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Covid-19 Hit everyone by surprise a new type of virus that hasn't been seen before, it is not very lethal but very often you really only see death from the virus if you have an undying disease or if you are old. But why haven't we found a cure and why is this virus so resistant to the medicine we have so far? Covid-19 is scary because of the symptoms people undergo when they first get the virus. The research I have done might give us the answers on how the virus works and why it is so resistant to the medicine we have already. Comparing this to other viruses might help us too. But then again Covid-19 is something new even though it has similarities to other viruses.

Özdemir, Öner. "Coronavirus Disease 2019 (COVID-19): Diagnosis and Management." *Erciyes Medical Journal / Erciyes Tıp Dergisi*, vol. 42, no. 3, Sept. 2020, pp. 242–247. *EBSCOhost*, doi:10.14744/etd.2020.63904.

This article that I find goes into depth on how covid-19 works there are different strains of Covid-19 the one that seems to only goes for humans and other mammals is called COVS a- and b- all forms of Covid-19 shares a good amount of DNA with SARS that is where we get the respiratory symptoms from. But there is one strain of Covid-19 that holds 95% bat DNA Its called SARS-CoV-2 this is the other strain of Covid-19 that attacks humans and mammals and is highly resisted to the medicine we use so far. But bats weren't the only animals to have covid-19 snakes and other animals I think this

helped contribute to why covid-19 is so strong and hard to fight off. The drugs they use to somewhat treat covid-19 used in Russia and china is called Arbidol. It is an antiviral medicine that doesn't work that well, it only helps weaken the symptoms only a little bit. It's not an effective way of treating the virus but it's better than nothing.

What surprises me about this part of the article is the fact yes I understand How the Covid-19 became so strong because constantly going from host to host from humans to mammals building us resists to humans and other immune systems but how does covid-19 specifically resist the drugs that were listed in the article if the virus never came into contact with these type of the drugs in the first place to build a resist to it? It seems that the drugs work just not very effectively. It also states that there are different strains of the virus but where exactly does it come from? The virus is closely related to SARS, another virus but is not exactly the same. It's scary how this virus works and not fully understanding it's origins.

“Human CoVs consists of α - CoVs (229E and NL63), β - CoVs (OC43 and HKU1), the Middle East respiratory

syndrome-related coronavirus (MERS-CoV), and SARS-CoV (5). The genomic and phylogenetic analysis showed

that the CoV causing COVID-19 is a β - CoV in the identical subgenus as the SARS virus, but in a different clade

(5). On 7th January, the virus was recognized as a CoV that had >95% homology with the bat CoV and >70%”

The reason why I picked these lines from the article is because it helps give us a better idea on why covid-19 is so hard to cure and get rid of. One because there are many different strains of Covid-19 each similar but a little different it makes you wonder if you find the cure for one strain will it kill and affect the other strains and it shows how

resistant this virus is. It also shows that because Covid-19 has many different strains it makes you wonder if the strains can affect humans we only know a little bit about the virus so there might be more to it.

White, Easton R., and Laurent Hébert-Dufresne. "State-Level Variation of Initial COVID-19 Dynamics in the United States." *PLoS ONE*, vol. 15, no. 10, Oct. 2020, pp. 1–13. *EBSCOhost*, doi:10.1371/journal.pone.0240648.

The article that I just just read talks about the affection rate in other states, nations, counties and how the virus affects everyone's bodies differently. That's already been proven because some people get symptoms while other people don't. Some doctors believe that blood type might determine if you get symptoms or not they are not really sure how that works but they are doing more research on why that might be the case. In the article it talks about how social distancing was really effective in china in the early stages because depending on the income and population size of an area it tends to help show why there are so many cases in one big area of the country compared to another big area. For the USA case it's the fact that they open a lot of schools in big states like Texas and Florida the cases are starting to spike up a lot more because of actions like this.

