

# **5G and Covid-19 Conspiracy FAQ**

## **20 Dec 2021**

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# 1. Is it possible for 5G to harm me (or the air)?

$1 \times 10^3$  means, 1 times 10, to the power of 3, in other words, 1 x 1 000.

$1 \times 10^9$  means : 1 x 1 000 000 000

No - it is basically not possible; the frequency is too low. Oxygen is about 152 picometres ( $10^{-12}$  m). 5G wavelength is between 1mm and 10mm ( $1 \times 10^{-3}$  to  $1 \times 10^{-2}$  m), in other words, between 1 000 000 000 000 x (one trillion times) and 10 000 000 000 000 x (10 trillion times) too big to stand a chance of hitting an oxygen molecule. DNA is bigger; it is 6 micrometres in size ( $6 \times 10^{-6}$ m), which is still between 10 000 and 1000 times too small to

easily be hit by microwaves, and it's made of atoms which themselves are mostly empty space. The gap between atoms is also important. (<https://study.com/academy/answer/what-is-the-average-distance-between-oxygen-molecules-at-stp.html>). Moreover, DNA is inside a cell and so damage to the DNA would more likely be due to overheating of the cell and cell death from the microwaves (as we see it warms up food at certain frequencies, but not all).

At Standard Temperature and Pressure (STP), the distance is about 4 nanometres ( $4 \times 10^{-9}$  metres) between oxygen molecules. So if a molecule is  $10^{-12}$ m in size, it means the gap between them is about 1000x bigger. So on a macro scale, if we imagine a molecule as 1m wide (about a yard, for our American readers), the next molecule at standard temperature and pressure (STP) is 1 km away (about  $\frac{2}{3}$  of a mile).

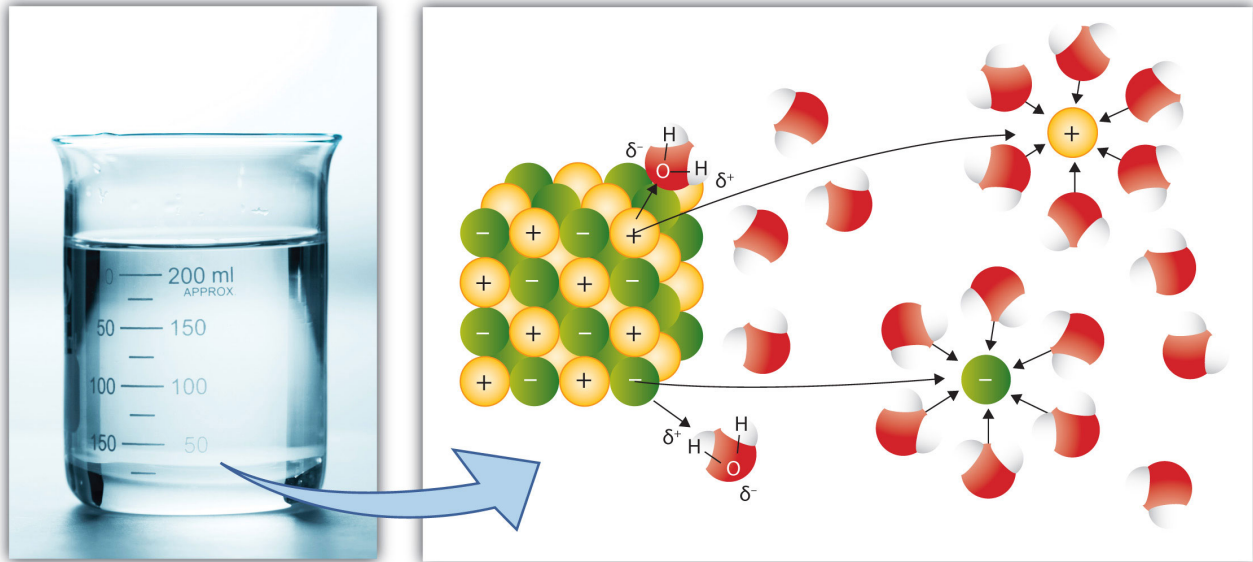
Standard Temperature and Pressure. Standard temperature is equal to 0 °C, which is 273.15 K. Standard Pressure is 1 Atm, 101.3kPa or 760 mmHg or torr. **STP** is the "standard" conditions often used for measuring gas density and volume. At **STP**, 1 mole of any gas occupies 22.4L.

In short, earth conditions.

At that scale, the 5G radiation wave crests are 1mm-1cm in size, so, if a molecule is 1m in size, and molecules are 1km apart, it means that each microwave wave crest is about as far away as the planet Jupiter — a billion km away, at its farthest point.

From these rudimentary calculations, you can see that the odds of a microwave hitting an atom is around 1 / 1 000 000 000 at best.

## 2. What is “ionising radiation”?



Ionising radiation is electromagnetic radiation which can cause **atoms** to shed **electrons**, that is, become “**ions**”. So for example, to bond chlorine and sodium to make sodium chloride, the sodium loses an electron and becomes  $\text{Na}^+$ , whereas the Chlorine gains an electron and becomes  $\text{Cl}^-$ . Because of the  $+/-$  attraction between them, they bond and become Sodium Chloride,  $\text{NaCl}$ . When put into water, the water helps them ionise again.

5G, like 4G, 3G, TV, radio, etc., is called "non ionising radiation" because it doesn't make ions.

Some non-ionising radiation may cause harm, e.g. high-intensity heat from an oven is not ionising but can harm. UVA doesn't ionise but can cause harm (<https://www.cancer.org/cancer/cancer-causes/radiation-exposure/uv-radiation.html>), etc. The full list is here: <https://www.arpansa.gov.au/sites/default/files/tr182.pdf>. “IR-A has the deepest penetration into biological tissue. The depth of penetration into tissue decreases with increasing wavelength through IR-B and IR-C. Exposures to IR increase the risk of cataracts and visual damage at the shorter wavelengths. Thermal stress and burns to biological tissue are possible from exposures to intense IR across the entire spectrum.”

In short, what matters are three factors: field strength, wavelength, and proximity, not the ionising behaviour per se.

### 3. What radiation should we worry about?

There are two types of *radiation* you need to worry about which pose a risk of cancer and DNA damage.

The first type, **radioactivity**, from radioactive **substances**, like uranium and plutonium. Unless you work in a nuclear laboratory, uranium mine, or nuclear power station, you do not need to worry about these. You have three types of radioactivity from radioactive substances: **alpha**, **beta** and **gamma**. Gamma is actually EM radiation, discussed below. **Alpha** is a high-speed helium nucleus, consisting of two protons and two neutrons. **Beta** is a high-speed/energy electron ejected from a nucleus of an atom. This is the type of radiation you get from **nuclear bombs**. We only encounter negligible levels of radioactivity in day-to-day life. <https://www.thisoldhouse.com/green-home/21018112/sources-of-radiation-in-household-items>



The **second** type of radiation is *high energy ionising electromagnetic radiation*:

- Gamma
- Xrays
- Ultra Violet (UV)

all of which come from the sun and manmade sources. Their danger levels are directly related to their frequency (energy levels). Gamma is the worst, followed by Xrays, followed by UV, which is the least dangerous.

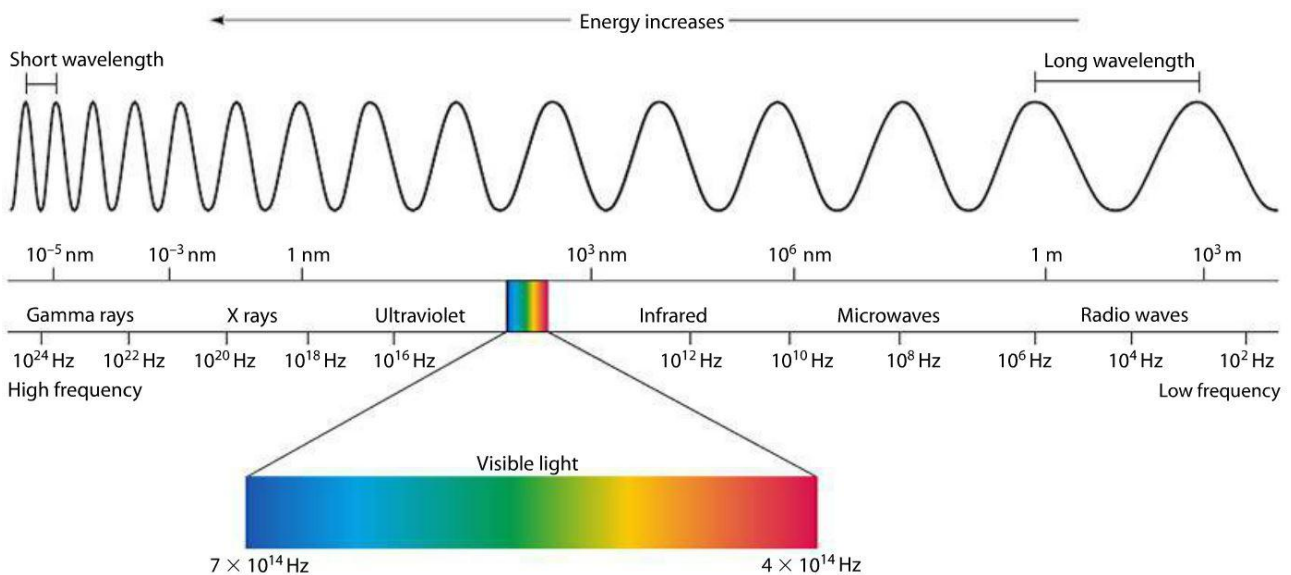
- **Gamma** comes only from radioactive substances like Uranium or similar. This is highly dangerous. It won't give you superpowers or turn you green.
- **Xrays** you get at the doctor's. Yes, it is harmful, particularly in large or repeated doses. That's why they give you a lead apron. It doesn't go through lead.
- **Ultra violet**, which you get from the sun, teeth whitening lights, tanning stations, dental porcelain filling lights used to set the porcelain, nightclub lights, bug zappers, etc. It's distinctly purple-looking and makes white objects glow bright purple. UV is what gives you sunburn, and if you sit in the sun too much, you can get skin cancer.

## 4. What is the “electromagnetic spectrum”?

This is the series of waves of electro-magnetic energy - energy with electrical and magnetic properties. The most familiar types you would know are:

- **visible light**, which enables you to see with your eyes
- **infra-red** (aka “heat” that you feel at a distance)
- the **microwaves** in your microwave oven or cellphone, or WiFi (yes, it’s microwave/radio range)
- **radio** waves which send the signal to your radio/TV
- **Xrays** that you get at the doctor
- **UV** lights

Here is the full electromagnetic (EM) spectrum: The **blue** side is the **dangerous side**, and **less dangerous**, even harmless except in very high-powered energy sources, is the **red** side.

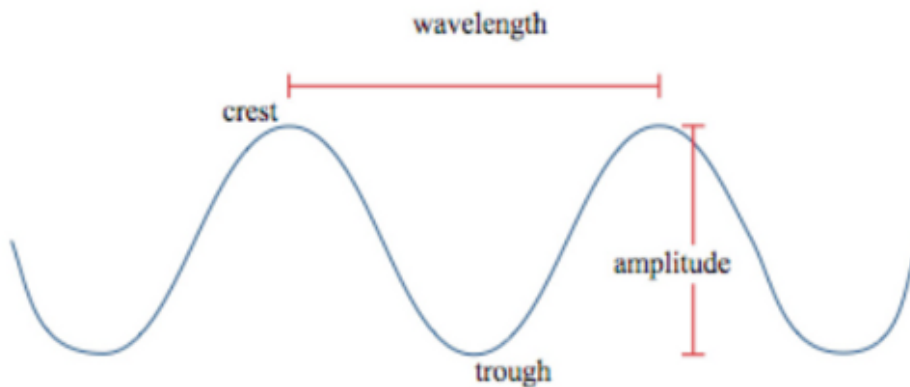


## 5. What does “frequency” mean? What does “wavelength” mean?

“**Frequency**” means the number of crests of a wave which pass per second. The shorter the wavelength of light, the higher the frequency that the wave crests pass.

Think of how you stand at the beach and watch waves hitting. How often do they hit? About once per 30s-60s. So their frequency is once or two per minute. Their wavelength is probably around 1-100m range. So their frequency is about 0,03 Hz. Radio waves are at 100 Hz, or 100x per second. Electrical current is usually around 50-60 Hz, or 50-60 times per second. If you've ever been shocked by an electric outlet you'll be familiar with the back-and-forth jolting at 50-60 Hz that the current delivers.

Every other form of electromagnetic (EM) wave is *has a higher frequency*. So, AM/FM radio is about 1000x per second (Hz), microwaves are about 1 000 000 000 x per second, etc. While that *sounds scary*, *visible light* has a *higher* frequency. And the truly dangerous forms of EM are in the  $10^{16}$  range, meaning their crests hit 10 000 000 000 000 000 x per second. *That* is about 100 000 000 x more frequent than the microwaves used in your cellphone or oven. See the diagram on the previous page for the figures.



## 6. What is induction?

For the next section, 7, you will need to know the word “**induction**”. It basically means to cause something or start something.

Induction in science usually means starting a current by using an electromagnetic field. An “induction stove” is one which uses a moving magnetic field to heat up a pot. The way it does it, is the moving magnetic field moves electrons in the iron that makes up the pot, creating an electrical circuit, and hence heat energy.

The same process applies to **RFID** (Radio Frequency Identity). We’ll talk about that later...



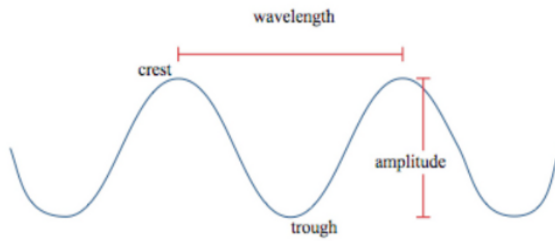
## # RFID



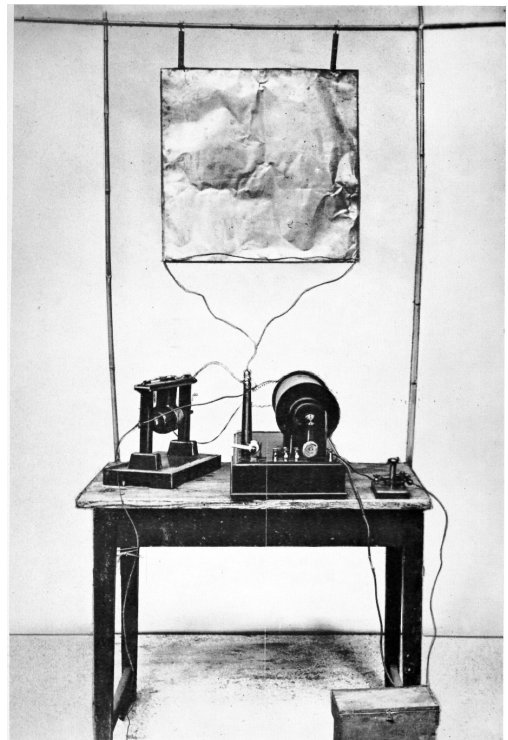
## 7. What is FM/AM? How does a radio work? Isn't it killing us?

- **Frequency** modulated vs **Amplitude** modulated radio. (Modulated = changed). It refers to how a signal is modified to “pulsate” to create sounds for your radio set. FM = they adjust the frequency (but not by much), and AM = they adjust the amplitude, or “Wave height”. Think again of an ocean wave. It can either hit more often (frequency) or it can stand taller (amplitude). See section 5 above for the diagram of a wave.
- In the case of **radio induction**: You have a radio in your car. It uses radio waves from the radio station's tower. The radio waves travel through the air, and hit your car aerial. They are strong enough to **induce** a current (move electrons, ie create electricity). The signal sent is either **frequency** modulated or **amplitude** modulated, that is, they're moderating either how often the wave crests move or how big they are, to fluctuate the signal. The fluctuating signal produces a fluctuating electrical current in the aerial, which goes to the amplifier circuit in your car radio, and from there to your speakers in your car.

Speakers work by being pushed by an “electromagnet” inside them that makes them vibrate according to the electrical signal. This produces music. A remote control for your TV uses infrared. Remote control toy cars use radio. Walkie talkies use radio. Cellphones use microwave - slightly higher frequency. **All these things work the same way.**



- Radio and its uses was discovered in 1892 by Heinrich Hertz (Germany) and Nikola Tesla (Serbia). It was then used by Guglielmo Marconi (Italy) to make a functioning radio set. Tesla, in the 19th Century, even proposed that we could use it for telecommunications and remote controls. So radio , as a technology, has been around for over 128 years.



