

# ***Demystifying the science behind the COVID-19 pandemic***

Associate Professor Siouxsie Wiles  
Bioluminescent Superbugs Lab



THE UNIVERSITY OF  
**AUCKLAND**  
Te Whare Wānanga o Tāmaki Makaurau  
NEW ZEALAND

**MEDICAL AND  
HEALTH SCIENCES**





Scientist-communicator

Science/research doesn't end  
with a journal publication...

« Back-breaking work

And then came the conspiracy theories.... »

## The veggie-burger disease? **Siouxsie Wiles** May 31

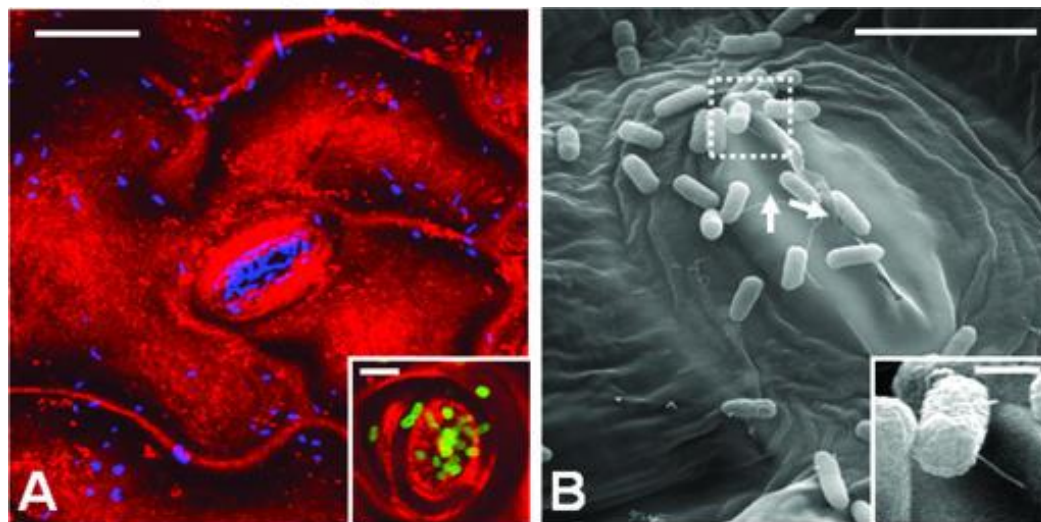
2 Comments

*Escherichia coli*, better known as *E. coli*, is a common inhabitant of the human gut. Most *E. coli* strains are harmless but a few can cause serious illness and even death. One such group, known as enterohaemorrhagic *E. coli* (EHEC) or Shiga-toxin producing *E. coli* (STEC), cause bloody diarrhoea, and in some people, [Haemolytic Uraemic Syndrome](#) (HUS) which can lead to anaemia, kidney failure and death.

5

Tweet

Image credit:  
Shaw RK et al (2008). Enterohemorrhagic *Escherichia coli* exploits EspA filaments for attachment to salad leaves. *Appl Environ Microbiol.* 74(9):2908-14.



## SCIENCE

# Science commentator Siouxsie Wiles

From **Nine To Noon**, 11:45 am today

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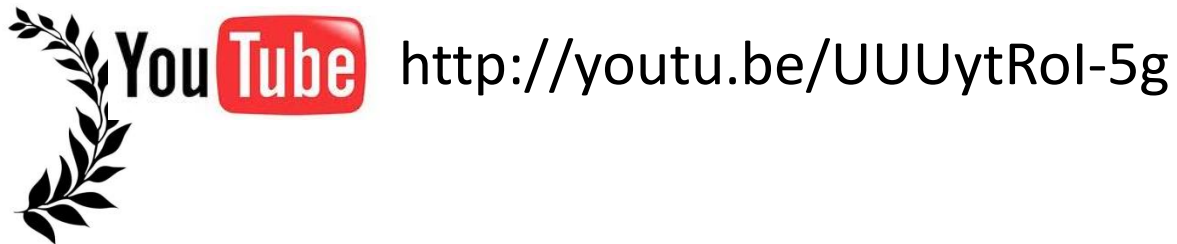
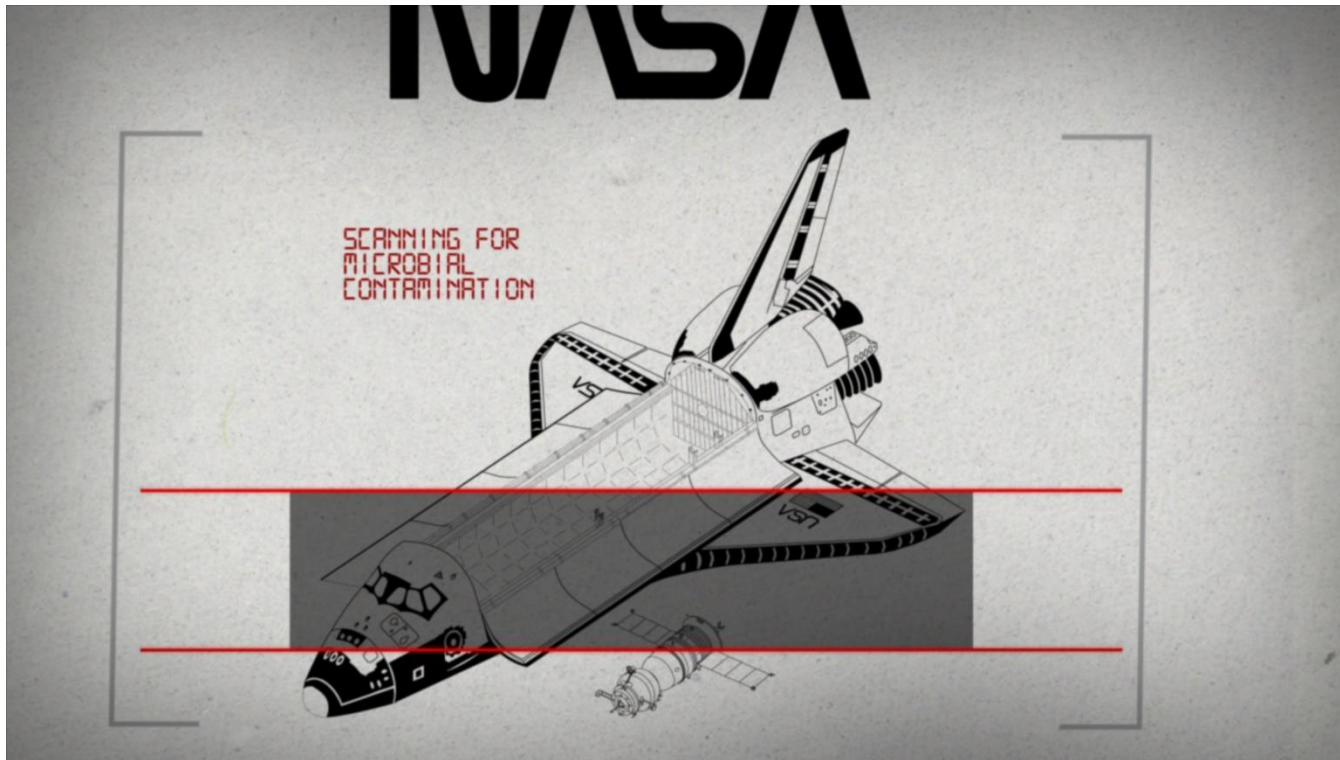


**Listen** 11' 20"

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This week, scientist Dr Siouxsie Wiles talks about the devices that are letting hospital patients and care home residents stay out of bed, what to do when you've got hay fever, and how the sugar industry have played the same game as the tobacco industry.