When I was reading this part of the article I thought to myself thinking How come places like china and north korea are doing so well after having outbreaks of the virus and being able for their people work outside like its nothing?" It made me think if we were to follow what china and north korea procedures on how to keep the cases of outbreaks of the virus would we be able to feel less stress and free? Yes Quarantine helps lower our cases but how long? We can't just stay in the house forever we still need to go buy food, lend to contact with other people and even if we had the cure right now people will still catch the virus, It's just we will recover faster from being sick but the damage is already done. How long will it take to rebuild this economy after all of this chaos is over and done with?

"emerging pandemic data are typically reported at the country or regional level. This allows for

interesting comparisons between countries [4–6] and for information from an earlier affected

country to be used to slow the outbreak in other places. For instance, South Korea was able to

“flatten their outbreak curve” through early and widespread testing as well as strict quarantine

policies [7]. However, country-level analyses still hide more local dynamics that are important

to the overall epidemic progression [8, 9]. For example Lin et al. (2020) found that, in China,

traffic control and social distancing measures did not work effectively everywhere. Instead,

these measures depended on income and population size [9].”

This quote shows that covid affects different places differently compared to the USA and that china and Korea are doing ok and after the effects of covid. It also says that maybe we should try to follow north korea and china lead when it comes to trying to get back on track and heal from this chaos because even though they had their outbreaks they seem to recover very fast compared to the USA.

FUNK, ANNA, et al. “COVID-19.” *Discover*, vol. 41, no. 5, July 2020, pp. 12–15.

EBSCOhost,

search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=143239214&site=ehost-live&scope=site.

This article talks about effective ways to somewhat prevent getting the virus most of this information we know about from washing our hands but the reason why washing our hands is so effective in actually killing covid-19 is the fact that soap destroys the outer membrane of the cell causing the cell to break down and die that is the reason why most people tell us to always wash your hands after coming from outside. Just like most other articles it talks about how covid-19 affects your body and how it is transferred from person to person. It goes on to talk about how this virus has brought the worst out of everyone, life isn't the same and it isn't normal, everyone just wants their life back.

When looking at this part of the article I see why washing your hands is very important but I thought about why soap is out of all things able to kill the virus. Yes it explains why it's able to kill the virus but the drugs we use to treat the virus so doesn't? Me reading that I thought to myself why Can't doctors invent a drug that only targets the Covid-19 cells in your body and lungs that destroys the outer membrane of the Covid-19 cells like soap? I know i'm not a doctor and what I am saying right now may be impossible but have they tried something like this? But it's crazy how something simple like soap can kill off the virus no problem.

“YOU’VE HEARD IT a million times: In the fight against **COVID-19**, our best weapon is proper hand washing. But why does it work? Hand soaps can break down the outer membranes of many pathogens, which kills bacteria and deactivates viruses like SARS-CoV-2. At the same time, soap works to trap and remove pathogens, along with oils and other debris, from the skin’s surface.

But soap’s effects are not instantaneous, which is why experts recommend washing your hands for 20 seconds. The 20-second target isn’t terribly precise, says Donald Schaffner, a researcher at Rutgers University who studies microbes and hand-washing. But without the 20-second goal, people typically wash their hands for far shorter periods of time — around six seconds.

As for water temperature? It doesn’t matter, in terms of how many microorganisms remain. Use whatever feels good for you. “If the water temperature is comfortable, what

that means is that you're going to do the best, most careful job," says Schaffner. Likewise, the amount of soap you use need not be precise, provided you have enough to get a nice lather going.

After you rinse, be sure to dry your hands with a clean towel, which can further remove pathogens. And moisturize regularly to avoid damaging your skin from all that washing.
— richard sima

Soap's effects are not instantaneous, which is why experts recommend washing your hands for 20 seconds." This quote shows why it's important to always wash your hands and it shows why soap is so effective against the virus.

In conclusion after reading all of the articles and gathering all this information we can see why the virus is so resistant and where it kind of came from. The reason why I say it kind of came from is because we know a lot of information on where we think it came from because one the virus might have come from bats and two it is closely related to SARS but that doesn't mean it evolved from it. We still are learning more and more about the virus as new symptoms are now being discovered as the virus continues to run rampant in the world. But hopefully this will all end soon and we can all go back to our normal lives.