## 8. But my phone gets hot! And does my microwave oven make my food radioactive?

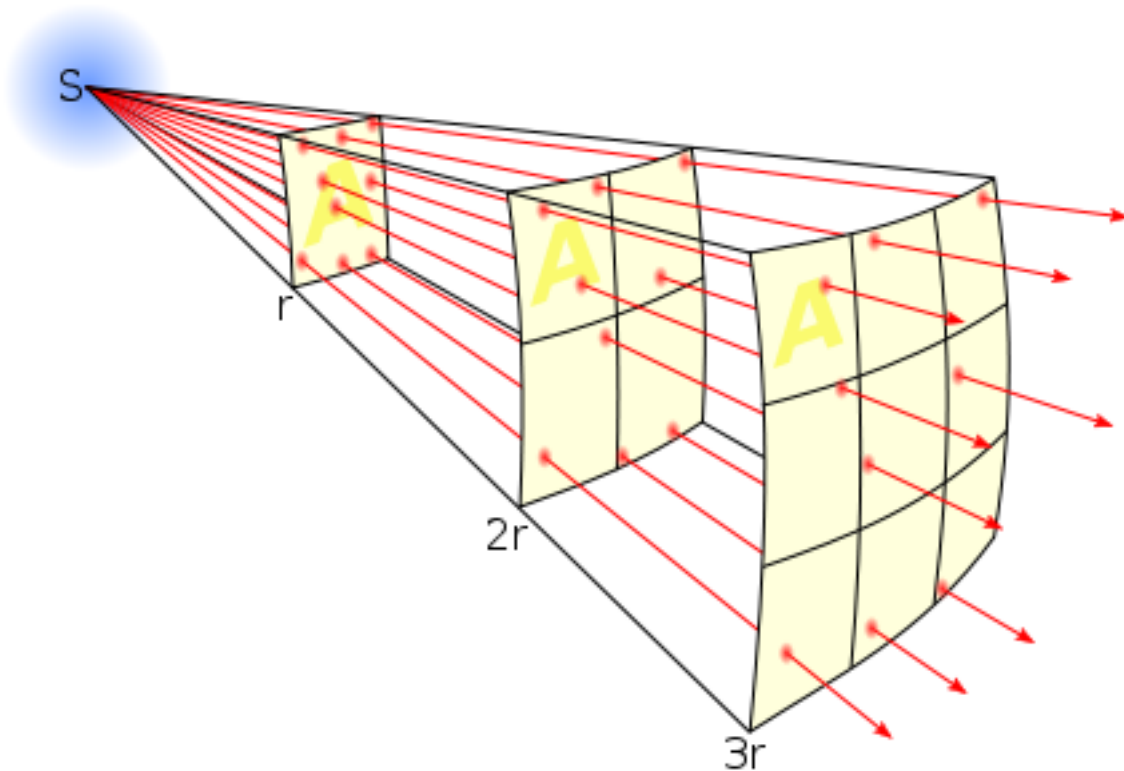
- Your phone gets hot on your head because it has a computer chip called a **Central Processing Unit or CPU**. CPUs use up to 40 watts (as much as an old light bulb) and sometimes up to 100 watts, like a powerful light bulb. Remember how hot those got?
- Your brain uses 100 watts, so you're also warming your phone up.
- A cellphone EM field is about 1-2 watts, or about 50-100x **less** powerful from the signal coming from your brain or a normal old-style lightbulb. The heat is not coming from the signal, it's coming from the CPU.
- A microwave oven is about 800 watts, about 8x more energy usage than your brain. That's why it cooks things. A cellphone is 400-800x **weaker** than a microwave oven. So if a microwave takes say 2 minutes to boil water, a cellphone would take 27 hours. But the heat would dissipate from the water faster than it was being "added".
- Radiation passes through things (EM radiation), it does not "stay" in them or "infect" them. The only radiation which hits things and "stays" in them (sometimes) is alpha radiation from radioactive fuels. That comes from things like uranium and plutonium, not from EM fields. Not even dangerous EM fields (like Xrays) leave "residue" in you.

## 9. But how do I know it's not cooking me, even if you say it's just 1-2 watts?

- A normal lightbulb is 40-60 Watts. You're not scared of *that* are you?
- Think of how you step away from a fire and the further you are the cooler it is. Or how you keep at a distance from a speaker in a night club that is too loud.

### Inverse square law

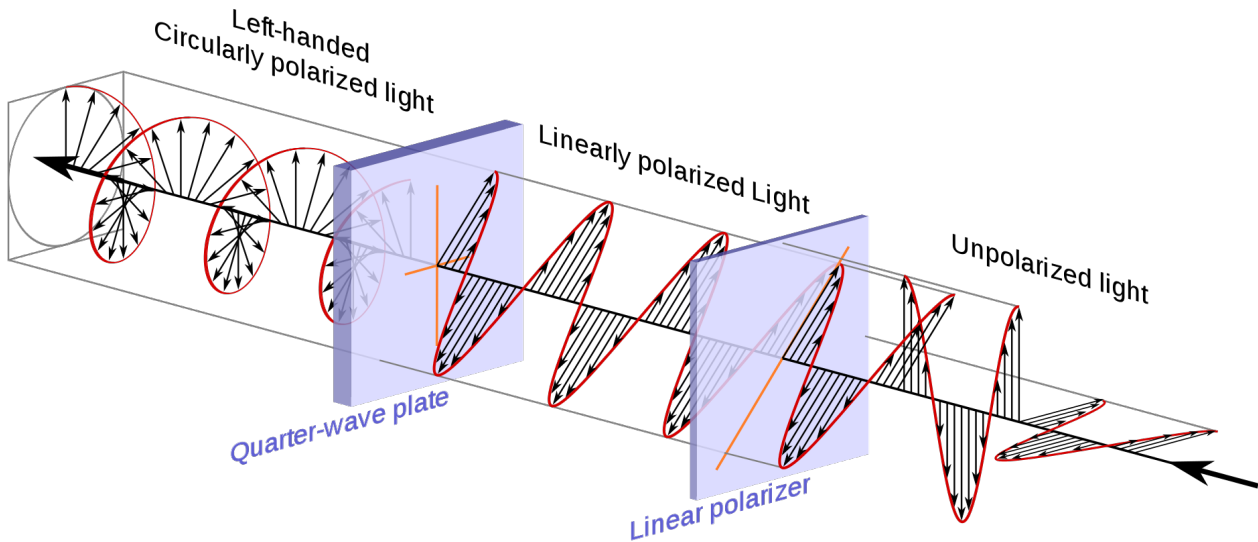
- The further you are from a source of energy or heat, the weaker it is.



- So you can compare the wattage with the intensity of the field from your cellphone and work it out. To save you the effort, we've done it. Suppose your cellphone on average puts out 1.5 watts at 1 metre. According to **inverse square law**, it is then 0,375 W at 2m, then 0,16W at 3m (ie 10x weaker at 3m). 0,16W means it is about 1000x less warm (meaning, emitting infra-red) than your brain. So at a mere 3 metres, your cellphone is 1000x less harmful to your DNA than your brain is.
- The reason a microwave oven has a **grid** behind the glass is because it's 800-1200 watts - quite strong - and so if you stand in front of it watching your food cook, you'd get cooked too unless they stopped it with a grid.

## 10. Light polarisation

- See that grid with little holes in a microwave oven door? It works on the same principle as polaroid sunglasses. **Polaroid** lenses have a microscopic crystal grid that functions the same as the grid in a microwave oven. It's called **light polarisation**.



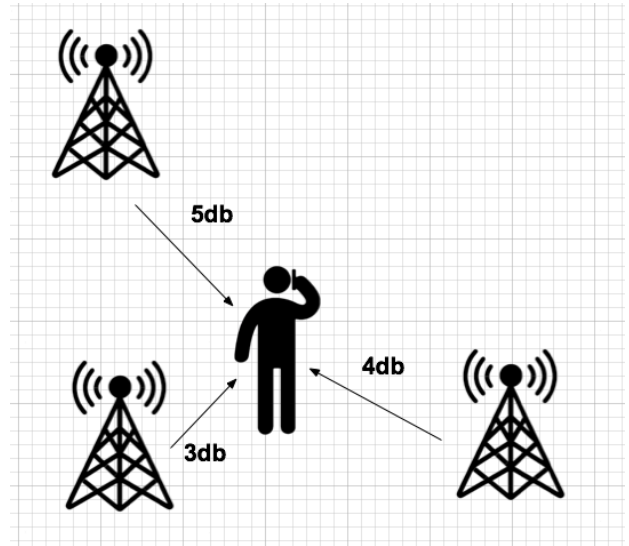
- At 4m an oven wouldn't harm you much because the wattage hitting you would effectively be 50W (about as much as an old-fashioned lightbulb), not 800W.
- Traditional electric ovens where we cook food, by the way, are about 3000W. They use infrared (IR) (also known as heat) to heat food. So a traditional oven can theoretically burn you if the door is open at 4 metres because you'll effectively feel about 188 Watts. But in practice I think we all know that if the oven door is open, it's actually OK to stand about 1m away because not all the energy is converted to Infrared, a lot is lost to electrical resistance in the heating coil. Hence we have even less reason to worry about microwaves from a phone, which are actually a lower energy wave (longer wavelength) than IR.
- Military night vision goggles are actually IR goggles that let you see the IR part of the spectrum, in other words, heat.

## 11. But can't they use 5G to track us?

Sorry for the bad news but "they" can use 2G, GSM and GPRS to track you, in other words, it's been possible to track you since around 1995.

It's called triangulation. Your cellphone talks to cellular towers near you; the strength of the signal in "decibels" between each tower tells each tower how far you are. You then just use a vector triangle (science syllabus, Grade 11-12) to work out the exact location of the person. It also uses trigonometry ... from maths class.

And by the way, even without 5G, **Google** has already been tracking you, see image below:



COVID-19 Community Mobility Report

South Africa March 29, 2020

### Mobility changes

Google prepared this report to help you and public health officials understand responses to social distancing guidance related to COVID-19. This report shouldn't be used for medical diagnostic, prognostic, or treatment purposes. It also isn't intended to be used for guidance on personal travel plans.

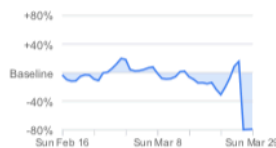
Location accuracy and the understanding of categorized places varies from region to region, so we don't recommend using this data to compare changes between countries, or between regions with different characteristics (e.g. rural versus urban areas).

We'll leave a region out of the report if we don't have statistically significant levels of data. To learn how we calculate these trends and preserve privacy, read [About this data](#).

#### Retail & recreation

**-79%**

compared to baseline

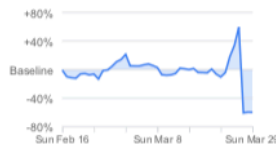


Mobility trends for places like restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters.

#### Grocery & pharmacy

**-60%**

compared to baseline



Mobility trends for places like grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies.

#### Parks

**-55%**

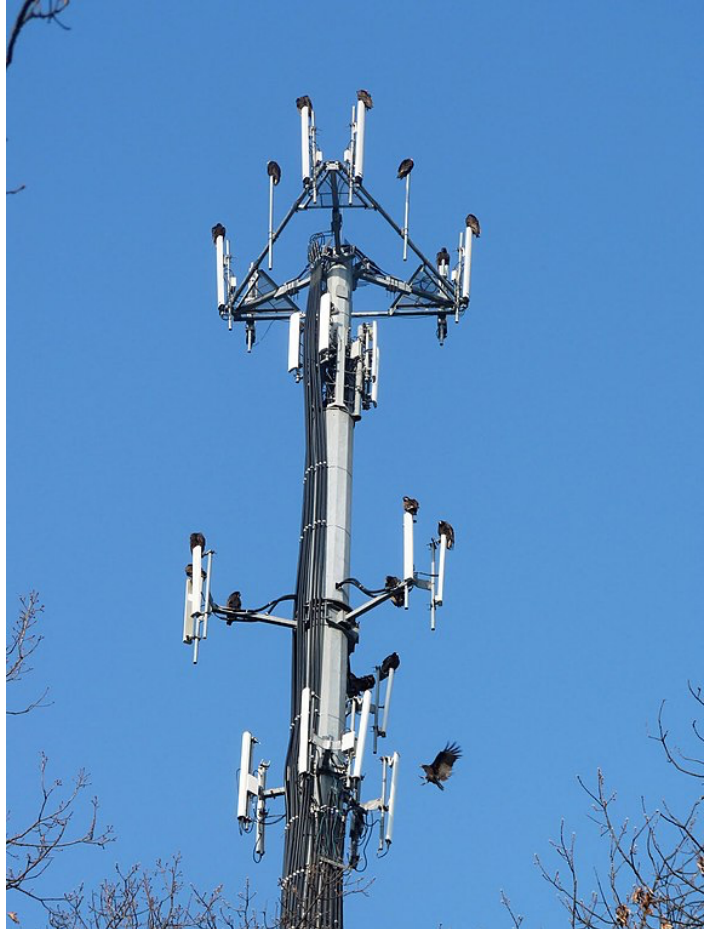
compared to baseline



Mobility trends for places like national parks, public beaches, marinas, dog parks, plazas, and public gardens.

## 12. But then what is different about 5G?

- **Short answer:** a lot of technical things, but mostly it's faster. Otherwise it uses the SAME microwave frequency *range* that 4G and others use. In short, you need to worry about it as little as you currently do about 4G. To transmit more data it will use higher frequencies *but* they will still be lower frequencies than Infra Red, Red, visible light, UV, etc. 5G aims to allow more devices to connect, and provide more speed.
- **Long answer:** <https://en.wikipedia.org/wiki/5G>



## 13. Can 5G be weaponised?

### Short answer

- **Yes, but why?** Why would a government allow telecommunications corporations to place weapons around the entire country? That would be like worrying that car manufacturers were allowed to place plastic explosives in every single car. It makes no sense at all. *Governments* have monopolies on force, not *corporations*. And in general, governments do not turn on their own citizens. When they do, that is called a military coup.

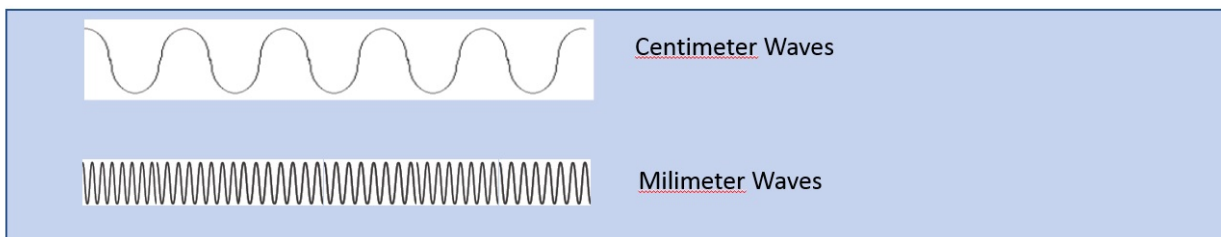
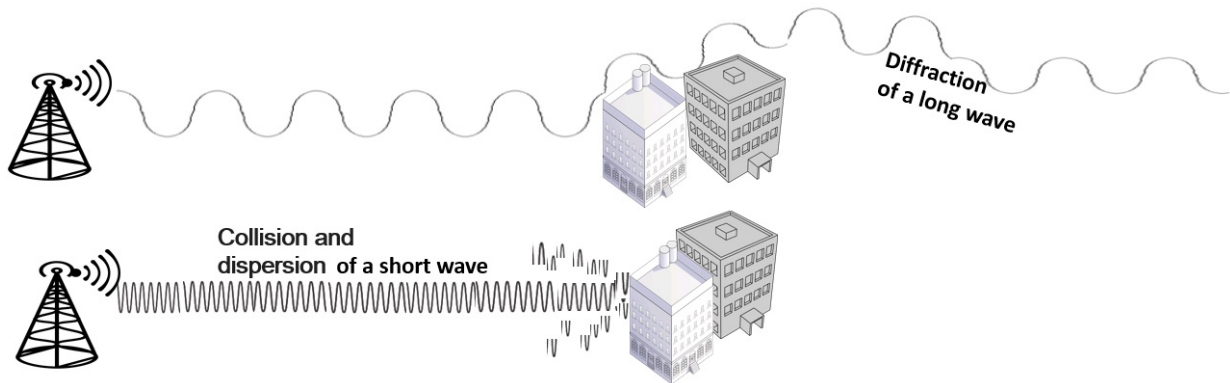
### Long answer

- **Legally speaking**, in South Africa, **ICASA** determines the law around telecommunications technology, and it has to be signed off by the Minister of Telecommunications. Do you really think that our minister(s) that we vote for would actually sign off a license for a weapon to be deployed amongst our population, and aim weapons at suburbs that the ministers themselves inhabit? Why not just send a tweet to the Minister and ask?
- **Consumer Protection Act** makes it illegal for a company to roll out a product which is actually harmful, and if it is found to be harmful, the company is obliged by law to remove it. Hence, if you think 5G is harmful, you are within your rights to lay a complaint with the Consumer Complaints Commission. Please be sure to provide a solid report with solid evidence, not memes from Facebook.
- **5G is not that great as a weapon.** 5G is a form of microwave, so it could *potentially* be weaponised like any other electromagnetic radiation. People could weaponise Xray machines if they wanted to. Consider for example lasers that you see in space movies. Those are electromagnetic weapons. However, to deliver a lethal dose of electromagnetic radiation, a laser has to be in the tens of thousands of watts range, which would probably require that they have a dedicated large power supply attached (see picture below). Although a laser pointer that you use in board rooms is quite strong, and certainly hurts your eyes, the most it can do is blind you. It can't even cut through your clothes.
- There **are** microwave crowd control devices called "**Active Denial Systems**" which are non-lethal, and there are things called "**masers**" which are lasers made using microwaves instead of visible light. However, all of these have to be **aimed** specifically at a target, they are not broadcasting indiscriminately in a spherical radiation pattern like a cell-phone mast.
- In **microwave mesh** technology, the towers make use of "line of sight" communication, that is, the transmission is focused between towers. Of course, it *could* be aimed at people on the ground, if the antenna was aimed at people on the ground, but there's no specifically good reason to do that, and, due to **inverse square law**, *since it is not a maser (ie not focused)*, it won't be very effective. Think about a welding arc. When you see the light close up, it really hurts your eyes. But it doesn't hurt as much further away, say, 100m away. Most cellphone towers are tall, so, the chance of a sufficiently powerful transmission hitting you at a few kilometers is very low, *even if "they" wanted to weaponise it*.
- The world governments have much more effective weapons available for mass destruction (such as aircraft and bombs), and much more effective weapons of mass control (propaganda, fake news). Microwave towers really are not a good candidate weapon.
- Sticks can be weaponised. Kitchen knives can be weaponised. So can cars, aircraft, etc. That's what humans do. Dynamite was invented by Mr Nobel originally for mining, but obviously, people used it as a weapon (hence Nobel *peace prize*).
- **Link:** [https://en.wikipedia.org/wiki/Active\\_Denial\\_System](https://en.wikipedia.org/wiki/Active_Denial_System).
- **Link:** <https://en.wikipedia.org/wiki/Maser>. Note that maser technology has existed since 1953.