HEI  
I3H




A-Z



## Siouxsie & Eve Investigate

There are microscopic bugs all around us, on us and even living inside us. Some of these bugs are good, some are bad, but they're all fascinating! Join New Zealand's most colourful scientist Dr Siouxsie Wiles, and her daughter Eve as they investigate this hidden world of microbiology, and find out what's living in our belly buttons, how to make cheese from it (Eww!), and much more...



## Episodes



Fungi  
Episode 1



Bioluminescence  
Episode 2



Poo  
Episode 3



**Damian Christie**

@damianchristie Follows you

Story-teller, journalist, video-maker. Director of @AotearoaScience.  
damian@scienceagency.co.nz 2017 Prime Minister's Science Communication Prize winner.

📍 Auckland 🌐 scienceagency.co.nz 📅 Born March 25 📅 Joined March 2009



BRIDGET  
WILLIAMS  
BOOKS

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## Antibiotic Resistance

The End of Modern Medicine?

Siouxsie Wiles

Antibiotic Resistance  
The End of Modern Medicine?  
  
SIOUXSIE WILES

*This is an important new book on the pressing issue of anti-microbial resistance. Engagingly written, well informed and provocative, it is a clear call to action for New Zealanders on one of the most critical issues we face.*

Professor Kurt L Krause, Webster Centre for Infectious Diseases, University of Otago

In ten years' time, will antibiotics still work? Have we let bacteria get the upper hand in the evolutionary arms race?

In the 1920s the discovery of the antibiotic penicillin started a golden age of medicine. However, experts warn that the end of that age may be just a decade away. In this BWB Text, microbiologist Siouxsie Wiles explores the looming crisis of antibiotic resistance and its threat to New Zealand. Wiles concludes that New Zealand must

BWB Texts
  
Preview
  
Buy book (\$14.99)
  
Buy ebook (\$4.99)

### Media

['The looming crisis of antimicrobial resistance'](#), Alison Ballance, *RNZ*, 1 June 2017.

['Could superbug 'Kryptonite' be in NZ forests?'](#), Jamie Morton, *NZ Herald*, 8 May 2017.

['Dr. Siouxsie Wiles on antibiotic resistance in New Zealand'](#), 95b FM, 28 April 2017.

Sarah-Jane O'Connor, ['Book review: Antibiotic Resistance – the end of modern medicine?'](#) Sciblogs, 21 April 2017.

[Siouxsie Wiles on The Project NZ](#), 20 April 2017.

['Microbiologist warns of 'pre-antibiotic era' and urges action on resistance'](#), Rachel Thomas, *Stuff*, 16 April 2017.

['Siouxsie Wiles on the end of antibiotics'](#), *Antibiotic Resistance*, 16 April 2017.

<http://bwb.co.nz/books/antibiotic-resistance>





## Scientist-communicator

# THE SPINOFF

SOCIETY

MAR 3, 2020



## Covid-19 and kids: How to talk to children about the coronavirus

People have started asking me how they should talk to kids about the disease. So, here are some handy tips.

[Read on.](#)

SCIENCE

MAR 2, 2020

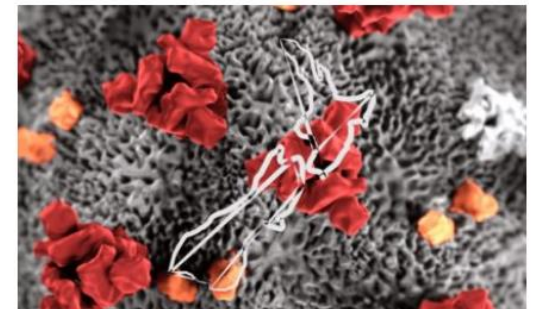


## Covid-19: How do you contract the coronavirus, and who is most at risk?

A new report on the Covid-19 outbreak has some important insights into the way it has progressed, and underscores why we should take it seriously.

SCIENCE

FEB 28, 2020



## A practical guide to dealing with the arrival of the coronavirus in New Zealand

Do not panic. But do prepare. Here's what you need to do.

[Read on.](#)



[thespinoff.co.nz](http://thespinoff.co.nz)

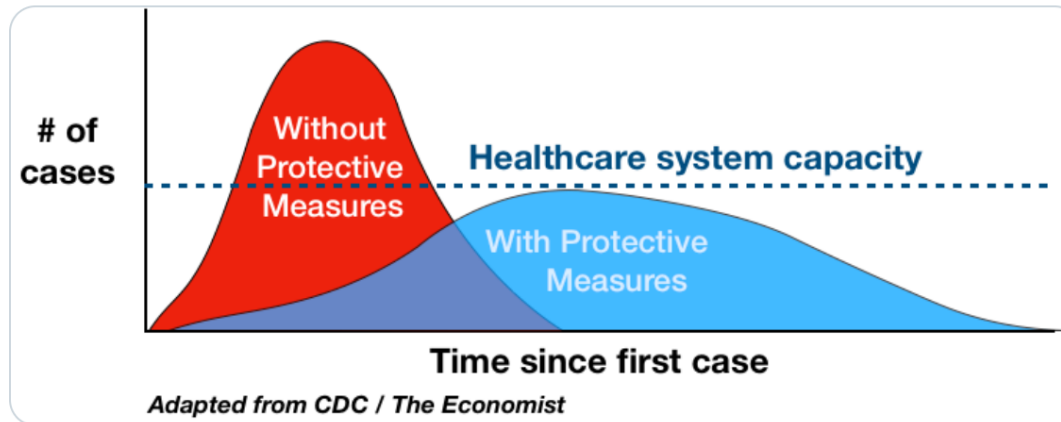


**Drew A. Harris, DPM, MPH**

@drewaharris



Important to remember that #Covid-19 epidemic control measures may only delay cases, not prevent. However, this helps limit surge and gives hospitals time to prepare and manage. It's the difference between finding an ICU bed & ventilator or being treated in the parking lot tent.



