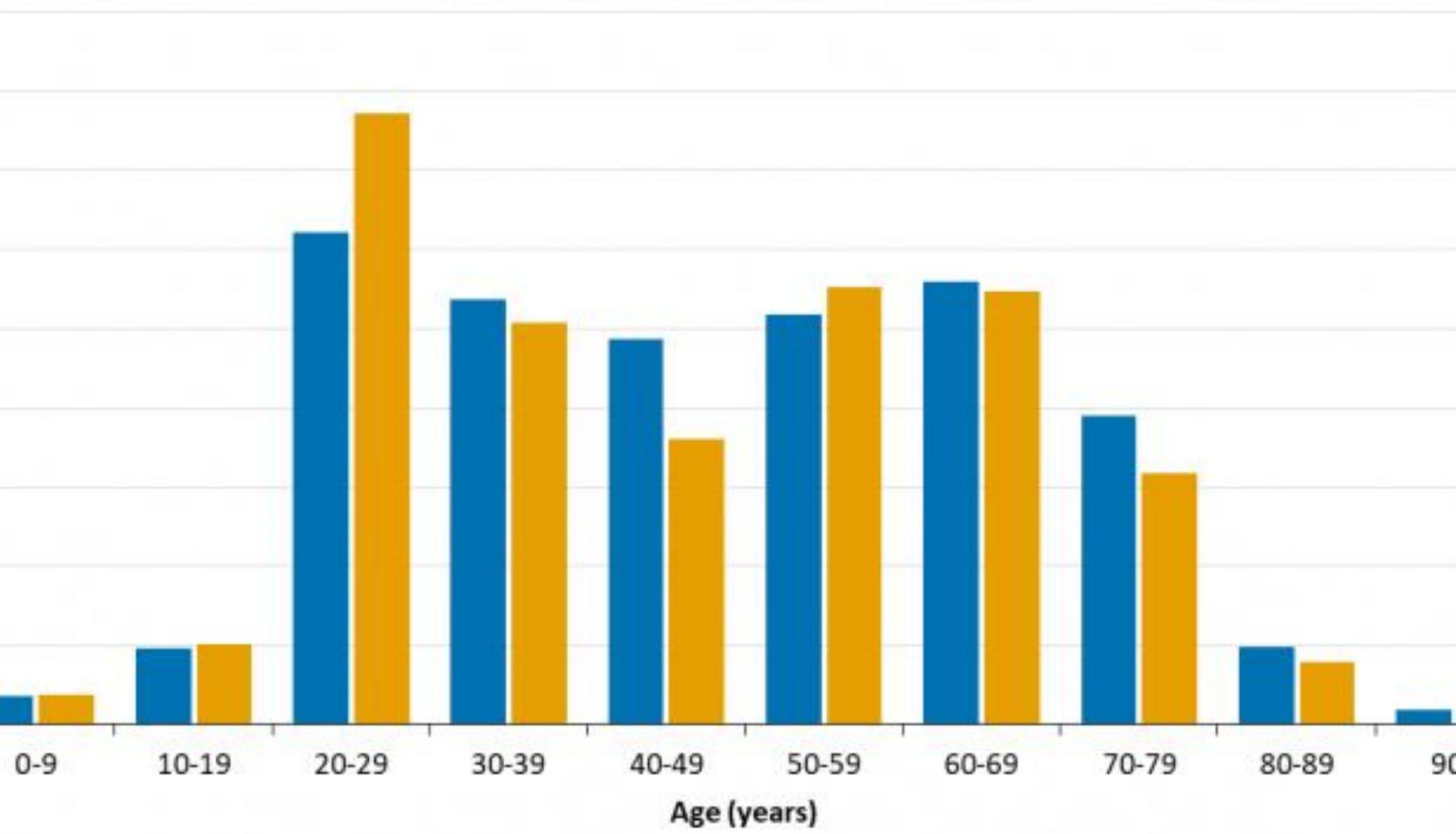
PUBLIC HEALTH RESPONSE MEASURE



of  
d cases

Total confirmed COVID-19 cases by sex and age group

Male Female



# Restrictions to open means new cases

## Restrictions easing will see new cases:

Remember the virus may live in its host and mutate, causing a stronger virus next time.