## 14. How does 5G differ from radio/TV?

- **Radio and TV** is what we call “long wave”. The reason we use long-wave radiation for telecomms is because it travels longer distances.
- **Longer wave (TV)** can go further, hence people can see TV in remote rural areas.
- **Shorter wave** (radio, microwave, 3G, etc., can mostly reach in urban areas because you can get more data through in the same energy output, BUT because it's higher frequency it can get stopped by things like concrete buildings).
- There's a technology called "**LiFi**", for example, which uses visible light. But because the frequency of the waves is quite high - higher than microwaves - it can't go through things. So you'd be able to get your internet signal inside a room with LiFi but once you close the door the signal would cut off. That's great for privacy but not much use for long-range communication.
- The reason why you can't see through walls, but the radio stations' signals can go through walls, is because solid things stop higher-frequency (more dangerous) radiation. That's why your bones show up white on an X-ray, because they're *denser* than your flesh.
- Meaning that since 5G is higher-frequency than visible light, it is easier to stop from harming you by merely going indoors (or by even wearing a tinfoil hat).



\* The difference of the propagation between a longwave and a shortwave.



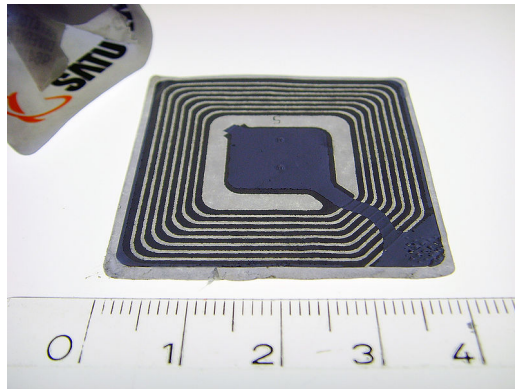
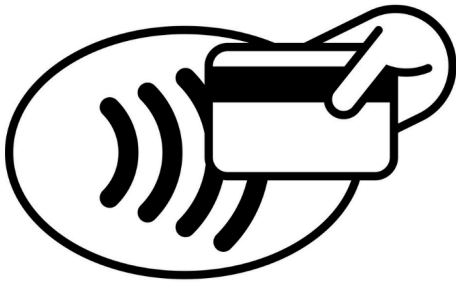
## 15. Why did President Trump say no to 5G? Is it because 5G is dangerous?

- Huawei finance chief Meng Wanzhou was **arrested** in Canada in December 2018 on charges of violating sanctions against Iran. (<https://www.bbc.com/news/business-46462858>)
- This started a **trade war** (<https://www.scmp.com/tech/big-tech/article/3040044/year-arrest-huaweis-meng-wanzhou-us-china-relations-remain-frayed-and>)
- USA responded by refusing rights to other technologies like American-designed chips used in mobile phones. They imposed a **trade embargo** on China and specifically Huawei who are developing 5G. (<https://www.wired.com/story/newest-us-sanctions-chinas-huawei-backfire/>)
- **Britain did not follow** USA's request to impose sanctions on China. (<https://www.ft.com/content/12e42a00-499b-11e9-8b7f-d49067e0f50d>)
- **USA claimed in Feb 2020 that it was really about espionage technologies** built into 5G (<https://www.wired.com/story/huawei-backdoors-us-crypto-ag/>)
- Meantime it was actually just because Huawei ignored the embargo against Iran and USA was dissatisfied with that.
- If you read **Snowden and Greenwald's book "No Place to Hide"**, you will see that Snowden alleges that USA puts snooping tools inside modems they ship as well. (<https://www.theguardian.com/books/2014/may/12/glenn-greenwald-nsa-tampers-us-internet-routers-snowden>). Meaning that *even if* Huawei "backdoors" their modems, so does USA.



## 16. What is RFID?

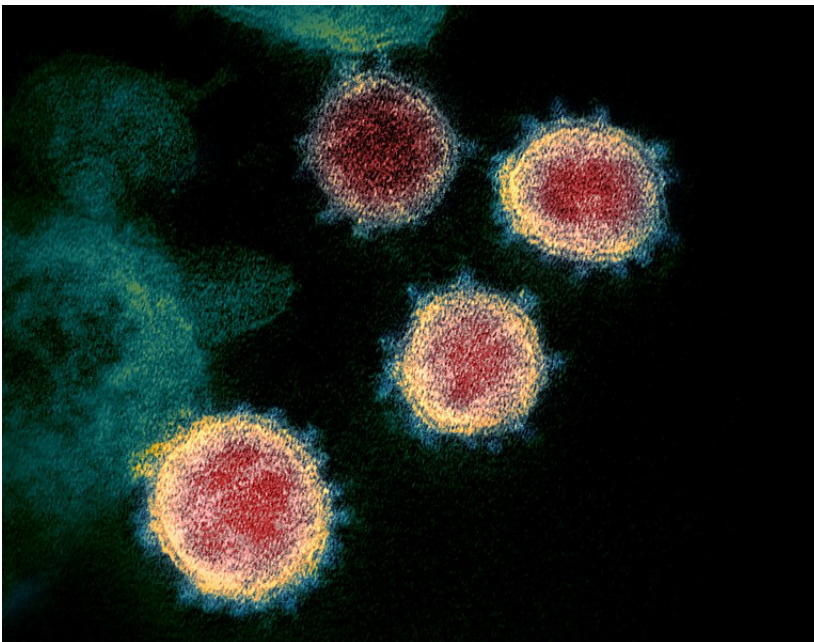
- It's a kind of computer identity chip, like your lost pet chip, or your "tap" credit card, which responds to induction (see 6 above). Remember the **inverse square law**. If you induce a current in a chip that's strong enough to reach a cellphone tower it will probably be something you can feel in your skin.
- So, that's why for example the RFID chip in your credit card can only be read if you "tap" it on the card reader - it has to be really close. As per **Inverse square law**.
- If someone could read RFID at a distance, no-one's bank account would be safe, since "tap" cards contain an RFID chip.
- Hence, there is no point whatsoever to putting RFID chips into people if you want to "track" people, because to read the chip you'd still have to go up to the person that you want to "track" and scan them at close-range (ie touch).



## 17. Is there a link between Covid-19 and 5G?

- **No.**

- Some conspiracy theorists claim that the purpose of the Covid-19 lockdown is to give governments an opportunity to install 5G. **No, Governments do not install 5G**, they merely legislate. The 5G would be installed by the *telcos*. Feel free to contact your service provider on Twitter and ask them if they are weaponising their towers, and if their towers create viruses. Be sure to ask for a tour of their facilities to inspect them for virus labs as well. The only role government has in 5G is licensing it, that is, issuing broadcast licenses to those who apply for such licenses. You can apply here: <https://www.icasa.org.za/pages/spectrum-licensing>. It's not a secret that is reserved for a secret cabal.
- **Correlation is not causation.** "They" found that there is a link between divorce rates and margarine sales. But clearly the divorce and margarine have nothing to do with each other. <https://www.bbc.com/news/magazine-27537142>. *Just because two things happen at the same time it does not mean that they caused each other.* **Superstition** is where you make this causal attribution mistake. For example, you flip a coin, it shows heads, and you have a good day. You start to think that the "heads" coin determines that you have a good day. However, it is just coincidence. Hence, the fact that 5G technology started to be rolled out around the time Covid came out, is coincidence.
- **Italy and Iran do not have 5G and were the worst-hit in the first wave out of China.** Iran was badly hit because the shrine at Qom was not shut, allowing people to kiss it and spread the disease (<https://time.com/5804546/iran-shiite-storm-coronavirus/>). Italy was badly hit due to their ageing population and slow response. USA has also been badly hit. China has largely recovered. *Therefore since China has recovered despite having 5G, 5G has nothing to do with it.*
- **Destroying ICT infrastructure prevents emergency services** from being able to contact you or your loved ones, and makes it more likely that you will die from an actual threat, namely a disease, because you can't get help. (<https://www.bbc.com/news/uk-england-52164358>).



## 18. How can I protect myself from Covid-19?

### Wash and sanitise

- Wash your hands after touching anything that anyone else might have touched, immediately. Particularly pay attention to financial exchanges, coin or note handling, restaurant menus, door handles, elevator buttons, ATM buttons, keyboards and mice, common or public touch screens.
- Do not touch your face, ever, except to wash it, and with soap.
- Sanitise your hands with 70% or stronger alcohol before touching anything else anyone else has touched, or anything anyone else passes to you, e.g. a bank card or bank payment machine (speedpoint), or ATM. Sanitise anything you touch or your hands after you touch something, especially hand rails, ATMs, card speedpoints, door handles, window latches, menus, elevator buttons, etc. before you touch it. Suggest you carry a spray bottle of sanitiser to avoid having to smear sanitiser. If you can avoid touching, avoid doing so. For example, rails in stairwells or on escalators, elevator buttons (the latter can be pushed with a key). Develop a habit of not touching anything with your hands without sanitising it first.
- Wash all clothing, shoes, hands, etc., when returning home, and afterwards wash your hands and wipe down any surfaces you or your clothing touched, with soap or sanitiser.
- Covid-19 survives well on plastic and most metal surfaces but poorly on copper. Therefore unless something is copper, ensure it is sanitised.



### Social distance

- Keep far away from others, especially in closed spaces. A minimum of 1.5m or 2m (1 yard to 6 feet) is recommended. Further is better. The reason is that the virus is light and can float in air for a few hours.
- If someone shows any symptoms of illness, keep far from them, especially coughing or sneezing.
- Wear a mask, preferably fabric with multiple layers, and encourage all around you to do so as well. Speaking, coughing, etc., all release spittle into the air which contains Covid-19. **Do not remove your mask to cough or sneeze**, keep it up. Rather go change your mask.
- Do not touch, visit, hug, shake hands with, anyone, as far as possible. Keep small social circles, e.g. immediate family, and avoid physical visits to anyone else.
- Minimise shopping, travel, or public spaces, e.g. offices. Pressurise your employer as far as possible if you do desk work, to let you work from home using internet.

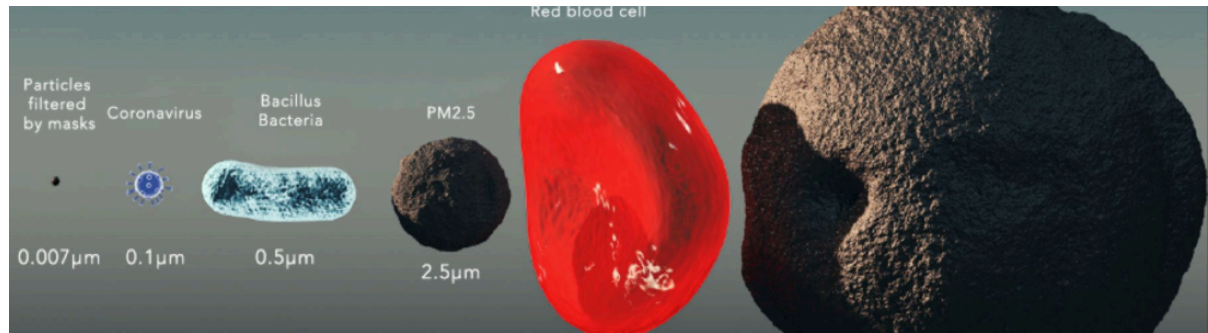
### Ventilate

- If you are in a closed space, try open all windows and doors to circulate fresh air from outside. Try stay upwind of all other people so that if they have covid-19, it does not blow onto you.
- Do not go into rooms without ventilation including airconditioned rooms as the A/C might be circulating from inside the building.
- Avoid public transport or insist on open windows on public transport.

### Sunbathe and take Vitamin-D

- Some studies suggest that Vitamin-D inhibits Covid-19, which may explain its lower rates in the Southern hemisphere which is more sunny. Exposure to the sun causes the body to produce Vitamin-D.
- If you are not able to do so, take Vitamin-D supplements in recommended doses.
- Do not suntan excessively otherwise you might get skin cancer.

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Comparitive sizes of dust (that masks filter out), covid (dark blue), bacteria (light blue), larger dust particles, red blood cell, and even larger dust/dirt particles.

## 19. God will protect me from Covid-19. I don't need a mask.

- **No.**

The Serbian/Montenegrin Orthodox church lost **two patriarchs** (church heads, like the Pope in catholicism, one of whom is depicted here), to Covid-19. They got Covid-19 by kissing bodies of those who had died of Covid-19. That is consistent with the germ theory of disease (that germs are small particles that cause disease and that pass by contact).

<https://www.bbc.com/news/world-europe-55098412>

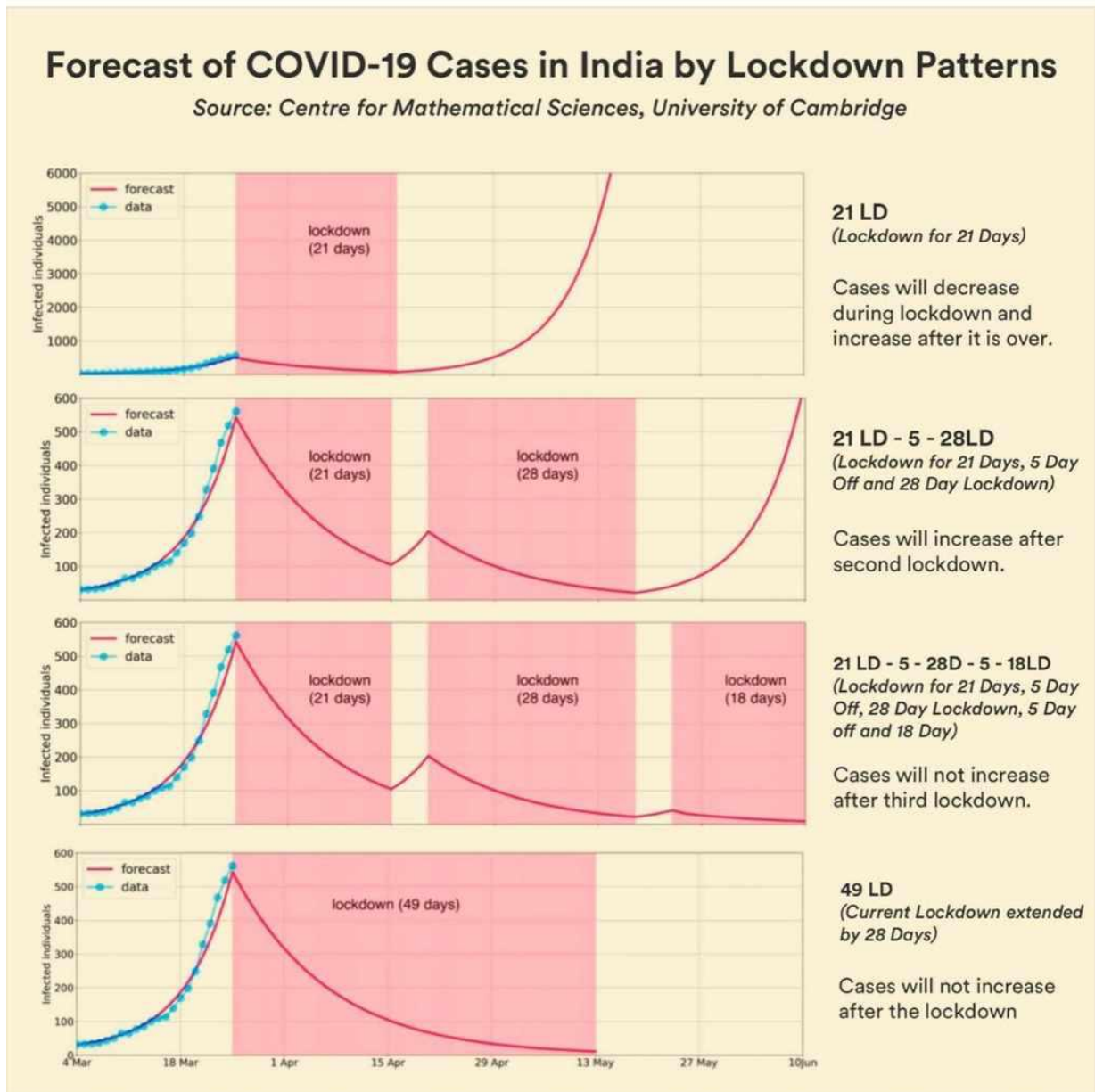
“Over the past two months, Covid-19 has deprived the religious institution of its top leadership in both Serbia and Montenegro. But critics say the blows are self-inflicted, **with traditional acts of worship the likely cause of infection.**”



If God isn't protecting a patriarch, he probably won't be protecting you.