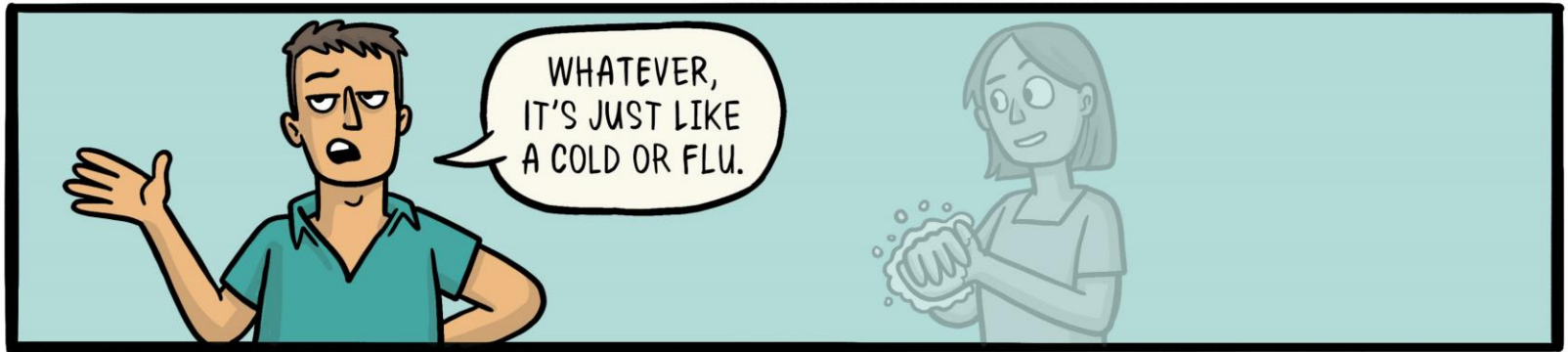
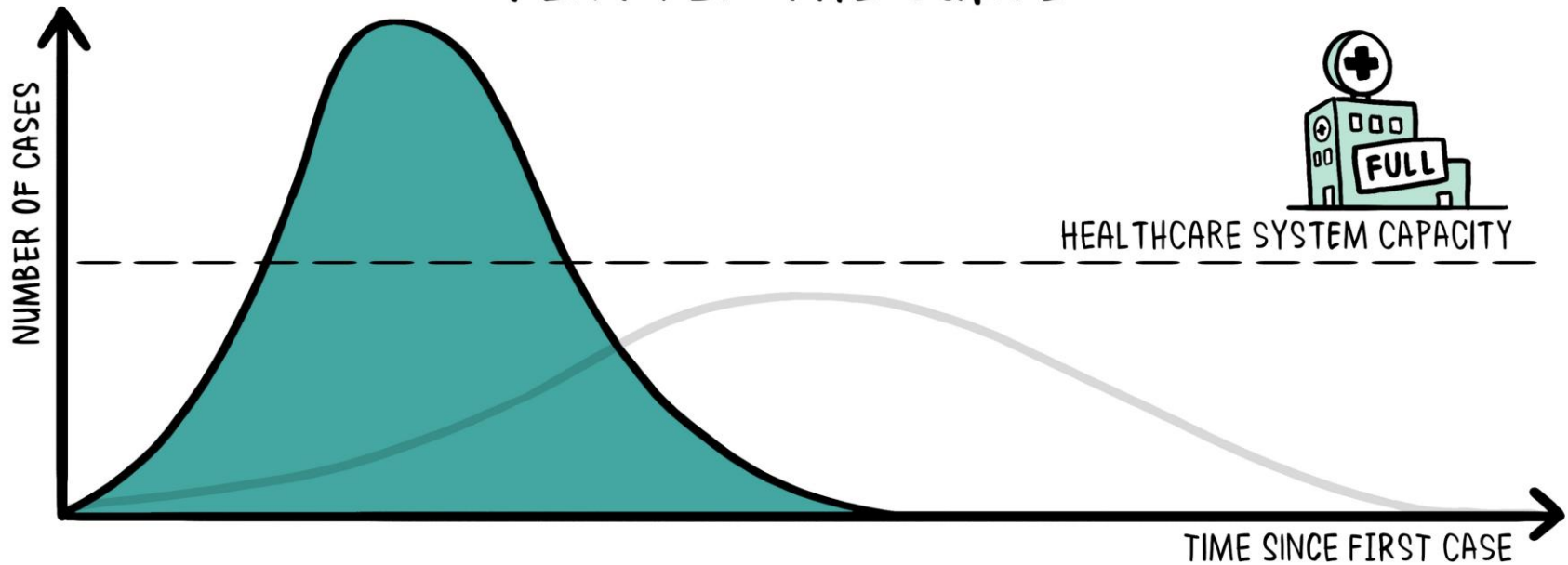
6:47 PM · Feb 28, 2020 · [Hootsuite Inc.](#)

**1.2K** Retweets   **1.6K** Likes



9<sup>th</sup> March

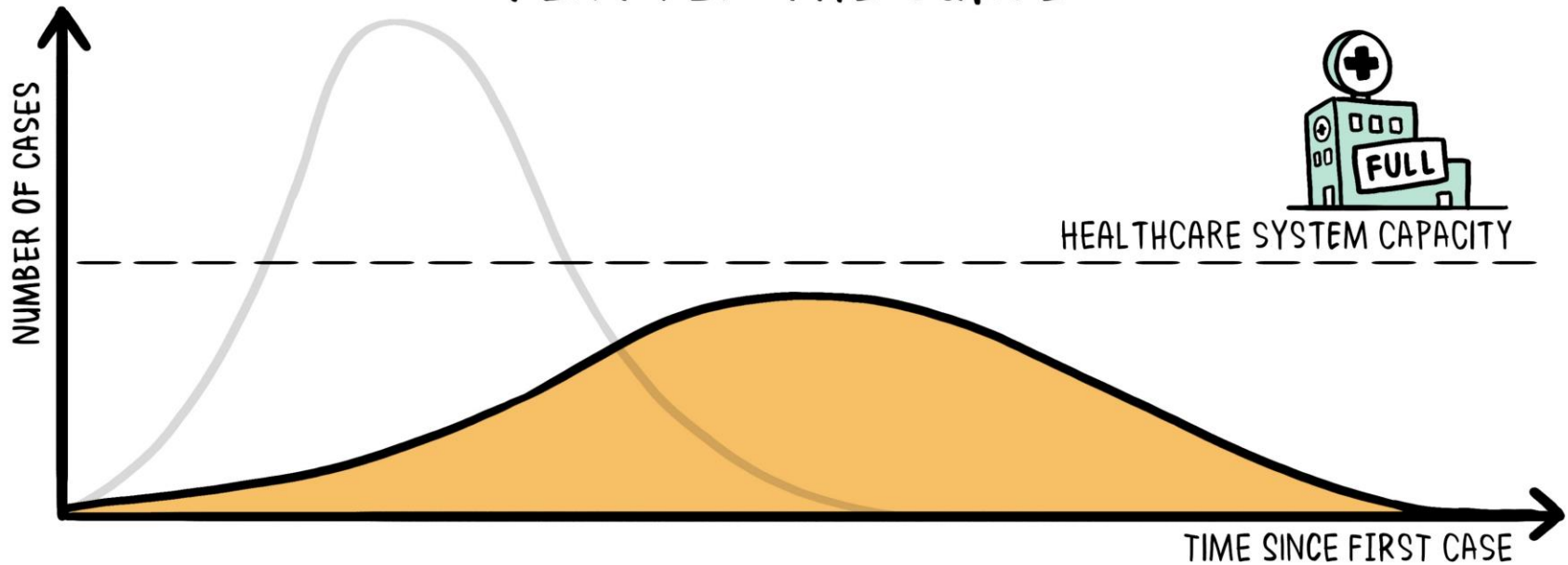
## FLATTEN THE CURVE



@SIOUXSIEW @XTOTL @THESPINOFFTV

\*ADAPTED FROM @DREWAHARRIS, THOMAS SPLETTSTÖBER (@SPLETTE) AND THE CDC'  
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# FLATTEN THE CURVE



# CREATIVE COMMONS LICENSES



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& PUBLISH



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REQUIRED



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USE



MODIFY  
& ADAPT



CHANGE  
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You can modify and  
adapt the original work

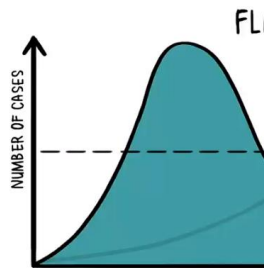


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of the work.



**Dr Siouxsie Wiles** ✓  
@SiouxsieW

If you only learn one thing about **#COVID19** today make it this: everyone's job is to help **FLATTEN THE CURVE**. With thanks to **@XTOTL** & **@TheSpinoffTV** for the awesome GIF. Please share far & wide.



