

From The Desk of Joe Polish

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Genius Network Members and Subscribers,

Dr. Mansoor Mohammed, who recently spoke at a GeniusX® meeting, is one of the top genetic doctors in the world. I asked him to write up a letter with suggestions about coronavirus (COVID-19) so I could share with all of my Genius Network Members and Friends.

Mansoor was kind enough to write up the document that follows.

It's titled, The Current Concern Over The Novel Coronavirus, COVID-19.

Mansoor gives an awesome and informative summary about COVID-19, what to look for, how to potentially prevent it, and specifics about the disease many people are overlooking. It's a very useful document, so be sure to read it carefully.

After reading this from Mansoor, I'm personally optimistic and feel good about the future. We've all been through challenges before, and we will successfully come through this one too.

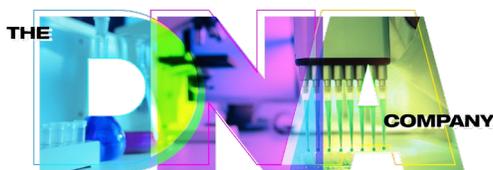
Please remember you're not alone! Genius Network is all about collaboration, connection and contribution. I want to make sure you know I and my team and other Genius Network Members are here for you.

Remember, there's opportunity in crisis. We will be providing invaluable content during this time to help you find it.

Best,

JOE

Only Genius Network Members Are Authorized To Share This Document



DATE: Friday
March 13th, 2020

TO: Our DNA Company friends and relatives,

RE: The current concern over the novel coronavirus, COVID-19

Disclaimer: This missive is meant solely for educational purposes and is not intended as therapeutic or diagnostic advice. All diagnostic and treatment decisions return to your licensed primary healthcare providers.

This short missive is an attempt to address the growing hysteria surrounding the recent outbreak of coronavirus (COVID-19), while emphasizing its legitimate concern.

The genomic considerations and recommendations at the end of this missive are meant solely for **educational purposes** and are not to be considered therapeutic interventions. If you are concerned that you may have been exposed to, or have contracted the current coronavirus, it is imperative that you take measures to contain its spread, while judiciously seeking treatment from a qualified healthcare practitioner.

Summary:

*COVID-19 does pose a significant threat – not necessarily in its mortality rate, but in its high rate of transmission and its potential to cripple the public healthcare system (as more and more severe cases emerge). Containment is not only viable, but **necessary** to curtail the spread of this virus. Containment or quarantine should not be viewed with hysteria, nor as a punitive measure, but rather, it should be viewed as the mature, safe, self-administered and considerate step to take.*

Coronaviruses are a large group of viruses that cause diseases in animals and humans. They often circulate among cats, bats and camels, and can sometimes evolve and infect humans.

Coronaviruses, and specifically COVID-19, are **not** ethnically biased. Upon exposure, anyone of any ethnicity can become infected by the virus. If you are infected by this virus, you are a carrier and can infect others, regardless of whether you are symptomatic or not (more on this important point later).

Coronaviruses are named for the crown-like spikes on their surface. Human coronaviruses were first identified in the mid-1960s. Recent examples of coronaviruses include the SARs and MERs outbreaks in the last 2 decades. The coronavirus responsible for the current outbreak has been named COVID-19: **CO** for Corona, **VI** for virus, **D** for disease, and **19** because this novel strain of the virus was first discovered in 2019.

In animals, coronaviruses can cause diarrhea and upper respiratory diseases. In humans, the viruses usually cause mild respiratory infections, like the common cold, which often self-resolve with adequate rest, appropriate hydration and nutrition, and medications for symptomatic relief. However, in a small percent of cases the viral infection can lead to complications (usually related to viral pneumonia) requiring acute medical intervention (currently for COVID-19 at about 8-10%).

The current mortality rate of the COVID-19 virus is about 3%. This is significantly less than the previous SARs (~9%) or MERs (34%) viruses, but higher than the common seasonal flu (0.1%). It is important that we understand these morbidity and mortality %'s. They are highly skewed toward the elderly, very young and/or otherwise health-compromised individuals (again, more on this important point later).

The COVID-19 virus emerged in a seafood and poultry market in the Chinese city of Wuhan in 2019. The disease was likely contracted from close contact with an infected, as yet unidentified, animal. Human-to-human transmission then quickly occurred through the 'perfect storm' scenario of Wuhan at the time: very large population; holiday season accompanied by significant travel; and unique characteristics of the virus which we will address shortly.