## 20. Why should we have lockdowns? Is it to control the population and bring on a fascist state?

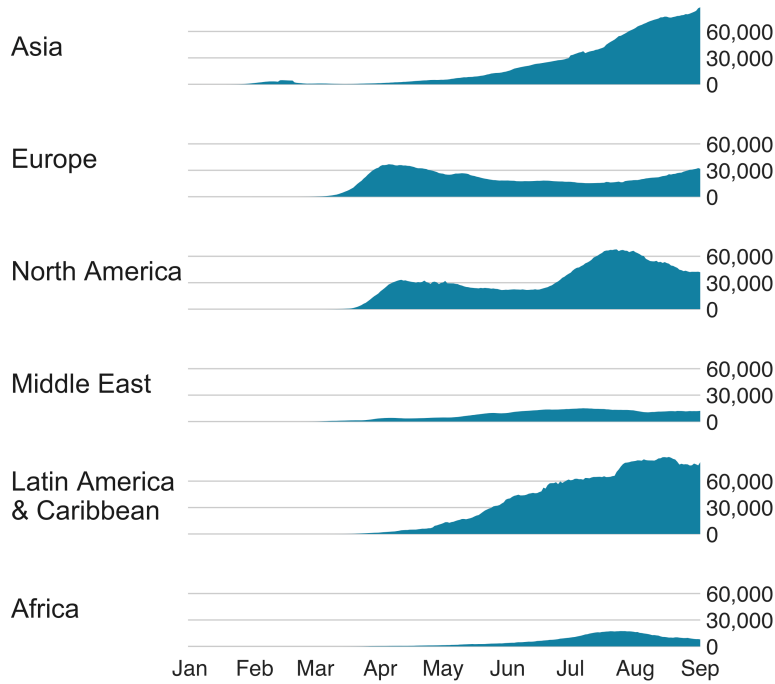
- The purpose of the Covid-19 lockdown is to prevent the spread of infection. The following graphs come from Cambridge University (below)



- What the graphs show is, the longer we lock down, the less likely it is that Covid-19 will start infecting people again. The graph going up is infection rate increases. The pink patches are lockdowns. The four graphs show 21 days, 21 then 28 days, then 21-28-18 day patches, and then a single 49-day patch, which seems to be the best option.
- Countries in Africa which did harsh lockdowns had lower infection rates. Consider the below graphs which show how lockdowns stop the spread in Africa.

### Covid-19 cases compared by continent

Number of cases per day, seven-day rolling average



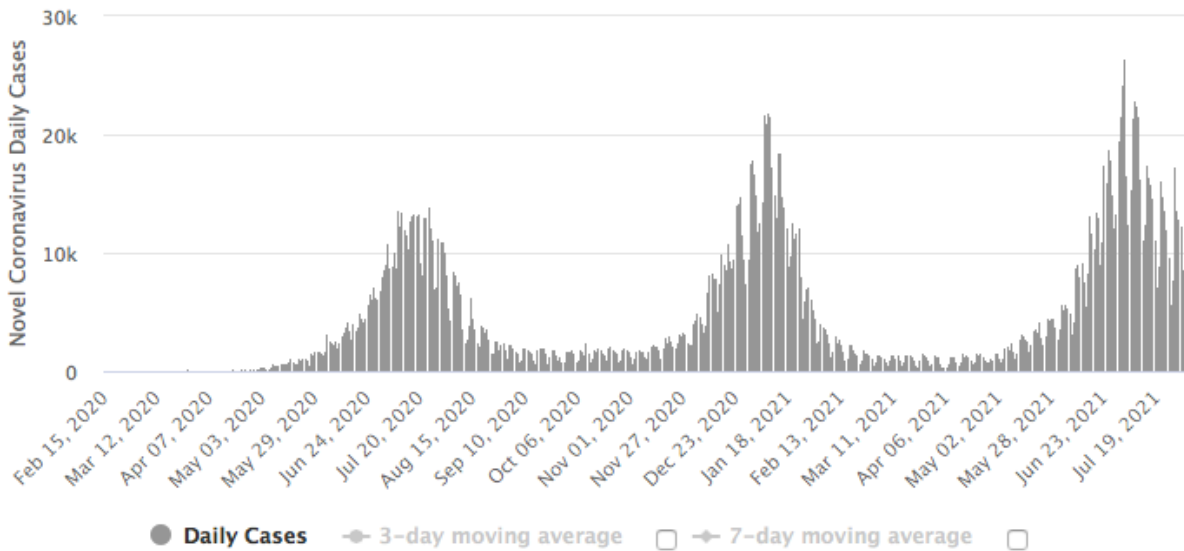
Oceania cases excluded as too low to register on scale

Source: ECDC and national public health agencies, data to 1 Sep



### Daily New Cases

Cases per Day  
Data as of 0:00 GMT+0

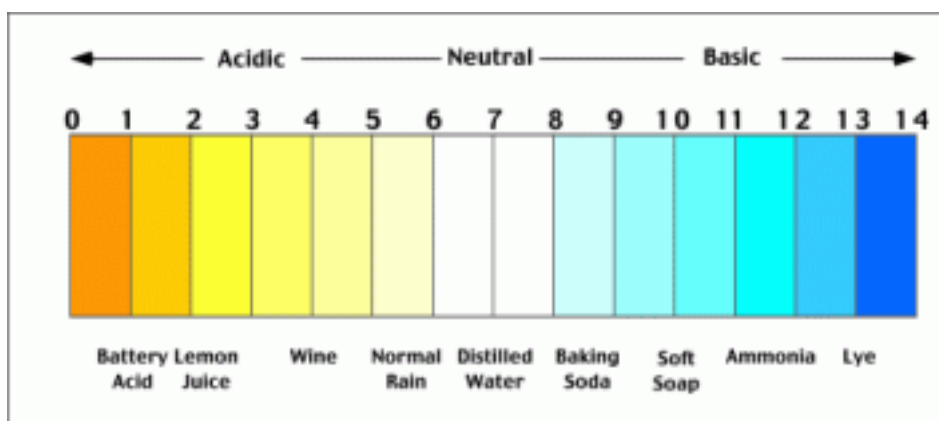




## 21. Can diet cure Covid-19? What about pH levels?

**NO.**

This response is to a meme circulating about diet being able to cure Covid through acidity. Acid is any substance with  $\text{pH} < 7$  (logarithm of hydrogen ion concentration, less than seven). Lemon for example won't "lower" acidity as the body maintains its own pH. Also, Covid-19 won't have an acidity since it won't be losing  $\text{H}^+$  ions. Covid-19 starts infecting in one area but spreads rapidly throughout the body, so there's no such thing as 'Covid in the nose' except for a few hours until it spreads elsewhere. pH ranges between 0 to 14, so any "pH" out of that range is fake news.



In chemistry, pH (/pi:'eɪf/, denoting 'potential of hydrogen') is a scale used to specify the acidity or basicity of an aqueous solution. Lower values correspond to solutions which are more acidic in nature, while higher values correspond to solutions which are more basic or alkaline. At room temperature (25°C or 77°F), pure water is neutral (neither acidic nor basic) and therefore has a pH of 7. The pH scale is logarithmic and inversely indicates the concentration of hydrogen ions in the solution (a lower pH indicates a higher concentration of hydrogen ions). This is because the formula used to calculate pH approximates the negative of the base 10 logarithm of the molar concentration of hydrogen ions in the solution. More precisely, pH is the negative of the base 10 logarithm of the activity of the hydrogen ion.

### pH in living systems

Compartment	pH
Gastric acid	1.5 - 3.5
Lysosomes	4.5
Human skin	4.7
Urine	6.0
Cytosol	7.2
Blood (natural pH)	7.34 - 7.45
Cerebrospinal fluid (CSF)	7.5
Mitochondrial matrix	7.5
Pancreas secretions	8.1

Alkaline diet (also known as the alkaline ash diet, alkaline acid diet, acid ash diet, and acid alkaline diet) describes a group of loosely related diets based on the misconception that different types of food can have an effect on the pH balance of the body. It originated from the acid ash hypothesis, which primarily related to osteoporosis research. Proponents of the diet believe that certain foods can affect the acidity (pH) of the body and that the change in pH can therefore be used to treat or prevent disease. Credible laboratories have done extensive research on this subject and have proven the theory to be false, not supporting the

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claimed mechanism of this diet. Due to conclusive evidence, it is not recommended by dietitians or other health professionals.

Human blood is maintained between pH 7.35 and 7.45 by acid–base homeostasis mechanisms. Levels above 7.45 are referred to as alkalosis and levels below 7.35 as acidosis. Both are potentially serious. The idea that these diets can materially affect blood pH for the purpose of treating a range of diseases is not supported by scientific research and makes incorrect assumptions about how alkaline diets function that are contrary to human physiology.

Source:

<https://en.wikipedia.org/wiki/PH>

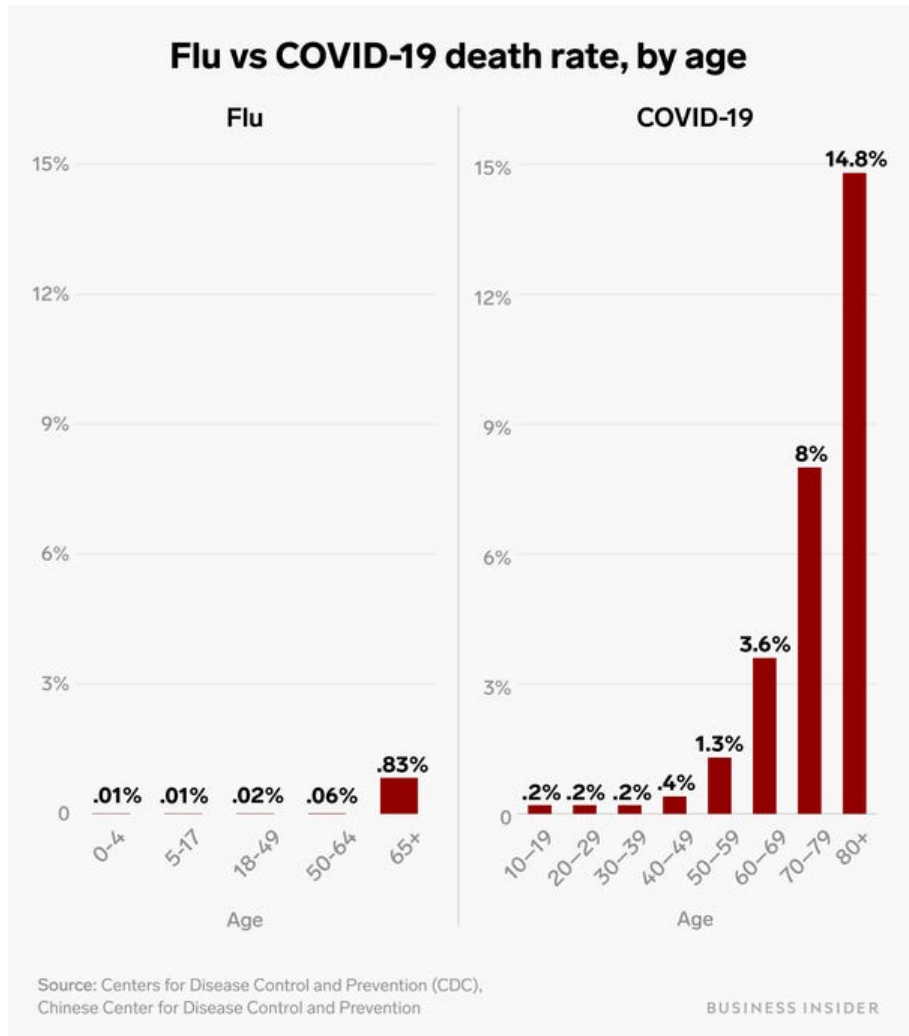
and

[https://en.wikipedia.org/wiki/Alkaline\\_diet](https://en.wikipedia.org/wiki/Alkaline_diet)

## 22. Covid-19 is just the seasonal flu

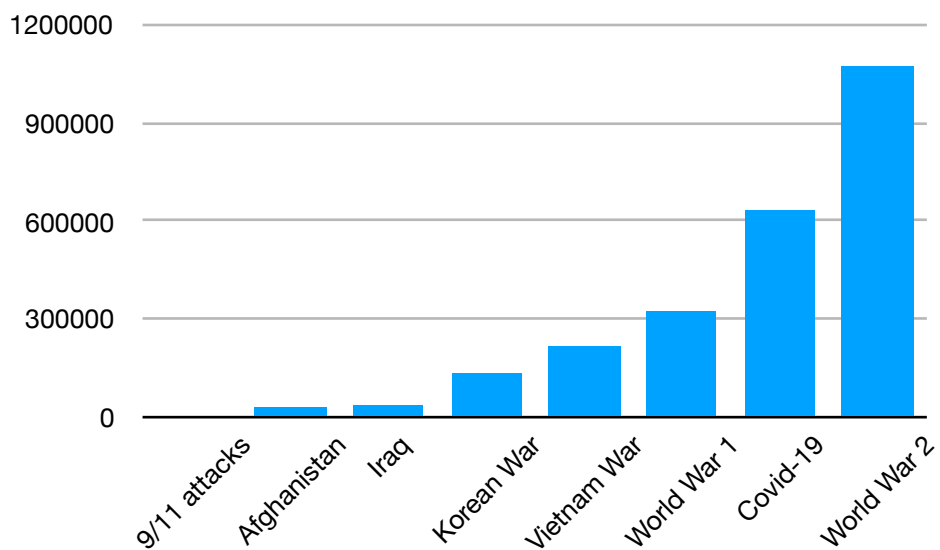
**NO.**

The are similar in both being viruses. However, Covid is more infectious and more deadly. Compare these two death graphs from BusinessInsider:



■ Number

To put this in perspective, here are some more charts of specifically American deaths in major wars compared to Covid-19 as at 2021:



## 23. I don't have to worry because I am younger.

**NO.**

There are several problems with this attitude.

1. **Skills lost:** Older people have more knowledge and skills gained over time, and therefore losing them costs the economy their expertise and their knowledge;
2. **Still spreads:** Even if it is true, and even if you get Covid-19 and don't die, you CAN pass it on to your parents or grandparents and kill them, or your coworkers who may be older than you; e.g. schoolchildren could end up killing their teachers;
3. **You're effectively saying older peoples' lives do not matter**, which is a highly unethical and cruel position to hold.

## 24. Can Hydroxychloroquine (or Ivermectin) cure Covid-19?

**Not as far as we can tell.**

Here are **four** sources saying **NO**, including the Lancet, which is the de-facto medical journal.

11. <https://www.sciencemag.org/news/2020/06/three-big-studies-dim-hopes-hydroxychloroquine-can-treat-or-prevent-covid-19>
12. <https://www.nih.gov/news-events/news-releases/nih-halts-clinical-trial-hydroxychloroquine>
13. <https://www.healthline.com/health-news/too-early-to-know-if-hydroxychloroquine-will-work>
14. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31180-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31180-6/fulltext)

- **Why would anyone hide a cure**, especially when Trump announced it already and it has already been tested extensively and found useless (see 1-4 above)? If it worked, and it has been promoted by Trump, presumably people would try it and see if it worked. But it hasn't worked, or doesn't. That's why no one bothers.
- **Why would anyone hide a cure** if they could sell it at a profit? Google the "Martin Shkreli" case. He was arrested for profiteering *too much* off a drug. If there is money to be made on a drug, people WILL publicise it, hype it up with adverts, and sell it. They are *not* doing this with hydroxychloroquine because it simply doesn't work.
- **What would the purpose of killing large numbers of people be**, particularly within one's own country, and particularly amongst the right wing who are currently (2020) in power? It makes no sense from a military point of view to exterminate your own population and deny them a cure, particularly after your own president announced it.
- **Ivermectin is for animal use to deal with parasites**, not certified in humans and not for viruses. A parasite is a living organism, a virus is something different (more below). What might poison, say a nematode worm parasite, will probably have no effect on a virus, or, it will harm the host animal more than a virus. One trial which correlated with a success does not remotely count as proof. Compare that to the vaccine trials which had around 20 to 40 000 participants and which are now actively protecting millions?
- **Why are you worried about vaccines but not scared of a normal drug?** Do you know what the difference between the two is? Both involve receiving a foreign substance into your body.