GIF

SIUXSIEW @XTOTL @THESPINOFTV

7:31 AM · Mar 9, 2020 · Twitter W



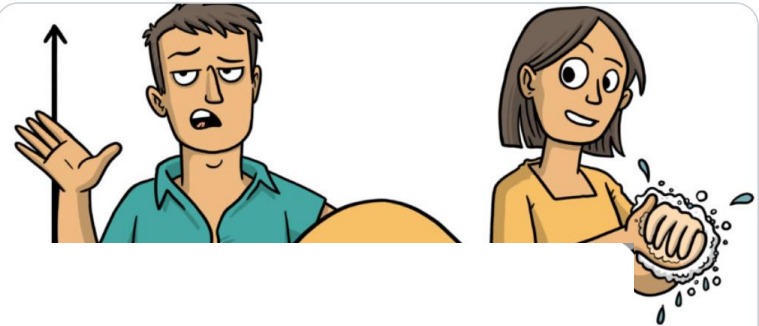
## Tweet Analytics

**Dr Siouxsie Wiles** @SiouxsieW

If you only learn one thing about **#COVID19** today make it this: everyone's job is to help **FLATTEN THE CURVE**. With thanks to **@XTOTL** & **@TheSpinoffTV** for the awesome GIF. Please share far & wide. [pic.twitter.com/O7xIBGAiZY](https://pic.twitter.com/O7xIBGAiZY)



**Dr Siouxsie Wiles** ✓ @SiouxsieW · Mar 9  
Replying to @SiouxsieW  
Here's a longer explainer...



FIRST CASE

geable  
does our  
Dr Siouxi...

### Impressions

times people saw this Tweet on Twitter

6,448,928

### Media views

all views (autoplay and click) of your media are counted across videos, vines, gifs, and images

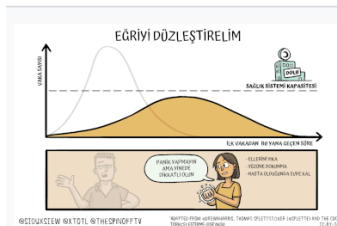
2,029,312

### Total engagements

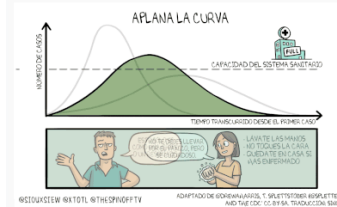
times people interacted with this Tweet

496,549

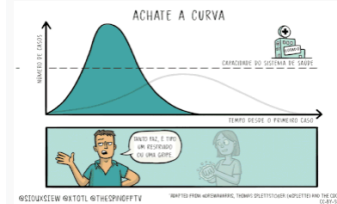




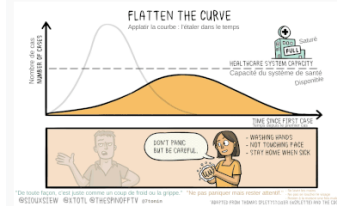
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in Turkish



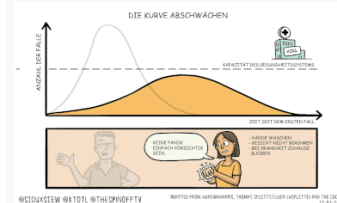
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in Spanish



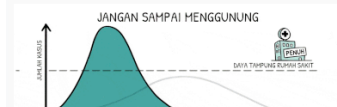
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In Portuguese



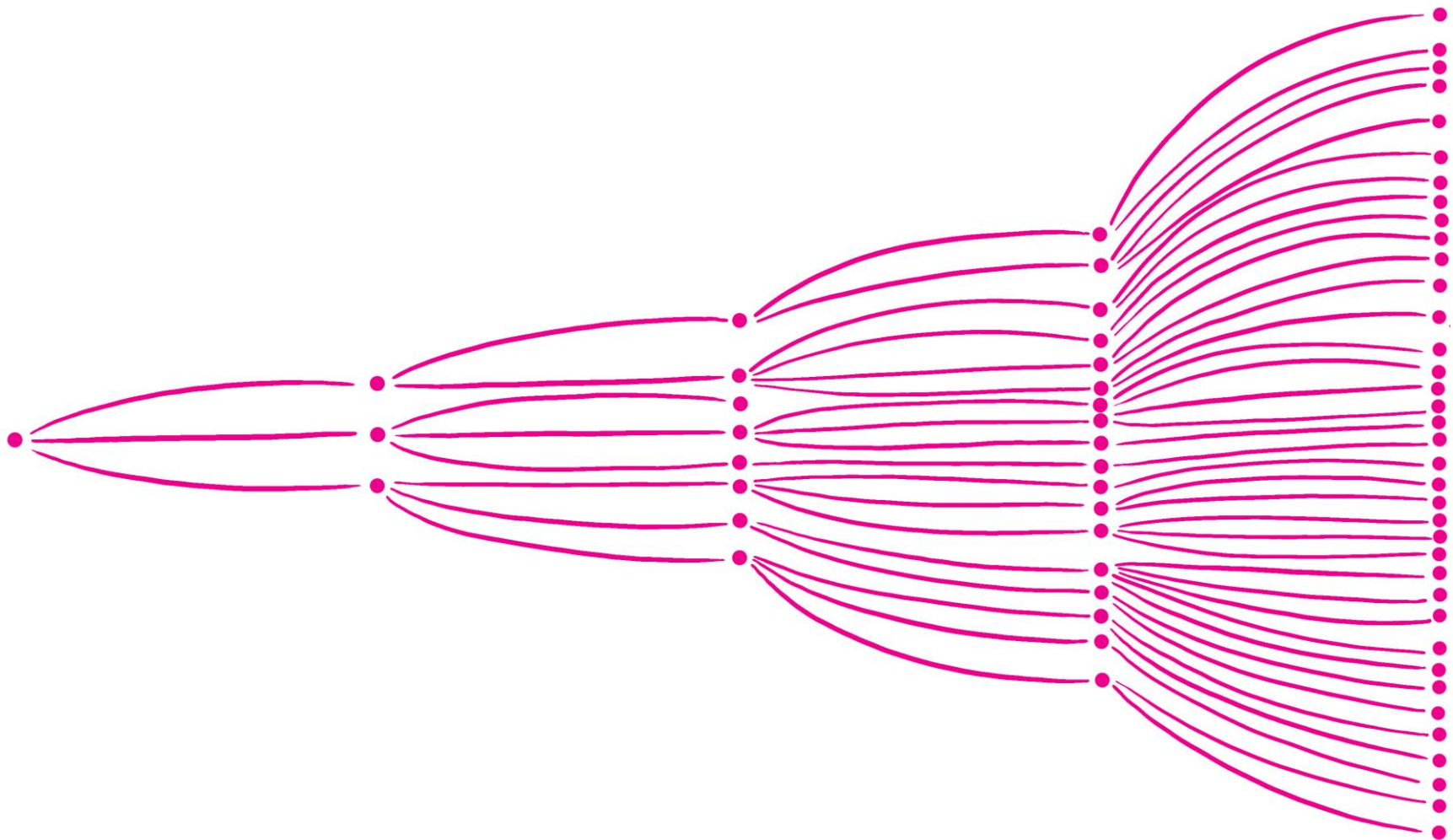
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In French