The same requirements will be required:

1. Protect yourself
2. Take preventative measures at all times.
3. Support the immune system especially coming into winter months.
4. Have products at hand to support any cold or flu like symptoms you may have and act quickly.

[https://jamanetwork.com/journals/jamacardiology/fullarticle/2763524?utm\\_source=ActiveCampaign&utm\\_medium=email&utm\\_content=What+Are+the+Long+Term+Effects+of+COVID-19%3F&utm\\_campaign=Coronavirus+Email+5+-+What+Are+The+Long+Term+Effects+-+SH+List](https://jamanetwork.com/journals/jamacardiology/fullarticle/2763524?utm_source=ActiveCampaign&utm_medium=email&utm_content=What+Are+the+Long+Term+Effects+of+COVID-19%3F&utm_campaign=Coronavirus+Email+5+-+What+Are+The+Long+Term+Effects+-+SH+List)

# How can we minimize risk

1. Isolation and social distancing – at least 1 metre distance
2. Avoid contact with people that might have mild symptoms but pass on to you.
3. Wash hands thoroughly with soap and water or hand sanitizer
4. Avoid touching your face
5. Cover your mouth and nose when coughing and sneezing
6. Stay at home and if you show any symptoms at all – do not leave the house

[https://www.who.int/health-topics/coronavirus#tab=tab\\_2](https://www.who.int/health-topics/coronavirus#tab=tab_2)

# How can we minimize risk

7. Refrain from smoking and other activities that weaken the lungs
8. Take supplements to support the immune system
9. If you do get symptoms act quickly

<http://www.ncbi.nlm.nih.gov/pubmed/26242570>

# Step 1 -Antiviral support

- **Vitamin C** – 3-5gms per day
- Zinc –Suggest 50mg per day and 50mg twice a day in active infection. Vitamin A – 5,000IU per day
- MCN Nasal spray – this is antiviral, antifungal and anti bacterial – use this twice a day to protect your nasal passages from the virus. 2 sprays in each nostril twice a day. (it stings at first but will clear the head)
- Antiviral immune herbal formula – 5ml twice a day
- Transfer Factors – to increase NK cells

## Step 2 –signs and symptoms

- **Vitamin C** – 3-5gms per day
- Zinc –Suggest 50mg per day and 50mg twice a day in active infection.
- MCN Nasal spray – this is antiviral, antifungal and anti bacterial – use this twice a day to protect your nasal passages from the virus. 2 sprays in each nostril twice a day. (it stings at first but will clear the head)
- Herbal support
  - Cough/sore throat mix
  - Respiratory/inflammatory mix – licorice, andrographis, scutellaria B, rosemary, vitis
  - Melatonin 10mg
  - Quercetin – 200mg 3 x day

# Hand sanitizer recipe

[Dr. Rishi Desai](#), chief medical officer of Osmosis, and a former epidemic intelligence service officer in the division of viral diseases at the CDC, says that the hand sanitizer recipe below will kill 99.9 percent of germs after 60 seconds.

## Hand sanitizer recipe

### What you'll need:

3/4 cup of isopropyl or rubbing alcohol (99 percent)

1/4 cup of aloe vera gel (to help keep your hands smooth and to counteract the harshness of alcohol)

10 drops of essential oil, such as lavender oil, peppermint, eucalyptus, clove or other oil

### Directions:

Pour all ingredients into a bowl, ideally one with a pouring spout like a glass measuring container.

Mix with a spoon and then beat with a whisk to turn the sanitizer into a gel.

Pour the ingredients into an empty bottle for easy use, and label it “hand sanitizer.”

<https://www.healthline.com/health/how-to-make-hand-sanitizer#ingredients>

# How can we help

- How can we help?
  - More appointments available
  - I will be available for ½ hour herbal consults Thursday 1pm – 6pm each week (to be extended where need be)
  - We will be having regular webinars/facebook sessions to keep you informed
  - If you are feeling anxious/depressed or alone, ring us

.

# THANK YOU AND QUESTIONS

CONTACT US:

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