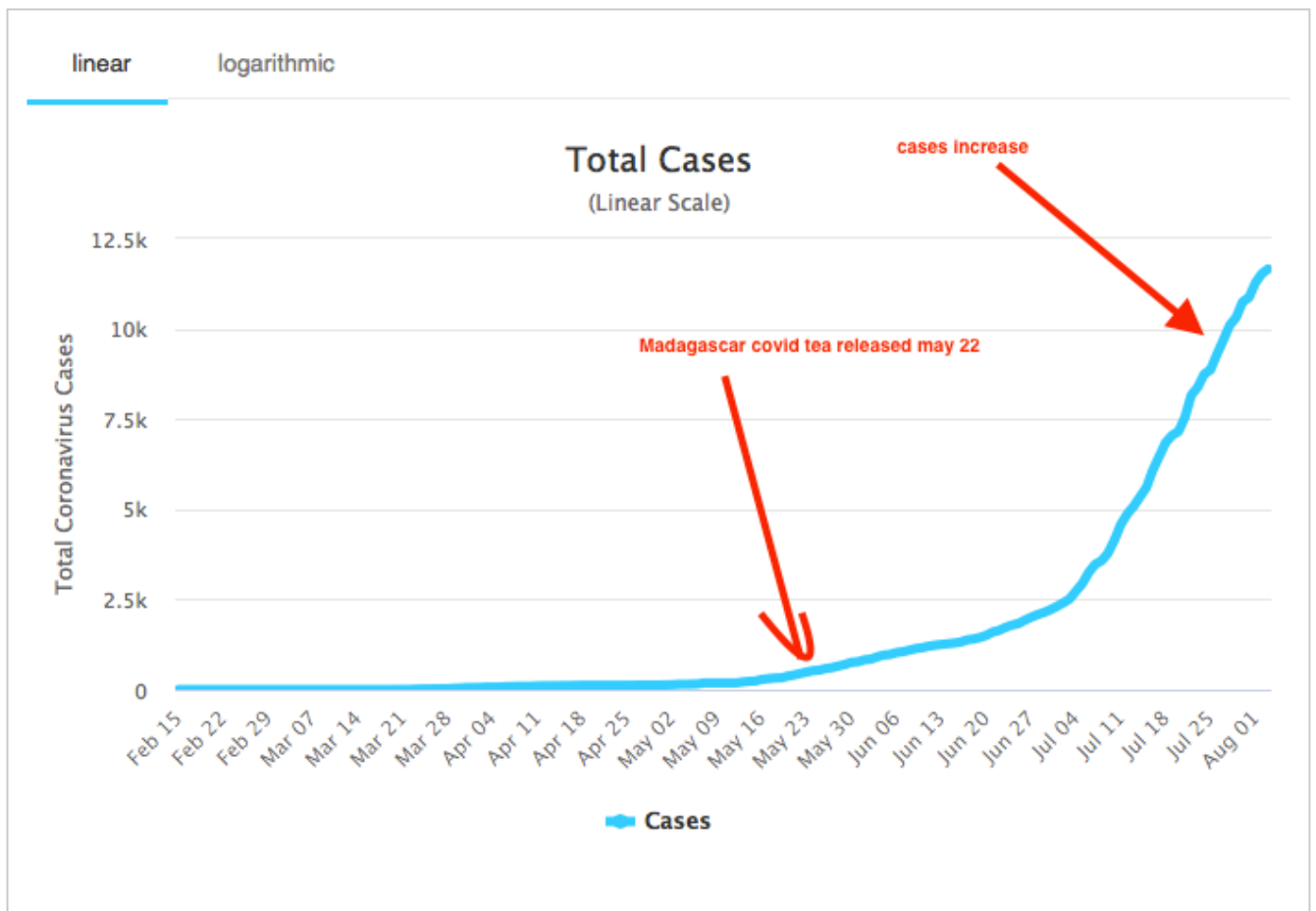
## 25. Can herbal cures cure Covid-19?

**NO.**

**If they did, we would be using them.** Here is the graph from Madagascar showing when they introduced their herbal tea as a cure and what their infection statistics did afterwards.

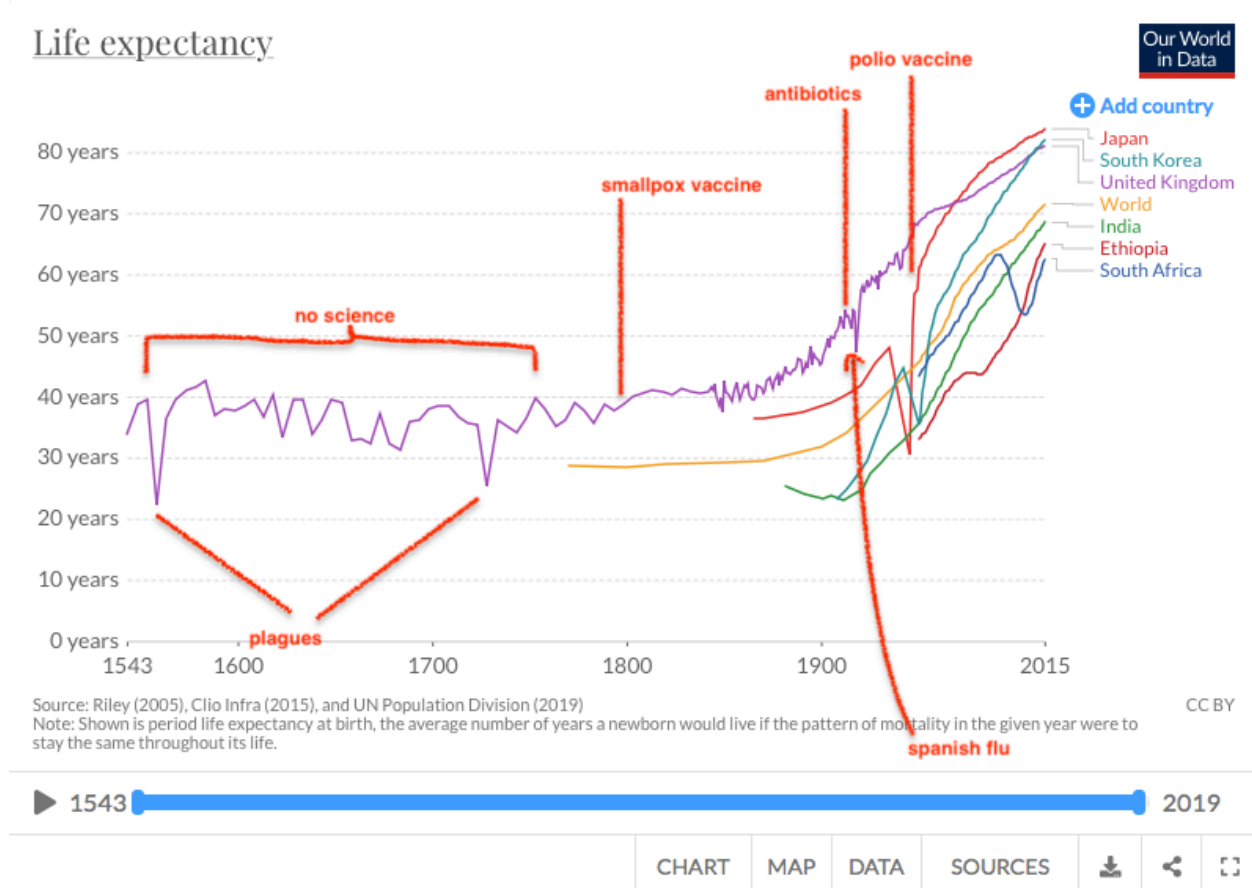
The first red arrow is when the tea was introduced (22 May 2020). The second red arrow shows cases **increase**. Meaning the herbal tea does not work, or makes covid worse.

### Total Coronavirus Cases in Madagascar



## 26. How do I know modern medicine works?

The following graph of human life expectancy is from <https://ourworldindata.org> and shows data from 1543 to 2019. Note how life expectancy goes from about 40 years, until the 1870s, to over 80 years in the present time. That's double. Up till 1870, for all of history, most people died around 40. What changed from the 1800s onwards? Science started to mature. That means: medical science works. Some of the dips in the chart also correspond to world wars (1914-1918 and 1939-1945). However in this chart we can't see the difference between world war 1 deaths and Spanish flu, the deaths overlap.



All diagrams except the triangulation diagram from wikimedia commons.  
 All content Creative Commons Sharealike NonCommercial Derivatives Allowed Attribution not required

## 27. What is a vaccine?

A vaccine is a substance which “trains” the body to respond to diseases. The first vaccine made by Edward Jenner in 1796 was for smallpox, which is now extinct as a result of his work (smallpox was fatal). Jenner noticed that milkmaids who often got exposed to cowpox viruses (a similar disease) did not get smallpox. He therefore concluded that exposure to dead smallpox sores/scabs would immunise people against smallpox. It worked.

More here. <https://www.who.int/news-room/feature-stories/detail/smallpox-vaccines>, and here <https://www.historyofvaccines.org/timeline/all>.

The word “vacca” in Latin means “cow”, referring to the original cowpox disease.



*Above: smallpox, made extinct in the 20th century. Other significant vaccines you may have heard of include Louis Pasteur's vaccine against Rabies and Jonas Salk's vaccine against polio.*

An often-heard complaint about vaccine manufacturers is they profit off the vaccines. In Jonas Salk's case he gave the intellectual property away for free and did not profit off it, nor did his predecessors. <https://www.history.com/this-day-in-history/salk-announces-polio-vaccine>

Yes, some manufacturers nowadays do make vaccines and profit off them. Fortunately, their prices are not exorbitant, and countries are arranging to bulk purchase to keep the prices down. There is a debate about whether a pharmaceutical company should own the rights to its scientific discoveries. In the case of the Oxford vaccine, AstraZeneca have indicated that they will charge manufacturing cost only. Of course there are also some cases where vaccines have produced side effects. In our modern era, we now test for side effects before we approve or release vaccines. (More on the experimental method below). Usually, however, side-effects are not as bad as the disease itself. For example, polio deformed your body and could prevent you being able to breathe, leading to death or disfigurement, or a lifetime in an iron lung. Google “iron lung” if you aren't sure or haven't heard of it. That's clearly worse a fate than any supposed side-effects.



Iron lungs in a polio ward, 1950.  
Society has a short memory.  
**#vaccinate**



## 28. What is a the experimental or scientific method in medicine?

Keywords:

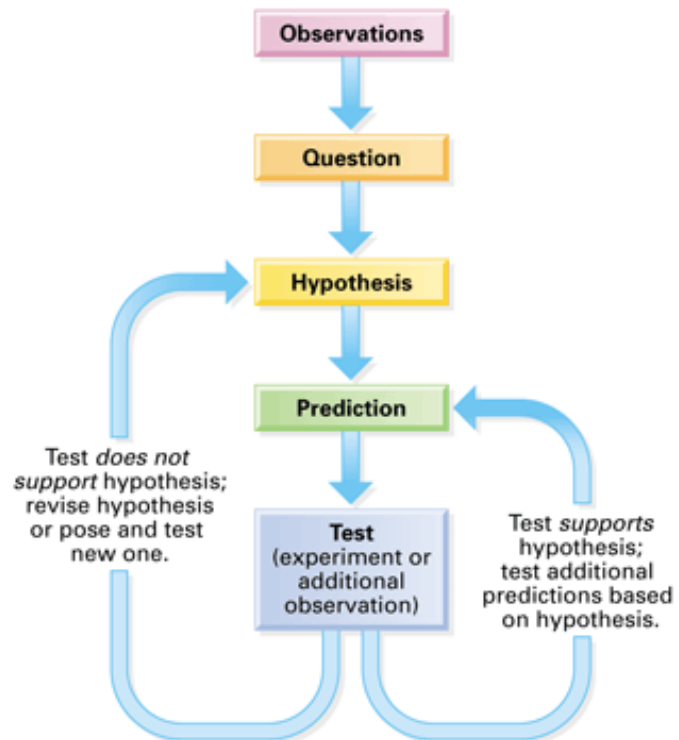
**Placebo**

**Double-blind**

**Control group**

**Study/Experiment group**

The scientific method we use today to test medicines involves the use of animal trials, placebos and double-blind controlled studies. What this means is that before a medicine is given to humans, it is first tested on animals. If the medicine works on animal trials, it is then taken to human trials. In both cases it has to pass ethics committees. In both cases, it also is done with **double-blind and controlled studies**. What that means is one group of test subjects - e.g. some of the lab rats, or some of the humans, are given a **placebo**, and they are then called the “**control**” group.



For a large-scale trial, researchers give the vaccine to half of a group of around 30,000 people, and the other half get placebo. Then the researchers wait until about enough people test positive for Covid to do good statistics and go back into the previously secret records to find out who was in the placebo group and who had the vaccine. Because there is no bias in choosing who is in which group, the two groups have an equal chance of getting infected. If 100 people who had placebo get sick and only 5 who had the real vaccine get sick, then the vaccine is rated as 95% effective. This kind of trial works best when the disease is spreading fast because it does not take long for 100 or more of the people on the trial to test positive.

The idea of placebo is to see whether the participants get sick without getting the actual medicine. In the case of pills, a placebo is usually a sugar pill, and in the case of injections, it is usually a salt water injection (“saline”). The reason for the placebo is so that neither the lab assistants (people who give the medicine), nor the participants (the lab rats or the human subjects), will know that they did not in fact get the medicine, because it looks like they did. That is called **double-blind**: neither the lab technicians nor the subjects know they got a placebo or an actual medicine. The reason is to stop bias, so that for example a lab technician cannot fake the results. The second group, the study or **experimental** group, then gets the active medicine.

The scientists then specify a timeframe to wait. So, for example, in Covid-19, we know that it normally takes about 1 week for an infection to show and 2 weeks for hospitalisation to be necessary or death may occur. Hence, after two weeks, the lab assistants will call the participants in the study back, and, see who is sick. IF the medicine - in this case a covid-19 vaccine - is working - they will find that a **statistically significant** portion of the **control** group will be **sick** (at the average rate for the population), but that the study or **experiment** group (who received the ac-

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tive vaccine), will **not** be sick in a statistically significant portion, or will be sick at a rate **lower** than the population average. They will also check for **side-effects**.

If after a period of three to six months, the scientists find that the control or placebo group has gotten sick, and the experiment or active medicine group have not gotten sick, they pronounce the vaccine **successful** or effective, to the percentage that did not get sick. Whereas, if they found that the control and the study group both got sick, they pronounce the vaccine as ineffective, and abandon the medicine.

## 29. Which vaccines are there and how do they work?

So far, over 50 vaccines have been created for Covid-19, of which only these have been approved:

- Pfizer (USA)
- Moderna (USA)
- Oxford/AstraZeneca (UK)
- SinoVac (China)
- Sputnik (Russia)
- Johnson & Johnson (USA)

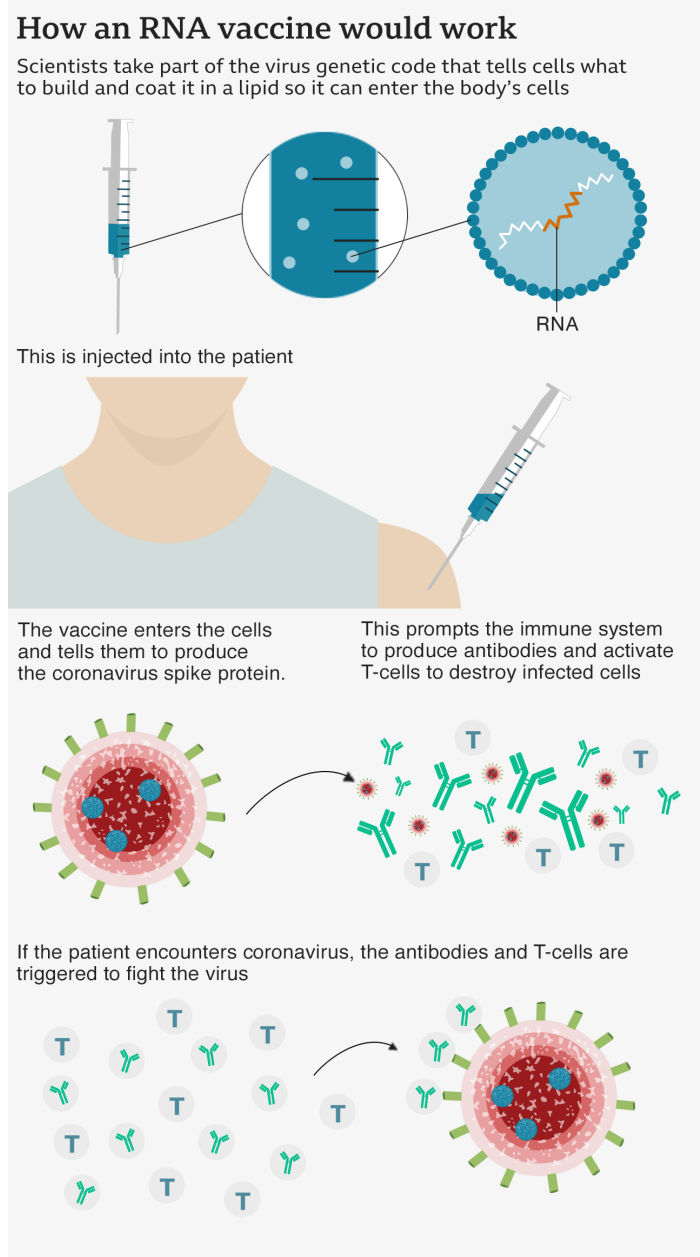
More here: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines>

The Pfizer and Moderna vaccines are mRNA vaccines which work by persuading the immune system to make antibodies. The Oxford vaccine uses a chimpanzee cold virus with corona virus spike proteins, to trick the immune system into attacking it and hence produce the antibodies.