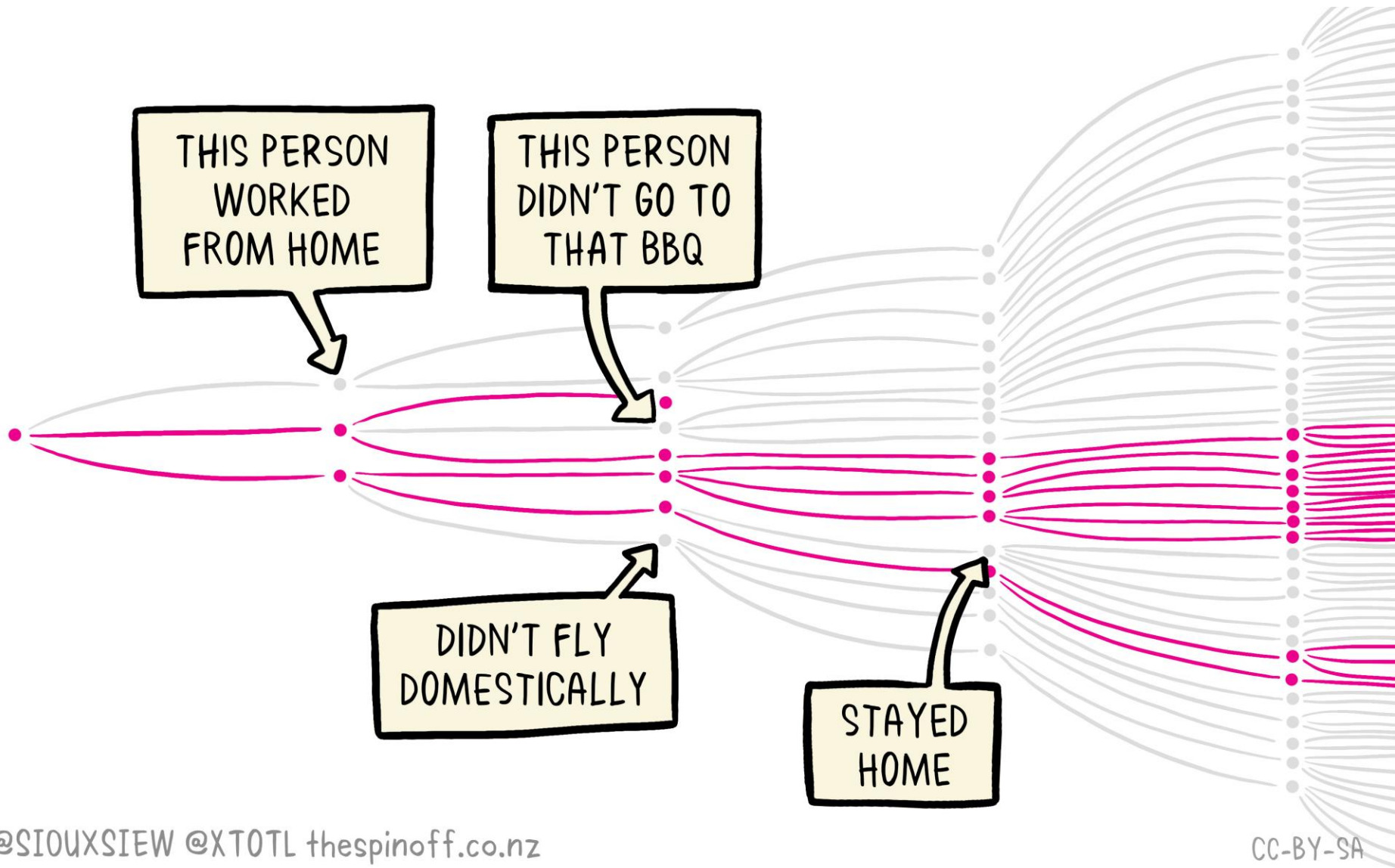


File: Covid-19-curves-graphic-social-v3-de.gif  
In German



File: Covid-19-curves-graphic-social-v3-id.gif  
in Indonesian







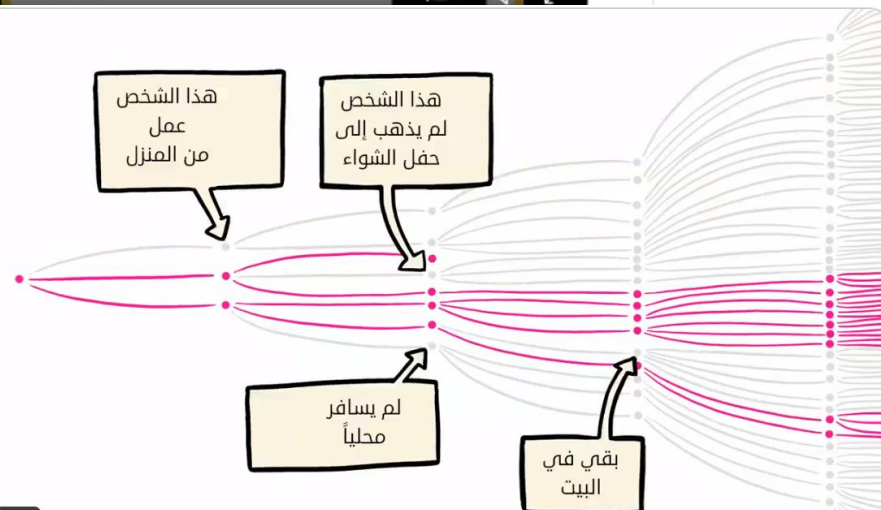
Australian Government Department of Health @health... · Mar 25  
Your actions will save lives. This is why it's important to stay home:



BMG @BMG\_Bund

Dieses Video verdeutlicht, die Wirksamkeit von #WirBleibenZuhause 🇩🇪. Durch die Einhaltung der Verhaltensregeln kann jeder und jede einen Beitrag dazu leisten, die Ausbreitung des #Coronavirus zu verlangsamen.

[Translate Tweet](#)



GIF

UXSIEW @XTOTL thespino-off.co.nz translation automation by @MARCSTUTTER CC-BY-SA





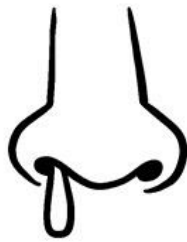
# POTENTIAL SYMPTOMS OF COVID-19



DRY  
COUGH



FEVER



RUNNY  
NOSE



SORE  
THROAT



BREATH-  
LESSNESS



HEADACHE



BODY ACHES/  
SORE MUSCLES



SNEEZE



FATIGUE



DIARRHOEA



CHILLS



LOSS OF  
SMELL

@SIOUXSIEW @XTOTL thespinoff.co.nz

FOR THE LATEST INFO PLEASE SEE [who.int](http://who.int) or [health.govt.nz](http://health.govt.nz)