The Johnson & Johnson vaccine, and the Astra-Zeneca, are not likely to need super-cold temperatures to keep stable. However, the mRNA vaccines do require extreme cold storage.

For more on mRNA, DNA and antibodies, turn over to the next page.

Image source: [bbc.com/Nature.com](http://bbc.com/Nature.com).



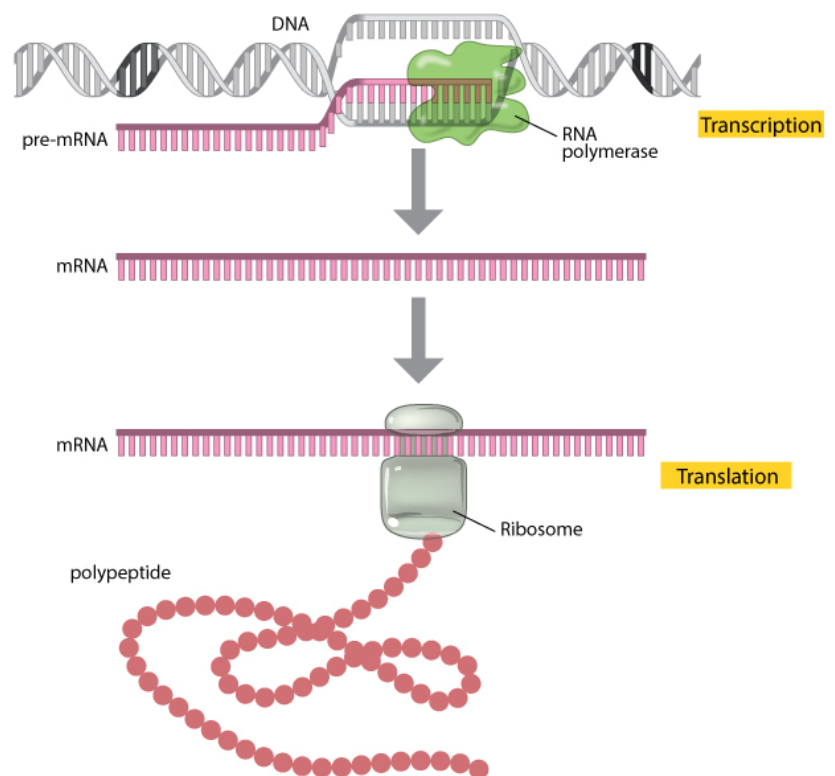
### 30. What are mRNA, DNA and antibodies?

**mRNA** or messenger ribo-nucleic acid is a substance in the body's cells which is used to make other substances needed in the body's processes.

In more technical language, "Messenger RNA (mRNA) molecules carry the coding sequences for protein synthesis and are called transcripts; ribosomal RNA (rRNA) molecules form the core of a cell's ribosomes (the structures in which protein synthesis takes place); and transfer RNA (tRNA) molecules carry amino acids to the ribosomes during protein synthesis."

<https://www.nature.com/scitable/topicpage/ribosomes-transcription-and-translation-14120660/>.

Image: Nature.com



The key idea behind an mRNA

vaccine is that it tricks the cell machinery into making proteins similar to the ones in the virus that trigger the immune system. mRNA vaccines are a new idea, and unlike other vaccines do not use a virus to trigger the immune system. They should be very safe – the only issue seen so far is that they can trigger an allergic response – but they cannot actually cause a disease, because they do not contain a virus, even an inactivated one. The main drawback is that RNA is a molecule designed to decay fast, because its role in the cell is passing messages of various kinds. This is why these vaccines need to be stored at extremely low temperatures.

Finding ways to make mRNA more stable is a big part of mRNA vaccine research. Many viruses use RNA rather than DNA, illustrating that this is possible in nature. The Sars-Cov-2 virus that causes Covid-19 is an RNA virus but it is this fragility of RNA that makes it possible to kill it with something as mild as soap. Unfortunately once it has invaded your cells, you can't reach it with soap (or alcohol). Amongst the proteins that mRNA might make, are antibodies. **Antibodies** are proteins that bind to or attack foreign proteins or harmful things such as viruses.

**DNA** stands for deoxy-ribo-nucleic acid. It is a complex molecule found in the nucleus (centre) of every cell and is used to create copies of that cell. DNA encodes the information needed to make living organisms. "However, DNA does more than specify the structure and function of living things — it also serves as the primary unit of heredity in organisms of all types. In other words, whenever organisms reproduce, a portion of their DNA is passed along to their offspring. This transmission of all or part of an organism's DNA helps ensure a certain level of continuity from one generation to the next, while still allowing for slight changes that contribute to the diversity of life." (<https://www.nature.com/scitable/topicpage/introduction-what-is-dna-6579978/> and <https://medlineplus.gov/genetics/understanding/basics/dna/>).

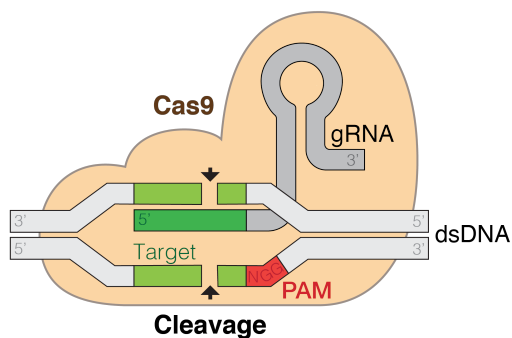
## 31. Can DNA be changed, and how? What is Crispr/CAS9?

When DNA mutates, that introduces a new feature into a cell and an organism. Different types of mutation can occur. Harmful and non-harmful ones can occur. If DNA mutates in a **beneficial** way, we refer to that as **adaptation**, or **evolution**. This usually happens when two gametes (reproductive cells) merge into forming what will become an embryo and then their DNA merges and adopts parts from each strand, creating a new unique creature.

If DNA mutates in a **harmful** way, we call that a harmful mutation, failure, or sometimes, **cancer**, if the faulty cell reproduces and grows. These harmful mutations usually come from outside sources such as direct damage to the DNA (e.g. Human Papillomavirus, or HPV), or, radiation, such as ultraviolet rays (strong sunlight), gamma rays, Xrays, alpha or beta radiation from radioactive substances like uranium. Some substances, such as tobacco, contain chemicals which can invade cells and damage the DNA. Those substances are called carcinogens - literally meaning cancer-generators or cancer-like.

A person's body layout, hair colour, eye colour, facial appearance, and vulnerabilities to some diseases like heart disease, stroke, cancer, etc., are determined to a certain extent by genetics, that is, how their DNA is laid out or coded. These are also called 'inherited traits'. One can see this when one refers to how a child resembles its parents.

The DNA that codes for a person's body is laid out at conception - that is, when the embryo first forms. After those initial cells (the blastocyst) start to divide and reproduce, the person's DNA and physical appearance are already set. It is only possible to modify a person's DNA at a large scale at that stage, with current technology. Some treatments of DNA at a later date in life are however possible, e.g. with bone marrow transplants. However, large scale replacement or editing of DNA is not currently feasible for adults or anyone else who is larger than a few hundred cells in size.



Recently, scientists developed a new tool called **Crispr/CAS9** (<https://www.livescience.com/58790-crispr-explained.html>) which lets them edit DNA. However, this can only be effective or usefully deployed on germ line (reproductive) cells or small cell samples like bacteria. (<https://medlineplus.gov/genetics/understanding/genomicresearch/genomeediting/>).

"CRISPR-Cas9 was adapted from a naturally occurring genome editing system in bacteria. The bacteria capture snippets of DNA from invading viruses and use them to create DNA segments known as CRISPR arrays. The CRISPR arrays allow the bacteria to "remember" the viruses (or closely related ones). If the viruses

attack again, the bacteria produce RNA segments from the CRISPR arrays to target the viruses' DNA. The bacteria then use Cas9 or a similar enzyme to cut the DNA apart, which disables the virus... Scientists are still working to determine whether this approach is safe and effective for use in people. Ethical concerns arise when genome editing, using technologies such as CRISPR-Cas9, is used to alter human genomes. Most of the changes introduced with genome editing are limited to somatic cells, which are cells other than egg and sperm cells. These changes affect only certain tissues and are not passed from one generation to the next. However, changes made to genes in egg or sperm cells (germline cells) or in the genes of an embryo could be passed to future generations. Germline cell and embryo genome editing bring up a number of ethical challenges, including whether it would be permissible to use this technology to enhance normal human traits (such as height or intelligence). **Based on concerns about ethics and safety, germline cell and embryo genome editing are currently illegal in many countries.**"

## 32. Do “they” want to change my DNA by using mRNA vaccines?

**NO.**

**Who are “they”?**

**Why would “they” want to do such a thing? To what end?**

The mRNA vaccines cause your cells to produce antibodies - chemicals that attack diseases such as covid-19. **They do not edit your DNA.**

mRNA is not part of, nor does it enter, the nucleus of a cell, where your DNA lies.

“COVID-19 mRNA vaccines give instructions for our cells to make a harmless piece of what is called the “spike protein.” The spike protein is found on the surface of the virus that causes COVID-19.

COVID-19 mRNA vaccines are given in the upper arm muscle. Once the instructions (mRNA) are inside the immune cells, the cells use them to make the protein piece. After the protein piece is made, the cell breaks down the instructions and gets rid of them.

Next, the cell displays the protein piece on its surface. Our immune systems recognize that the protein doesn’t belong there and begin building an immune response and making antibodies, like what happens in natural infection against COVID-19.

At the end of the process, our bodies have learned how to protect against future infection. The benefit of mRNA vaccines, like all vaccines, is those vaccinated gain this protection without ever having to risk the serious consequences of getting sick with COVID-19.

They do not affect or interact with our DNA in any way.

mRNA never enters the nucleus of the cell, which is where our DNA (genetic material) is kept. The cell breaks down and gets rid of the mRNA soon after it is finished using the instructions.” <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html>



**Also**, the Oxford vaccine does NOT use mRNA and hence if you are worried, you can request the Oxford/AstraZeneca vaccine instead. It uses a standard chimpanzee cold virus with covid-19 spike proteins attached to it, which causes the body to automatically produce antibodies against the spike proteins. The virus used can only infect chimpanzees. These spike proteins do not cause covid-19, the code inside the virus does that (it makes the human cells reproduce the covid-19 virus). The spike proteins merely serve to break into the cells.

Note that the SARS-Cov-2 (Covid-19) virus does not contain DNA – it is an RNA virus. This means it does not change your DNA. There are many coronaviruses, ranging from causing no illness at all, to very severe illness like SARS and MERS (fortunately, these diseases did not spread as fast as Covid-19, so they were easier to stop). Image from *Al Jazeera*.

[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32661-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32661-1/fulltext)

### 33. Don't vaccines cause Autism?

**NO.**

This **myth** was started by a researcher called Andrew Wakefield in 1998 who linked the Measles Mumps and Rubella (MMR) vaccine to autism. There has been NO successful repeat of his experiment or his results in the years since. The Lancet journal retracted his findings. **“The final episode in the saga is the revelation that Wakefield *et al.* were guilty of deliberate fraud (they picked and chose data that suited their case; they falsified facts). The *British Medical Journal* has published a series of articles on the exposure of the fraud, which appears to have taken place for financial gain.”**

More on this matter can be found here. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3136032/>

#### Autism Symptoms:

- Social communication issues
- Difficulty understanding non-verbal communication, such as body language
- Difficulty understanding when and how to appropriately respond in social interactions
- Trouble developing, understanding and maintaining relationships with others
- Repetitive patterns of behaviour, e.g. rocking
- Repetitive use of movement, speech or objects
- Easily upset by changes to routine, environment, and the familiar
- Very narrow and intense focus on limited areas of interest, e.g. scientific interests

**Even if the myth was true — which it isn't — dying from a preventable disease is certainly worse than autism!**

#### Well-known autistic or potentially autistic people

If you think having autism is bad maybe look at this list of people and see if you'd be in bad company:

**Albert Einstein** (behaviour shows symptoms); **Alfred Hitchcock** (behaviour shows symptoms); **Alfred Kinsey** – Sexologist & Biologist; **Andy Warhol** – Artist (behaviour shows symptoms); **Barbara McClintock** – Scientist and Cytogeneticist; **Benjamin Banneker** – African American almanac author, surveyor, naturalist, and farmer; **Bill Gates** – Co-founder of the Microsoft Corporation (symptomatic); **Bobby Fischer** – Chess Grandmaster; **Charles Darwin** (behaviour shows symptoms); **Courtney Love** (actor, diagnosed); **Dan Aykroyd** (actor, diagnosed); **Darryl Hannah** (actor, diagnosed); **David Byrne** (diagnosed); **Emily Dickinson** – Poet (behaviour shows symptoms); **Greta Thunberg** (environmentalist, diagnosed); **Hans Christian Andersen** – Children's Author (behaviour shows symptoms); **Henry Cavendish** – Scientist (behaviour shows symptoms); **Immanuel Kant** – Philosopher; **James Joyce** – Author of “Ulysses” (behaviour shows symptoms); **Jerry Seinfeld** (self-diagnosed); **Lewis Carroll** – Author of “Alice in Wonderland” (behaviour shows symptoms); **Lionel Messi** (behaviour shows symptoms); **Ludwig Wittgenstein** – Philosopher (behaviour shows symptoms); **Michelangelo** – Sculptor, Painter, Architect, Poet (behaviour shows symptoms); **Nikola Tesla** – Inventor (behaviour shows symptoms); **Paul Dirac** – Physicist (behaviour shows symptoms); Satoshi Tajiri – Creator of Nintendo's Pokémon; Sir Isaac Newton (behaviour shows symptoms); **Stanley Kubrick** – Film Director; **Steve Jobs** (behaviour shows symptoms); **Susan Boyle** – Singer; **Temple Grandin** – Animal Scientist; **Thomas Edison** (behaviour shows symptoms); **Thomas Jefferson** – Early American Politician (behaviour shows symptoms); **Tim Burton** – Movie Director; **William Butler Yeats** – Poet (behaviour shows symptoms); **Wolfgang Amadeus Mozart** – Classical Composer (behaviour shows symptoms); **Woody Allen** (behaviour shows symptoms).



### 34. Aren't the vaccines made with aborted foetal tissues?

**NO.**

Some vaccines - but **not** the coronavirus ones - contain stem cells grown from 'cell lines' taken from foetal tissues from many decades ago. This is similar to how one might grow bacteria or fungi in a lab from a bacterium or fungus sample. Over the years, the connection with the original sample is lost. Such samples would be used to see how human tissue responds to medicines. As far as the authors of this document are aware, the particular vaccines which may have used those cell lines are vaccines for rubella, chickenpox, hepatitis A, and shingles.

<https://www.uab.edu/news/youcanuse/item/11771-debunking-the-myths-about-the-covid-19-vaccine>

### 35. Won't I get an allergic reaction from the vaccine?

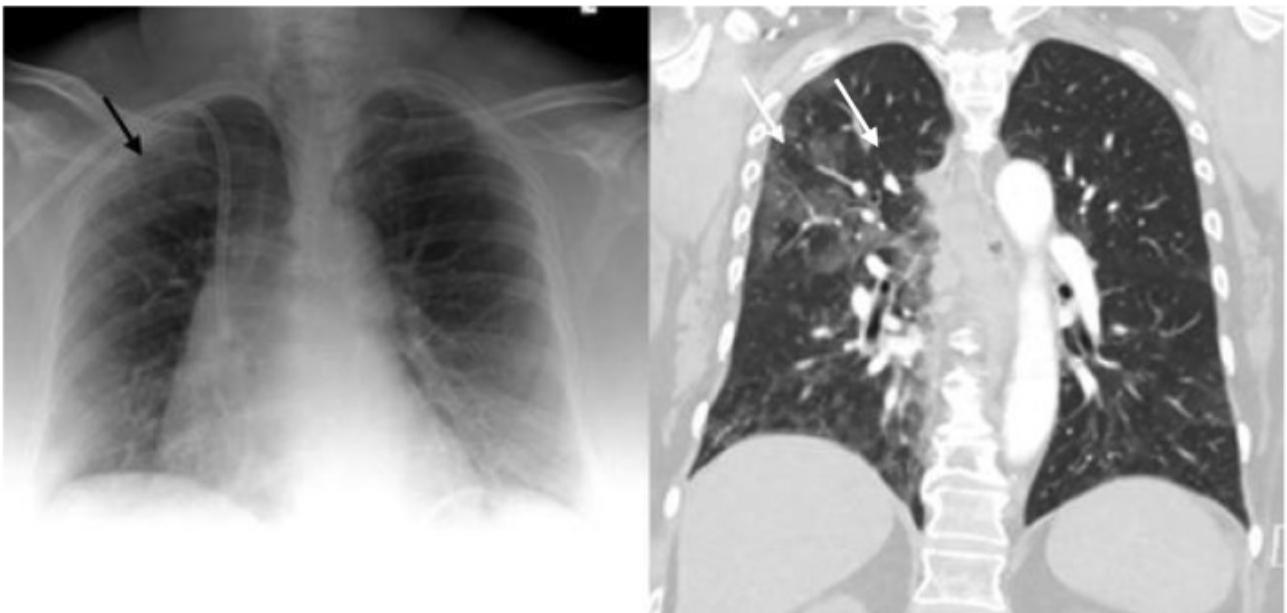
**Probably not.** Unless you get the Moderna vaccine *and* have facial filler implants, there aren't significant reports of allergic reactions.