SOURCE: WHO, CDC CC-BY-SA 4.0

29 APRIL 2020

# COVID-19 TRANSMISSION 101



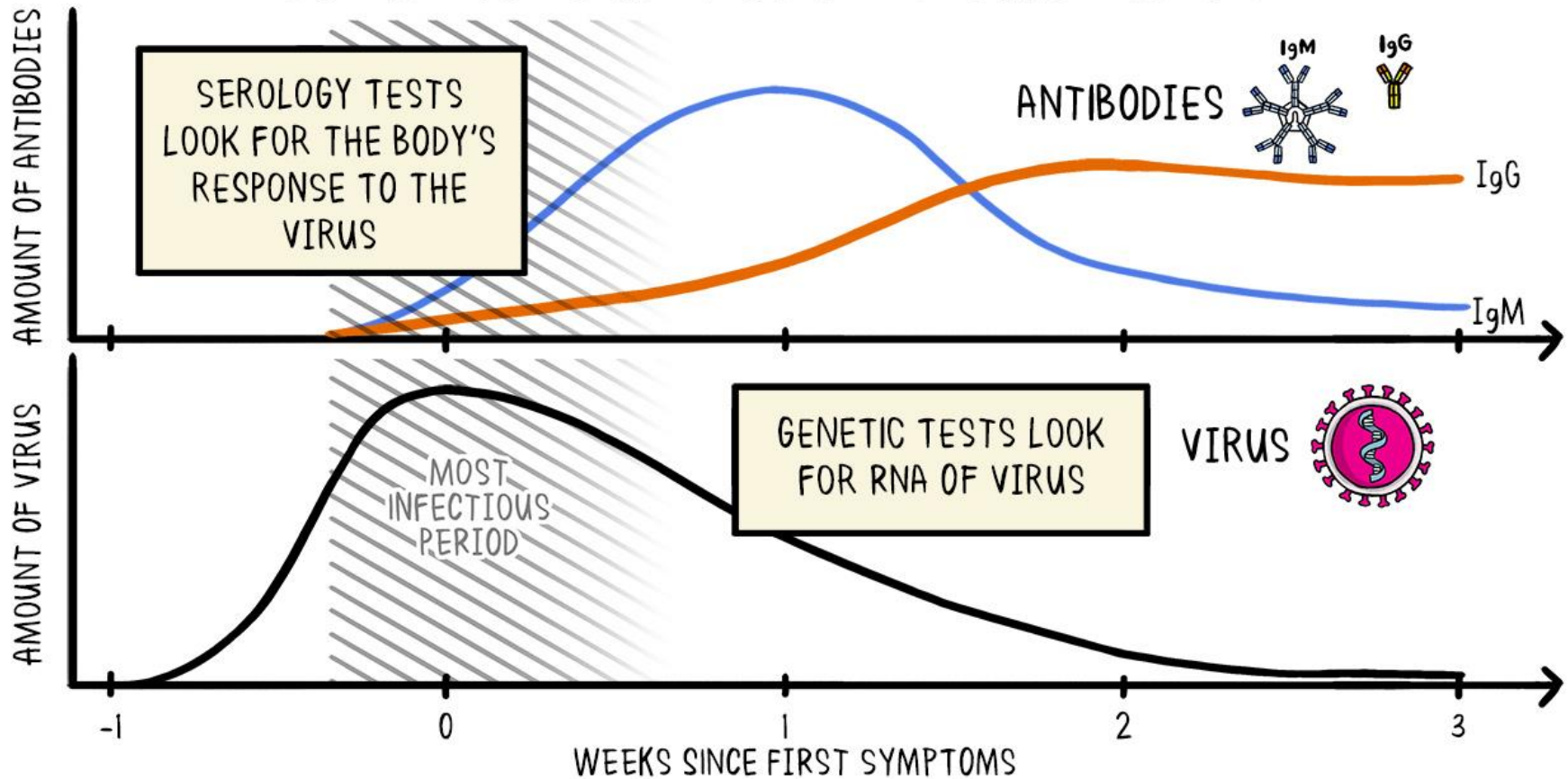
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\*INFORMATION MAY CHANGE AS NEW VARIANTS EVOLVE

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4 FEB 2021

# COVID-19: OUR BODY VS THE VIRUS

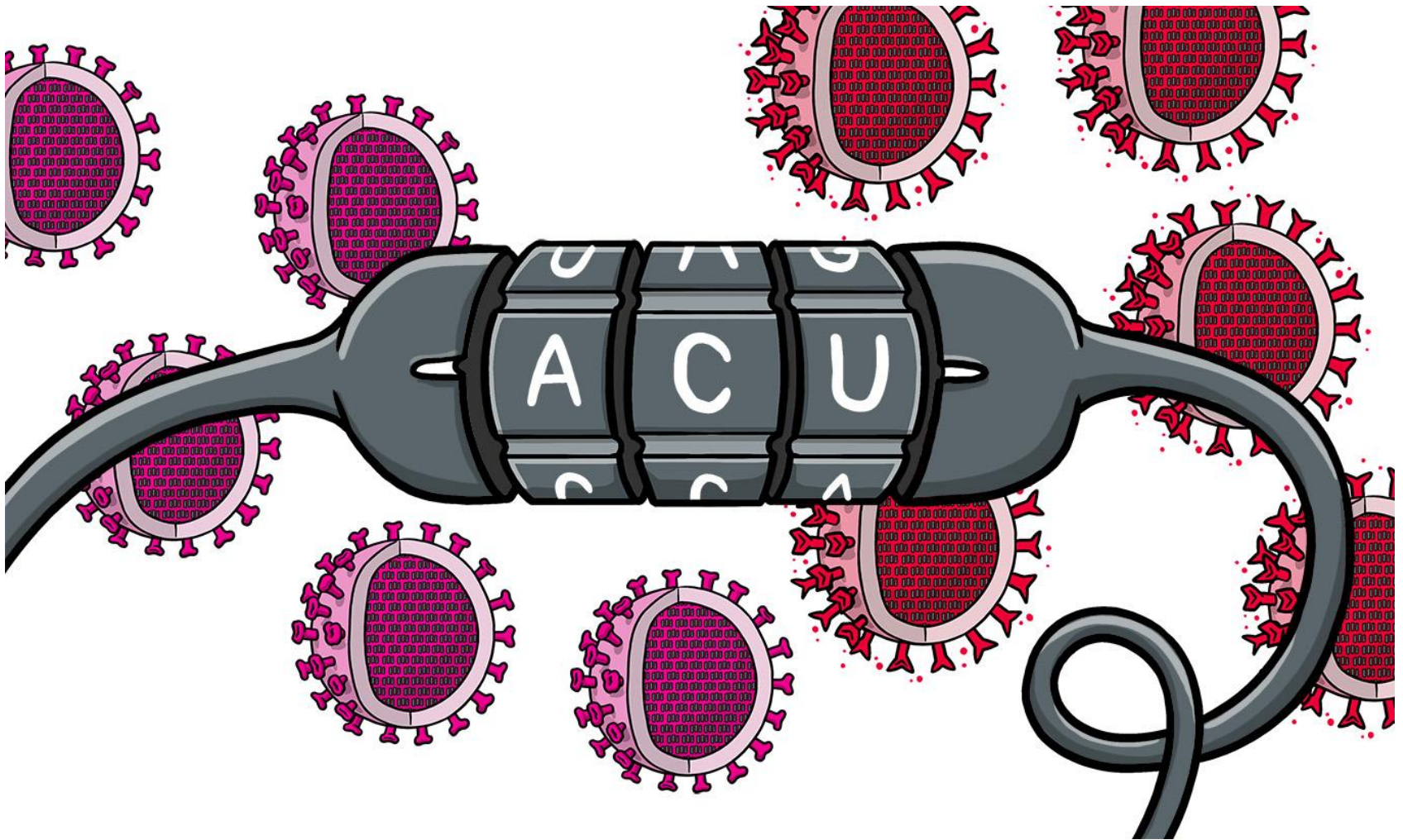


@SIOUXSIEW @XTOTL thespinoff.co.nz

ADAPTED FROM: NATIONAL COVID TESTING SCIENTIFIC ADVISORY PANEL (2020) MEDRXIV (DOI: 10.1101/2020.04.15.20066407)  
HE X, LAU EHY, ET AL (2020) NATURE MEDICINE

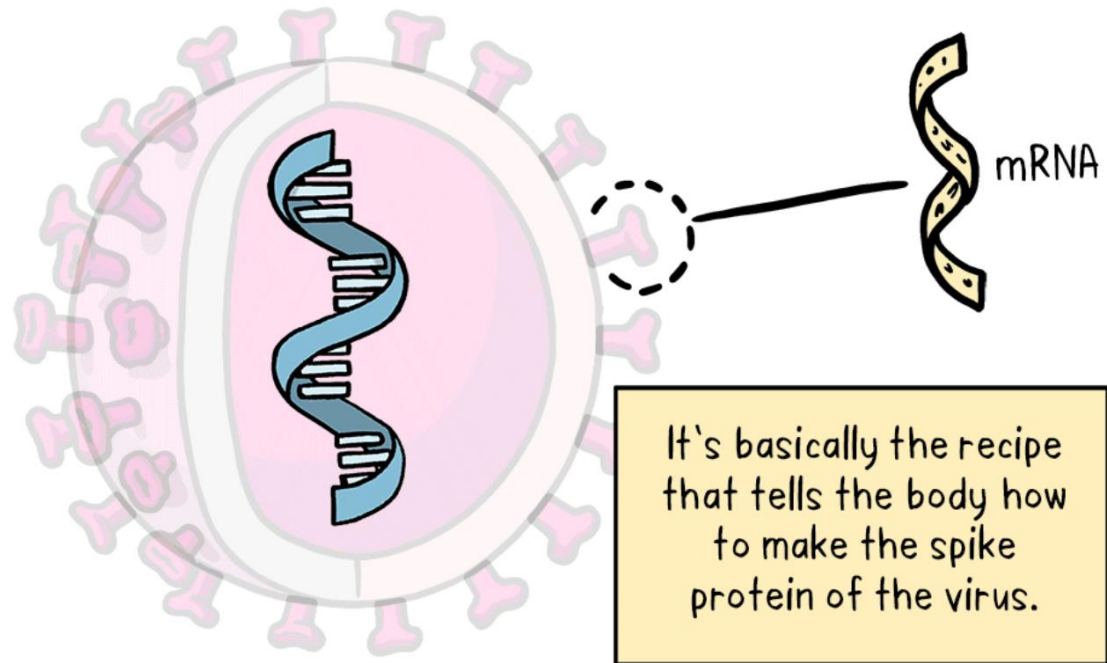
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3 MAY 2020







# THE PFIZER/BIONTECH COVID-19 VACCINE EXPLAINED



# ALTERNATIVES TO HANDSHAKES, HUGS, HIGH FIVES AND HONGI



THE WAVE



THE HAND ON HEART



NAMASTE



NZSL: HOW ARE YOU?



THE 'HI-BROWS'



THE 'ALL GOOD' NOD



THE 'EAST COAST WAVE'



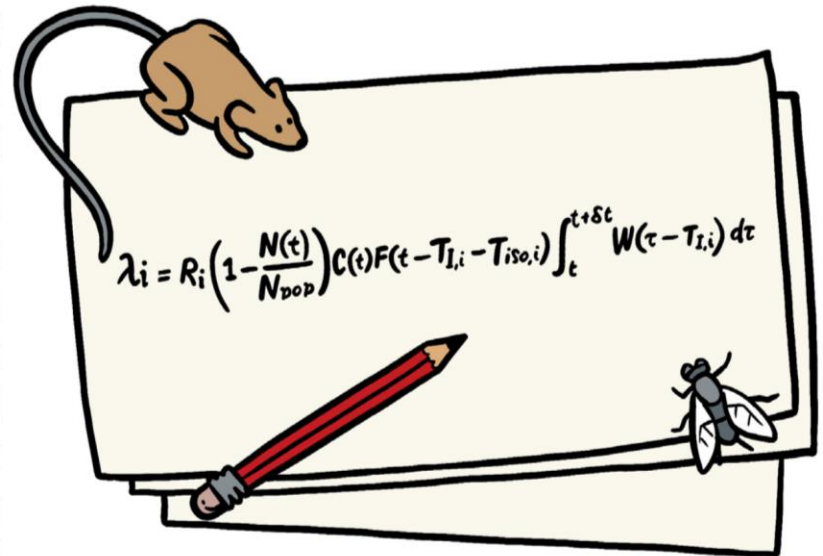
THE 'WHAT A WORLD EH?'

IT USUALLY MEANS...

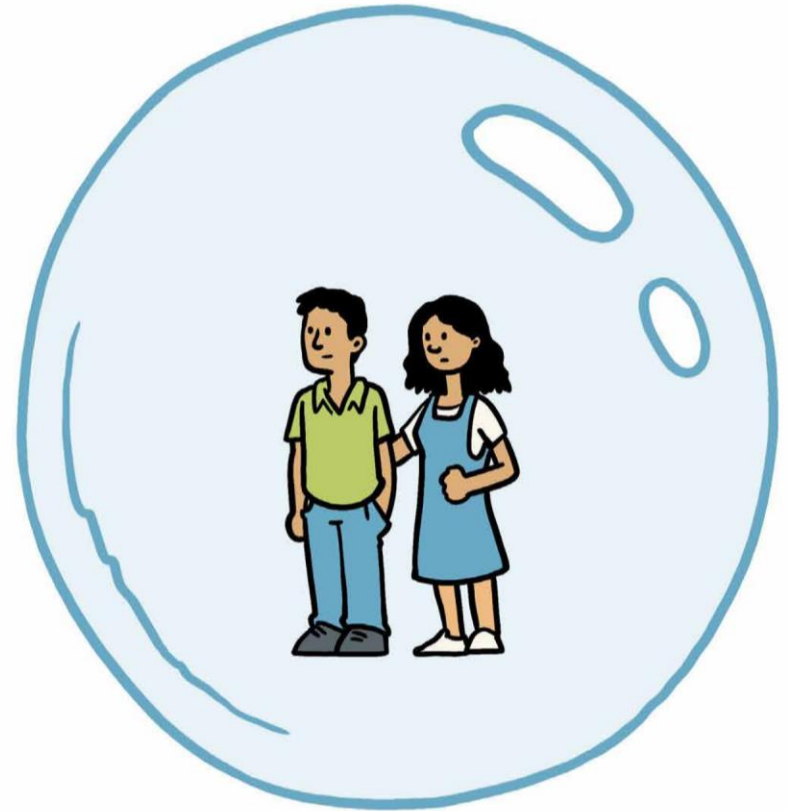
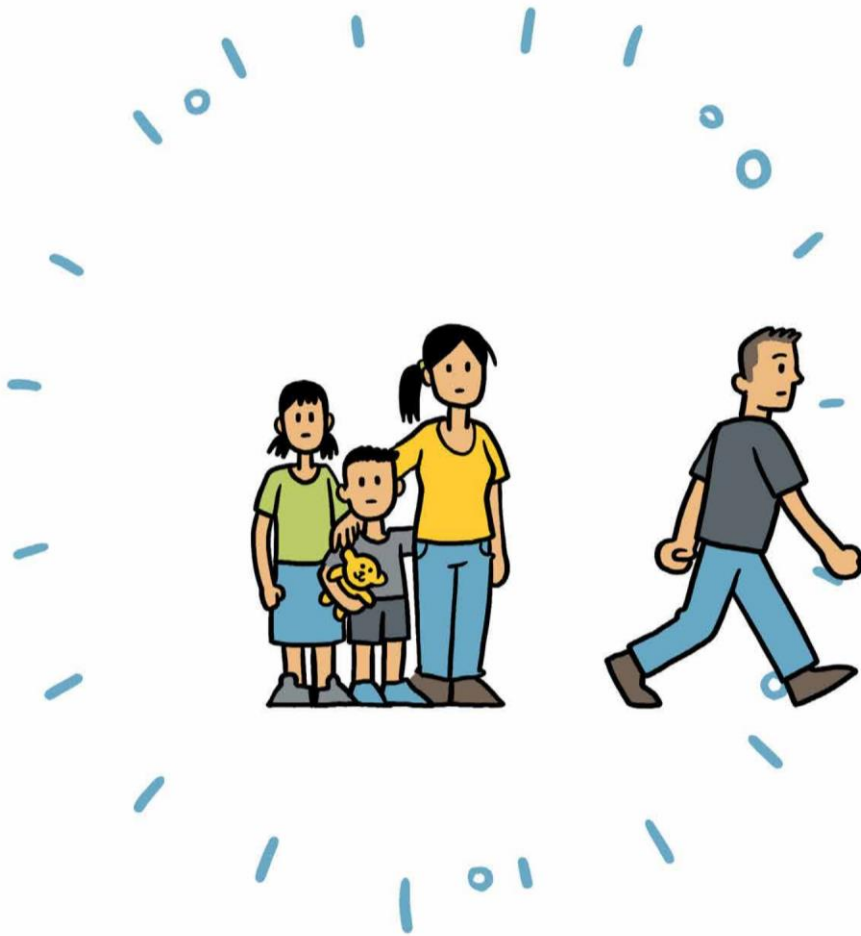


a small replica, or a person who demonstrates clothes

BUT SCIENTISTS MEAN...