<https://www.uab.edu/news/youcanuse/item/11771-debunking-the-myths-about-the-covid-19-vaccine>

### 36. Won't the side-effects be worse than covid-19?

**No.**

Most of the side-effects are things like joint aches or minor pains at the injection site, for a few days. The disease itself is generally much worse than that with a 2% fatality rate (death), particularly higher in older people, including severe coughing, very high temperature (fever), and potential lung and even brain damage. The below shows Covid-19 damage in the lungs:



### 37. Aren't there poisons in vaccines - like formaldehyde?

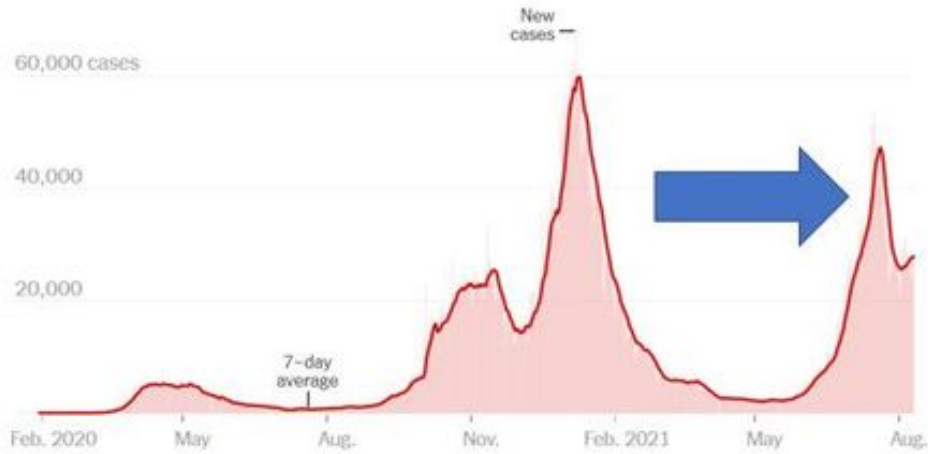
1. It depends on which vaccine you are talking about. They all have different ingredients.
2. Many substances are poisonous when in specific combinations. For example, Chlorine and Sodium are both poisonous, particularly in large doses. But we find them in all forms of table salt, which contains chlorine and sodium in equal proportions. Even natural sea salt and natural Himalayan pink salt contain sodium and chlorine as their main ingredients. Salt is used in a process in our kidneys and we would not be able to urinate without it.
3. A "poison" is only poisonous in specific concentrations or doses. In lower concentrations, substances behave differently or are in fact used in the body. A poison operates by disrupting organic processes in your body. It takes a specific dose to cause a disruption. So for example, we need oxygen to survive, but if exposed to too much oxygen we hyperventilate. We see this when fish die when removed from water into the outside air which has a higher oxygen concentration. Hence, oxygen, even, is poisonous to fish, in high doses. Another example is phosphorus, which burns spontaneously in the air and creates phosphoric acid (poisonous). But phosphoric acid is used in Coca Cola and phosphorus itself is a major part of DNA. Finally, many people eat almonds as a source of vitamin B17, but wild ("natural") almonds also contain cyanide. <https://www.npr.org/sections/thesalt/2019/06/13/732160949/how-almonds-went-from-deadly-to-delicious>
4. Some vaccines contain substances like Potassium Chloride (KCl) which is used to kill people in death row in USA. However, this is only true in larger doses. In smaller doses, substances like KCl will kill bacteria and keep the solution untainted by further infections, or provide ions to make the solution isotonic, or stabilise the vaccine to prevent it reacting with other chemicals in its container. Furthermore, in solution, KCl ionises and the body uses the ions for different things (<https://factcheck.afp.com/misleading-image-used-claim-vaccines-are-dangerous>; <https://www.reuters.com/article/uk-factcheck-vaccine-idUSKBN27Z336>).
5. Different vaccines contain different ingredients. Most are to balance the pH or keep the vaccine from decomposing, or stabilise it at room temperature, etc. The active ingredient in any vaccine, that exists in significant concentration, is the biological component such as the mRNA, or the deactivated virus sample.
6. The purpose of scientific testing of vaccines on live subjects and particularly human subjects is to tell whether the vaccine is harmful. A medicine which fails a test or causes harmful side effects is generally retracted from circulation and banned. For example, DDT (an insecticide) was found to cause serious side effects in humans and was therefore banned. If you suspect that vaccines are harmful, simply compare the death rate of those who have received the vaccine to the unvaccinated population. You will see it is significantly lower. Another question you might consider is: Why would a pharmaceutical company make a lethal injection as a "vaccine" and expect to get away with such a crime? These basic questions of rationality show that the ingredients clearly are not at a toxic level.
7. When a vaccine is tested and used on a large scale, "adverse events" are reported. Within a certain number of days, whether you take a vaccine or not, you could get ill, or suffer an allergic reaction, and so on. If the number of people with any adverse event is higher than you would expect over that time period, the vaccine use gets stopped and the cause determined. An adverse event on its own does not necessarily mean the vaccine caused it: it could just be bad luck or a coincidence. The Oxford vaccine experienced two adverse events in a cohort of about 24 000 participants. ([https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32661-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32661-1/fulltext))

### 38. Are vaccines effective?

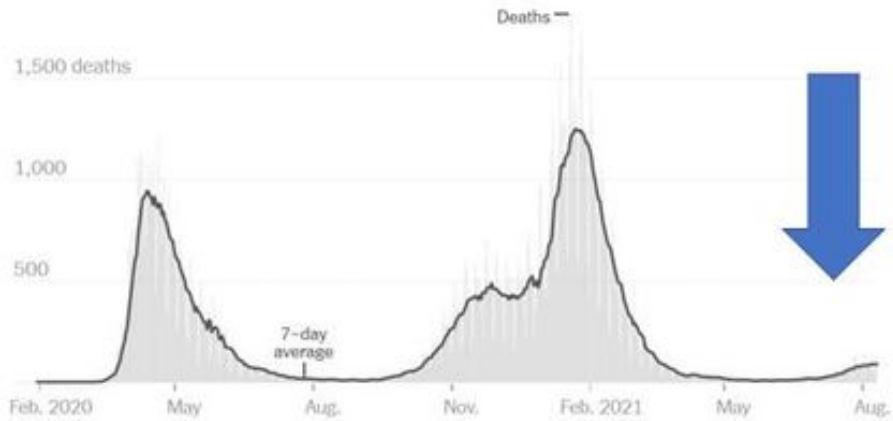
Yes. Note how cases are up in the current wave but deaths are down.

#### How trends have changed in the United Kingdom

New reported cases by day



New reported deaths by day



## 39. How do I tell if something is fake news?

*Fake news...*

- Features **poor-quality grainy image/s** (to hide the tampering with the image).
- It is **sensationalist, scary** and/or makes you **angry**.
- It does not come from a **reputable TV channel, reputable newspaper, or an actual person** in a position of authority. If you go to **reputable newspaper websites** there is no mention of it.
- It is **not compatible** with democratic laws, or a democratic **constitution**. For example, in most of the world, banning communication is unconstitutional, so anything calling for such must be considered suspicious.
- The government has **not announced it**. Of course, this depends on which country you're in as to how much you want to trust the government; some governments are repressive.
- It **confirms your beliefs about other conspiracies**. If it confirms for example that there's a global plot run by lizard aliens, it is fake news.
- If it was seen on Twitter, Facebook, Youtube, Whatsapp and any similar social media platform - it is probably fake news. Youtube is particularly bad.
- **All content which has lots of exclamation marks**. You can generally google the content and see if it comes up on reputable sites or is just copy/pasted on random sites that you have never heard of. If the latter, it is fake news.
- It is in plain text - not a **PDF, professionally typeset**. It has spelling or grammar **errors** (government officials are not allowed to publish items with spelling and grammar errors).
- The website or Youtube video that contains the "information" contains adverts, e.g. for the author's conspiracy books or videos. See image below where advert is circled. **The purpose of sensationalism is to attract customers to buy something.**

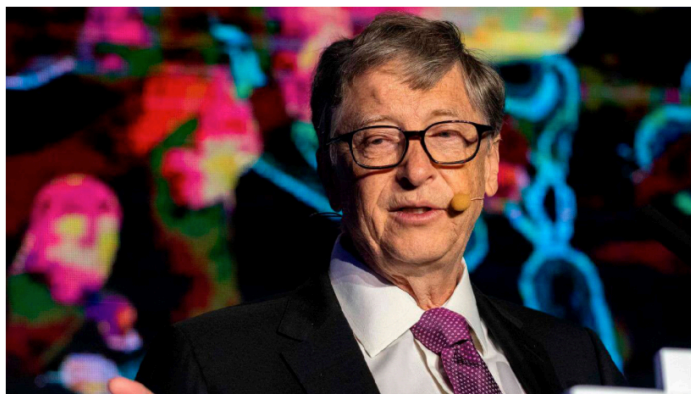
**VigilantCitizen** Bill Gates Calls for a "Digital Certificate" to Identify Who Received COVID-19 Vaccine

### Identify Who Received COVID-19 Vaccine

Bill Gates recently stated on Reddit that "digital certificates" will be used to identify who received the upcoming COVID-19 vaccine. And these certificates will also be used to identify who can conduct business or not. Here's how this plan is already backed by a massive organization called ID2020.

Published 18 hours ago on April 1, 2020

By **Vigilant Citizen** 



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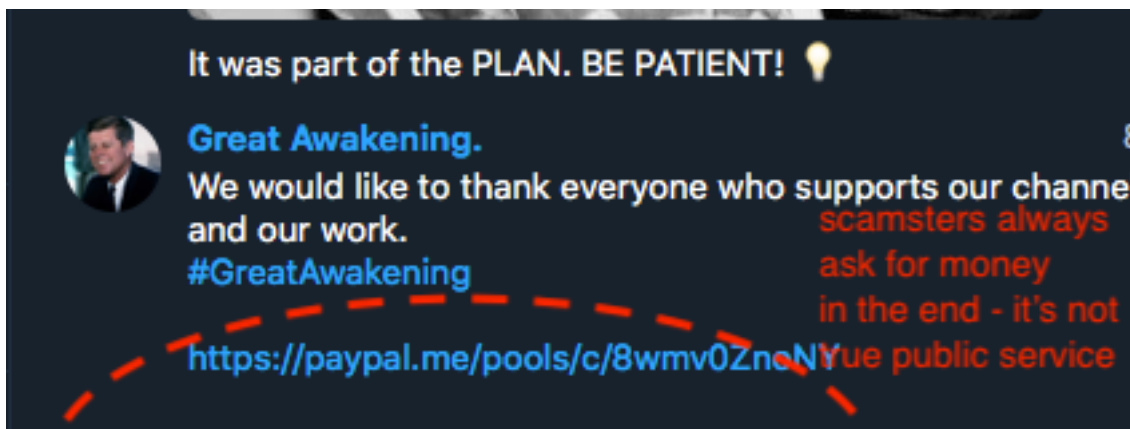
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## 5G and Covid-19 Conspiracy FAQ

- **Give the “news” a score based on the above items.** If it scores more than 2, you can be reasonably sure that it is fake.
- **Pretend that EVERY DAY on internet is April Fool’s day** and treat everything with the same suspicion.
- Note that **reputable** sites, like **wikipedia** and **university websites, do not contain adverts.** Fake news is usually designed for a commercial agenda; e.g. to get a politician re-elected (so he can continue to abuse state resources for funding); or, to get you to buy a product. Generally, the more adverts on a website, the less reliable it is.
- In short, unless you saw it on a government or university website, or wikipedia, or a well-known reliable news source, such as BBC, The Guardian, Al Jazeera, Daily Maverick, etc., please do not share it. *Many (BUT NOT ALL)* mainstream media or news sources are indeed unreliable or dubious, or prone to sensationalism or exaggeration, e.g. Daily Mail, Fox, CNN. American news sources in particular over-hype news events to create hysteria. Rather look at British sites (other than Daily Mail and to a lesser degree the Telegraph, both of which have right-wing slants and a tendency to exaggerate). Sensationalist publications like *The Sun/Daily Sun/People* are to be ignored.
- To check an item, google it using the **site** directive. For example, if you want to confirm some fake news and become even more terrified, just add **site:youtube.com** and you will find lots of conspiracy videos that say exactly the same thing you just saw. However, if you would like to not live in fear, and would prefer to get sober, calm facts, just add **site:snopes.com** or **site:en.wikipedia.org** or **site:.edu** or **site:.ac.uk** ... you will see much more sober, less hysterical analyses on those sites.

Here's a chat group on Telegram spreading alleged truths about conspiracies, but every post he made contained a PayPal link to ask you for money. Watch out for scam artists!



## 40. Can I be arrested for posting fake news?

### In SA, YES!

Section 11 of the new Regulation 43107 issued in terms of section 27(2) of the Disaster Management Act, 2002

“(5) Any person who publishes any statement, through any medium, including social media, with the intention to deceive any other person about—

(a) COVID-19;

(b) COVID-19 infection status of any person; or

(c) any measure taken by the Government to address COVID-19,

commits an offence and is liable on conviction to a fine or imprisonment for a period not exceeding six months, or both such fine and imprisonment”

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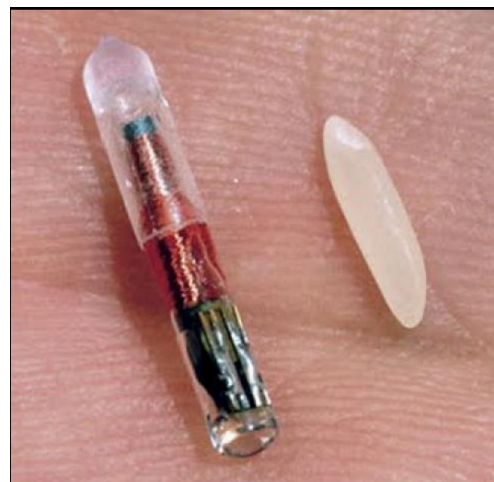
## 41. But Bill Gates wants to use vaccines to implant RFID chips, and depopulate the earth as part of the Illuminati Agenda and One World Government plan.

No, that is *irrational* for a number of reasons:

- **Firstly**, there's **NO** link (logically) between implanted chips and depopulating the earth. How would implanting chips and viruses be related? If the intention of the virus is genocide, how does implanting a chip help, isn't that to *track people* who are NOT dead? Furthermore, as shown earlier, ANY cellphone of ANY type can track you already.
- **Secondly**, **why** would the world's **richest** (or second-richest) man — who obviously has spent a lot of time in the pursuit of earning more money — suddenly want to wipe out his customers for Microsoft software through depopulation? **How would it make more money for him?**
- **Thirdly**, to what end would Gates in particular want to *track* you in particular — do you imagine that your life is that interesting *to him*? And how would a *vaccine* or deadly virus enable that? The conspiracy theory is that the virus is used as a “false flag” or pretext to inject you with a microchip. Well, about that, read more below.



- Fourth, **Vaccine injections cannot be used to implant chips**... RFID chips (shown here next to a grain of rice) are **too big** to go down syringe needles, and RFID only works on short distances. (Grain of rice down a needle?). See above (6) on **Induction** and (9) above on **Inverse Square Law**. Surely you've noticed in clothing stores that tagged clothes only beep **when you walk out the door of the shop**, not while they are being moved around inside the shop? The reason is because you have to be **close** to the security scanners at the entrance of the shop, for them to make the RFID chip respond. How is a microscopic chip in your arm going to be able to reach a cellphone tower many kilometers away?



## 5G and Covid-19 Conspiracy FAQ

- **Fifth**, Bill Gates has invested **millions** of his own money into providing **malaria nets** for Africa. If he wanted to depopulate the world, why would he try save lives with mosquito nets? (<https://www.gatesnotes.com/Health/Net-Impact>). That seems to suggest that he wants to **SAVE lives**. The issue about population is about having children, or having too many children, for the earth to realistically feed. It's not about genocide. The first person to point this out was Malthus in the 19th century. It's a long-standing problem. It's normally referred to as "sustainability". There is only so much farm land that is available, hence, the issue is about reducing population **growth** (have **fewer babies**), **not** reducing population by **exterminating** people.

<https://arynews.tv/en/naturopath-false-claim-bill-gates/>

- **Sixth**, think about **how hard it is to keep a secret**:
  - **It leaks out really fast**. The more people are involved, the faster it leaks (think of how many staff you would need to run the world conspiracy). (<https://www.live-science.com/53494-how-to-tell-if-conspiracy-theories-are-real.html>)
  - We always complain online about how governments are incompetent or how companies have poor customer service, yet we think they can orchestrate a top-secret conspiracy? So, make up your mind. **Are governments competent or incompetent? You can't have it both ways**. Either they *are* competent, and are able to run things properly (really), in which case, maybe they could be tracking you already, OR, they're not competent, and could never orchestrate a conspiracy. Based on how fast the vaccine rollouts have taken in most countries (ie very slow), do you still think that they're very efficiently and competently tracking everyone?
  - Why would a **telecommunications company** cooperate with, or allow, its **competitor** to create weaponised cellphone towers or poisonous vaccines? It would be much more profitable to reveal the conspiracy and take over the competitor's infrastructure. **Remember: the profit motive always explains corporations' actions. There is no profit in lethal 5G towers or poisonous vaccines.**
  - Why do governments *not* delete conspiracy videos on Youtube if they are so powerful in controlling the narrative? They **did** prosecute **Snowden, Chelsea Manning, and Assange**. The answer is simple: **those videos you are watching do not contain truth or secrets, that is why they are not deleted**. But Snowden, Manning and Assange *did* release truth and secrets, so the result was that *they* were prosecuted and their materials taken offline.
  - If a conspiracy video *is* taken offline, it is because it is **legally slanderous** and the author got a **lawsuit**. Even Google themselves refuse to manually take things offline: they instruct the author, on the threat of account closure, to take it offline.
- **Persons mentioned above**:
  - [https://en.wikipedia.org/wiki/Chelsea\\_Manning](https://en.wikipedia.org/wiki/Chelsea_Manning)
  - [https://en.wikipedia.org/wiki/Julian\\_Assange](https://en.wikipedia.org/wiki/Julian_Assange)
  - [https://en.wikipedia.org/wiki/Edward\\_Snowden](https://en.wikipedia.org/wiki/Edward_Snowden)
  - [https://en.wikipedia.org/wiki/Bill\\_Gates](https://en.wikipedia.org/wiki/Bill_Gates)





## 42. Delta Variant is part of a rollout plan. When they inject you with the vaccine they actually inject the next variant.

**NO**, for the following reasons.

These are the "planned" Covid "variants" and their release dates - keep the list and then watch as this Scamdemic continues to unfold -

Cepa/variante		Lanzamiento
Δ	Delta	jun 2021
Ε	Epsilon	jul 2021
Ζ	Zeta	ago 2021
Η	Eta	sep 2021
Θ	Theta	oct 2021
Ι	Iota	nov 2021
Κ	Kappa	dic 2021
Λ	Lambda	ene 2022
Μ	Mu	feb 2022
Ν	Nu	mar 2022
Ξ	Ksi	abr 2022
Ο	Omicron	may 2022
Π	Pi	jun 2022
Ρ	Rho	jul 2022
Σ	Sigma	ago 2022
Τ	Tau	sep 2022
Υ	Upsilon	oct 2022
Φ	Phi	nov 2022
Χ	Chi	dic 2022
Ψ	Psi	ene 2023
Ω	Omega	feb 2023



BI  
M

### 1. Too many nurses to bribe.

You believe that every nurse in every hospital in every country has been bribed to do this? Unlikely. Maybe go to your local hospital and ask a nurse, and quite insist, that s/he's injecting Covid, not vaccines. If you are convinced that it's true, step away from social media and your keyboard, go to your local hospital and simply ask. Put your money where your mouth is. Go get the proof.

### 2. Delta and Lambda came out around the same time.

### 3. The dates on the meme are wrong.

4. Note the **spelling error** and Italian month names. WHO, WEF, Johns Hopkins etc. **do not write in Italian.**

5. Delta came out in **May**, not June: <https://mg.co.za/coronavirus-essentials/2021-06-28-rise-of-the-variants-what-you-need-to-know-about-the-delta-variant-in-sa/>

6. Lambda came out **already** around the same time as Delta,

at the time of writing, namely July 2021, yet according to this meme, Lambda supposedly has not yet come out. <https://www.nationalgeographic.com/science/article/the-unusual-lambda-variant-is-rapidly-spreading-in-south-america-heres-what-we-know>

7. So far there are no **mentions of the letters between Delta and Lambda**. If there was any truth to this thing they'd have mentioned Epsilon, Zeta, etc... to Lambda by now.

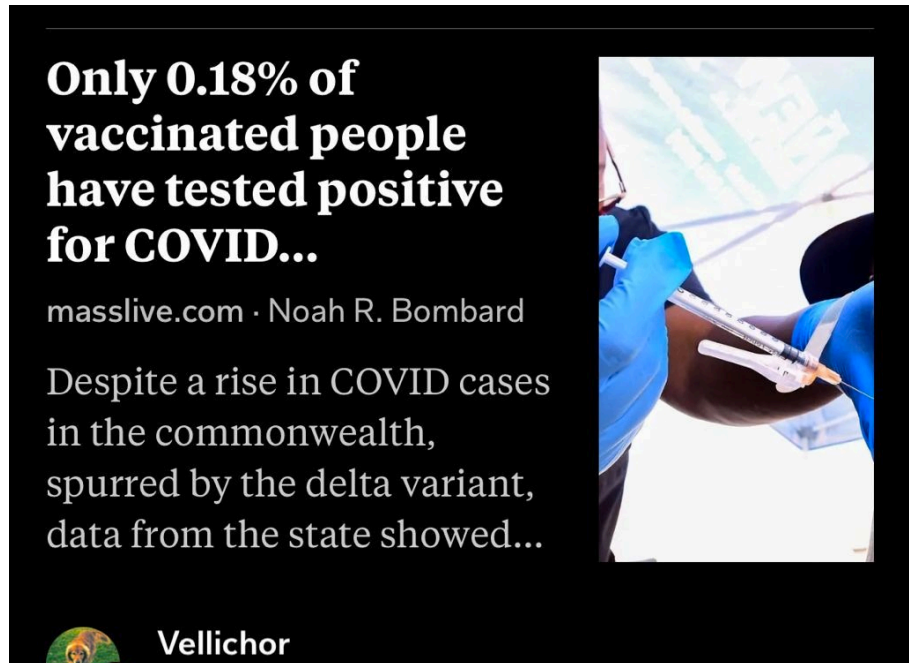
8. **The Greek naming convention was introduced to destigmatise** the country names that we getting attached, e.g. the Delta variant was called the South African variant, which

## 5G and Covid-19 Conspiracy FAQ

negatively impacted tourism; Lambda was the South American variant, etc. Hence, the neutral names.

9. **Pasting some logos onto a table** does not make the table "authentic" or prove it is coming from those organisations.


10. Those who have been injected with the **Pfizer** vaccine seem to not get severe cases of **Delta** variant, however it seems that the AstraZeneca is not very effective against Delta. So if it was true that people were being injected with the next variant, why is it only 0,18% (meaning less than a twentieth of one percent) of them are getting it instead of 100%?



**Only 0.18% of vaccinated people have tested positive for COVID...**

masslive.com · Noah R. Bombard

Despite a rise in COVID cases in the commonwealth, spurred by the delta variant, data from the state showed...

 Vellichor

11. **Delta:** Predicted: June 21. Actual: Dec 2020 (India)  
**Epsilon:** Predicted: July 21. Actual: July 2020 (California)  
**Zeta:** Predicted: Aug 2021. Actual: Jan 2021 (Rio)  
**Eta:** Predicted: Sept 2021. Actual: March 2021. (France).  
**Theta:** Predicted: Oct 21. Actual: Feb 18, 2021 (Philippines).  
**Iota:** Predicted: Nov 21, Actual: Nov 2020 (NY)  
**Kappa:** Predicted: Dec 2021. Actual: Dec 2020 (India).  
**Lambda:** Predicted Jan 2022. Actual: July 2021 (Peru).  
**Mu:** Predicted: Feb 2022. Actual: Sept 2021 (Colombia).  
**Nu** - Skipped due to ambiguity with "new"  
**Xi** - Skipped due to allusion to China.  
**Omicron:** Predicted: May 2022. Actual: 24 Nov 2021 (South Africa).

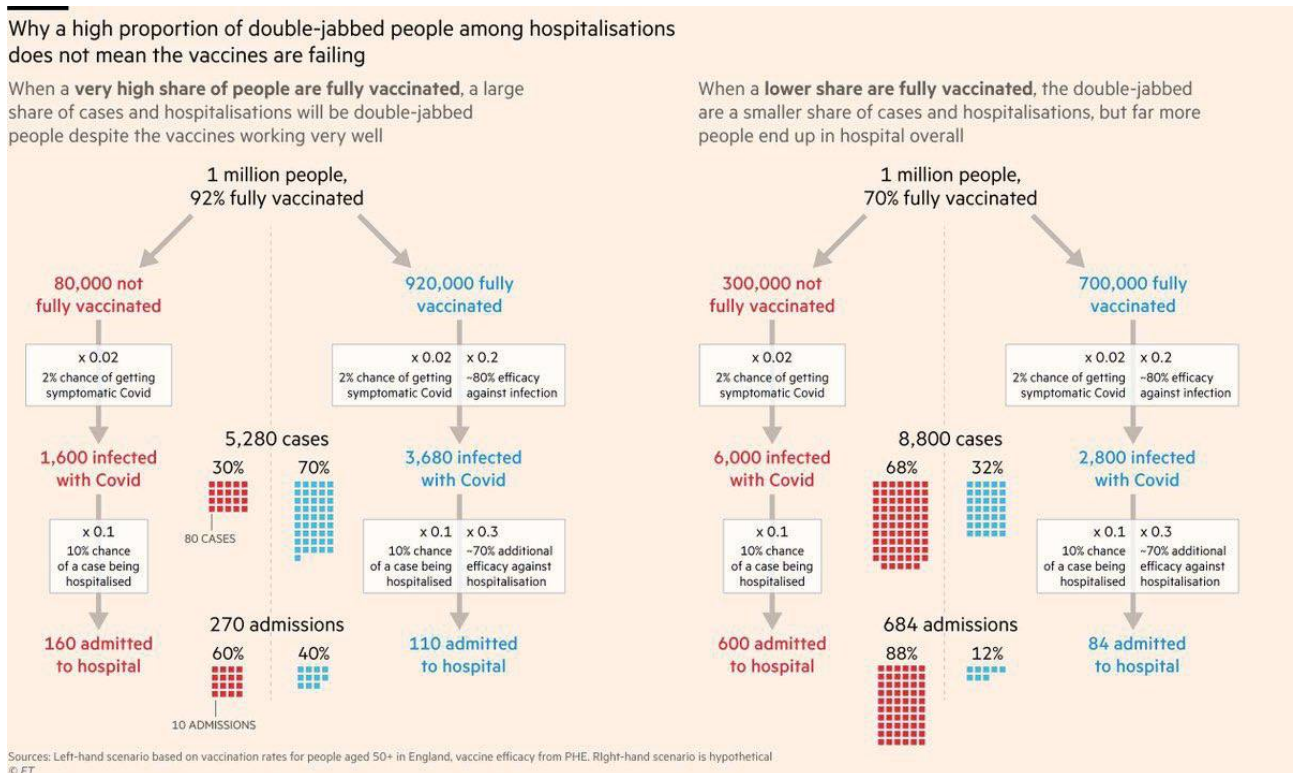
I won't do the rest of them, but you can see this timetable is generally about a year inaccurate. So this is just taking the Greek alphabet naming scheme, putting a sequence of dates that matches the scheme, on the basis of the notion that this is "planned". However, clearly, releasing a new variant precisely every month is entirely suspicious and would be noticed. So, if I was the illuminati, I would not do something as dumb as that, I'd release them randomly, right? Clearly therefore at a glance, you can tell it is fake news. Pasting logos on something does not make it true.



## 44. But there were vaccinated people in hospital before Omicron?

Yes, that can happen for two reasons.

- (a) if the proportion of vaccinated people is high, in your country, then a larger total body of people exist who might get "breakthrough" infections. These are infections which are not stopped effectively by the vaccine. Since the vaccines were known to only be 70-90% effective (roughly) against Alpha, Beta, Delta, it follows that a fair percentage of those who are vaccinated will still get infected. (Around 10-30%). However, it's still better than the unvaccinated scenario where approximately 100% will get infected. So, if you have a high vaccinated population, naturally, you will still see quite a large number of vaccinated people in hospital. But still, proportional to the BASE population of those who are vaccinated, the population will be LOWER. This however only applies in countries with HIGH vaccinated rates.
- (b) In a case with low vaccination rates like in Africa, you will generally mostly see unvaccinated people in hospitals, but you might still get vaccinated people because the vaccines are not 100% effective.
- (c) Omicron is an example of a variant of covid which the vaccines won't stop. However, hospitalisation rates for it are currently low (Dec 2021).



## 45. Did Omicron come from Africa? Isn't Africa carrying a heavy disease burden?

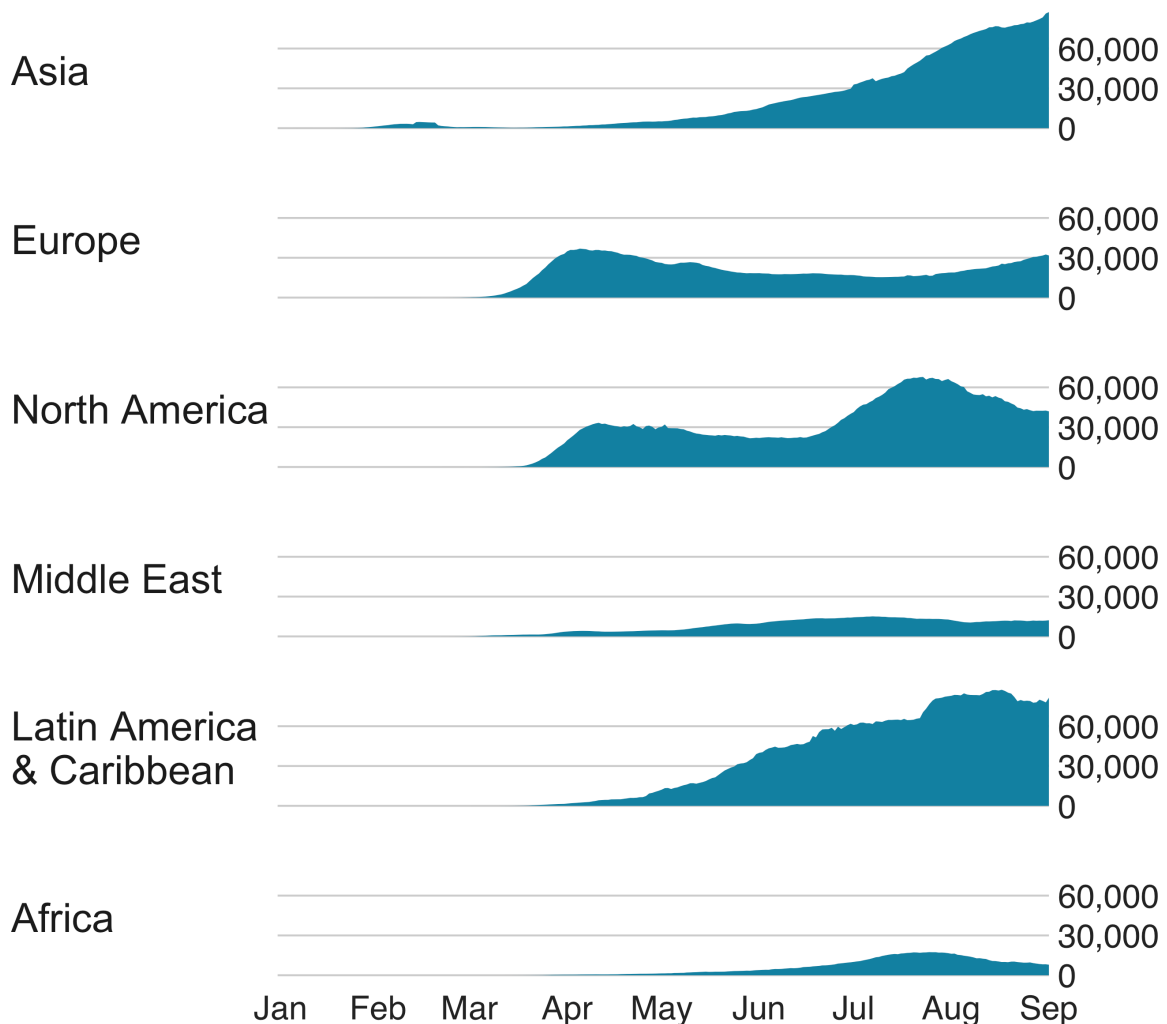
No, it was *first discovered* by South African scientists. It had already spread. Shortly after the discovery, Omicron started showing up internationally, despite flights from South Africa being banned. Hence, it was already "in the wild".

Yes, Africa carries a high disease load, mostly Malaria, which has nothing to do with Covid.

Here are the graphs of Covid cases by continent for 2020. The highest case-load is in South Africa which also has the highest prosperity and largest number of international flights. There seems to be some correlation between wealth and Covid, in that wealthier countries seem to be more affected. It is unclear what the cause is. For example, Nigeria which has a very densely packed and large population, has less than 3000 deaths at the time of writing, despite having a population about half that of USA, which has 800 000 deaths. If Covid was as ineffective in USA as it was in Nigeria, we would see only 6000 deaths in USA at this time.

### Covid-19 cases compared by continent

Number of cases per day, seven-day rolling average



Oceania cases excluded as too low to register on scale

Source: ECDC and national public health agencies, data to 1 Sep