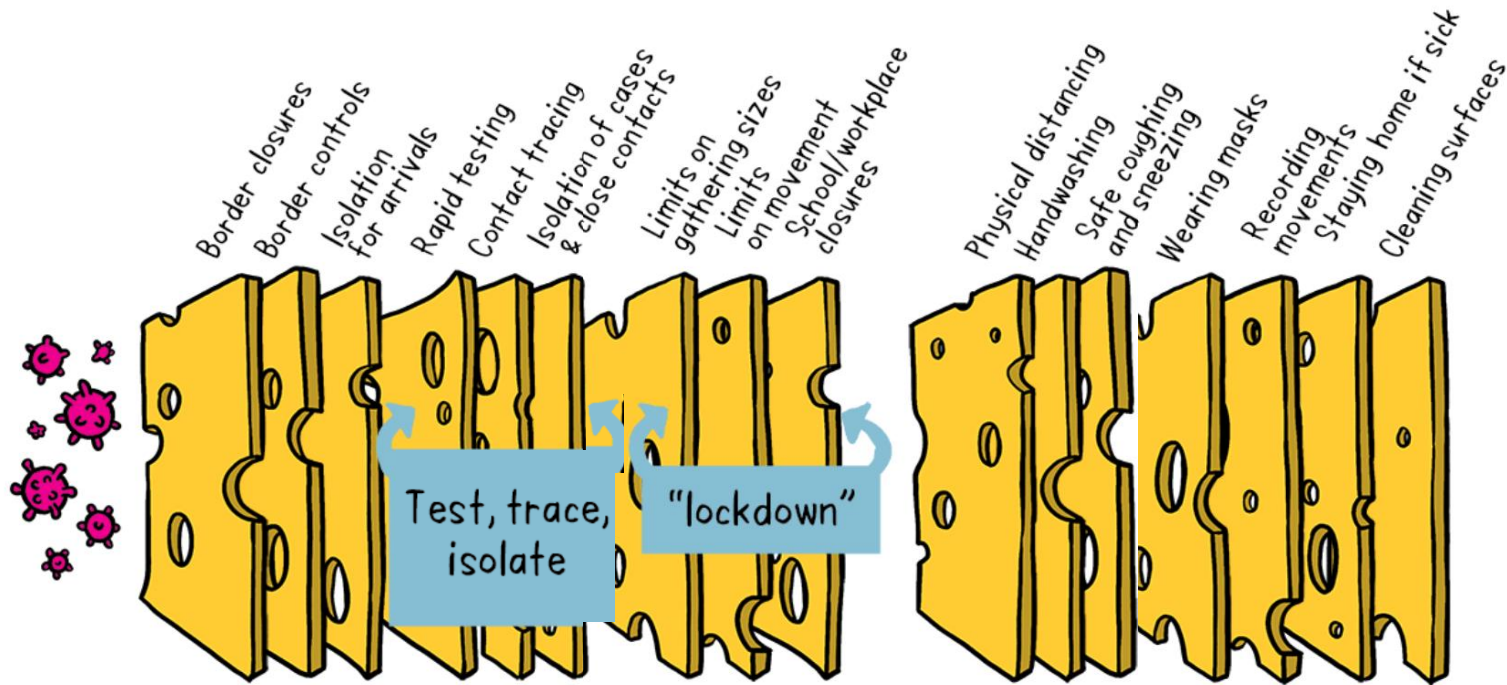


a simulation or representation of the real world





# THE EMMENTAL CHEESE MODEL



# MISINFORMATION



# DISINFORMATION



Independent of government

Provide information in bitesize,  
understandable pieces

Make it engaging and sharable







APPS

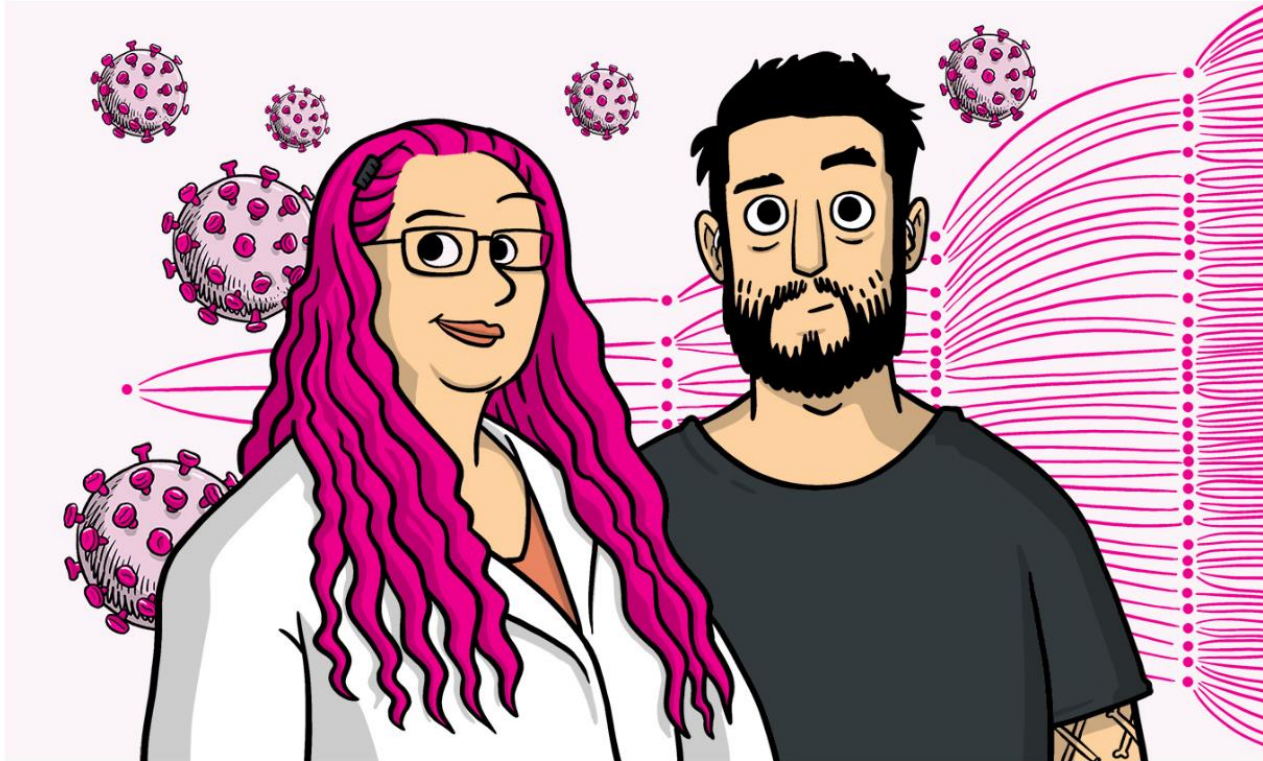


# THE SPINOFF

voyager. | Media Awards 2019

WINNER OF

WEBSITE OF THE YEAR



The bumper Toby Morris & Siouxsie Wiles  
Covid-19 box set

<https://thespinoff.co.nz/media/04-09-2020/the-great-toby-morris-siouxsie-wiles-covid-19-omnibus/>