Before we address some of the potentially unique features of COVID-19, here are some important quick facts about coronaviruses in general:

Symptoms:

Believe it or not, **most people get infected with human strains of coronaviruses at some point in their lives.** These illnesses are usually short-lived with symptoms that may include:

- runny nose
- headache
- cough
- sore throat
- fever

As noted, in most cases, these symptoms self-resolve. However, in some cases human coronaviruses can cause more severe symptoms and illnesses, such as bronchitis or pneumonia. This is more common in individuals with heart and lung disease, those with weakened immune systems, infants, and older adults.

Therefore, while the contraction of any coronavirus, including COVID-19, is likely to be met with

mild symptoms and are overwhelmingly non-life-threatening, it is the high risk of transmission and more severe manifestations in the above mentioned segment of the population that is a very legitimate concern – especially when considered in the context of the current epidemiology of COVID-19:

- high rate of transmission
- long and often non-symptomatic infection cycle
- ill-preparedness in many communities
- significant travel from high infection locations prior to appropriate quarantines
- a laissez faire/non-compliant attitude among many

Diagnosis:

There are laboratory tests to detect human coronaviruses. These tests usually require a simple non-invasive nasopharyngeal swab (NPS) or throat swab. However, laboratory testing is more likely to be used for patients who have severe disease. If you think you may have a coronavirus, talk to a healthcare professional about any recent travel (especially to areas with known outbreaks). Please keep in mind there is a current, relative shortage of COVID-19 tests available.

Prevention:

Human coronaviruses can spread through:

- coughing and sneezing
- close personal contact, such as touching or shaking hands
- touching an object or surface with the virus on it, then touching your mouth, nose, or eyes
- rarely, fecal contamination

There are currently no vaccines available to protect against human coronaviruses, but there are steps you can take to help prevent infection:

- wash your hands often with soap and water for at least 20 seconds
- avoid touching your eyes, nose, or mouth
- cover your mouth and nose when you cough or sneeze
- clean and disinfect objects and surfaces
- avoid close contact with people who are sick and stay home while you are sick

Treatment:

There is currently no specific treatment, other than good supportive care:

- take pain and fever medications if/when needed (pay attention to age/dosage recommendations)

- use a humidifier or take a hot shower (these may be helpful in soothing the nasal and lung passageways)
- drink plenty of liquids (adequate hydration is critical to your immune function and the maintenance of your body's electrolyte and temperature homeostasis)
- stay home and rest (maintaining a healthy sleep cycle is critical to your immune function)
- as simple and trivial as it might sound – limit your stress. Your body's stress response produces cortisol, which can dampen your immune response/capacity

If you are concerned about symptoms, call a healthcare professional and tell them about recent overseas travel. Do not go directly to the doctor's office or hospital, where you may infect other people.

Specifics:

Now that we have some basic facts and similarities across all coronaviruses, let's address why there seems to be an increased concern surrounding COVID-19, and whether this concern is legitimate?

COVID-19 seems to enter human cells in the lower respiratory tract via a cell-surface enzyme known as ACE-2. Interestingly, the gene that encodes this enzyme is found on the X-chromosome. As a quick primer, females have 2 copies of the X chromosome, whereas males only have 1 copy. Consequently, females have 2 copies of the ACE-2 gene, while men only have 1. Scientists are currently trying to determine if this dichotomy will influence the infection, morbidity and mortality rates in men and women. Currently, it is too early to say if a correlation exists. However, it is important to note that the ACE-2 gene plays a central role in maintaining your blood pressure, with correlations to your kidney and cardiovascular function. While it is still too early to draw any strong conclusions or associations, you may want to be more vigilant if you currently have any relevant existing health concern (i.e. suffer from hypertension, cardiovascular disease, pulmonary disease, kidney disease and/or a compromised immune system).

The most concerning aspect of COVID-19 is ironically the very attribute that initially caused many to underestimate its impact – the mild or non-existent symptoms in the majority of people who contract the virus. When coupled with a relatively long incubation period (5-10 days) – the majority of which can be asymptomatic – frequent travel, and poor self-accountability and self-containment, the COVID-19 virus presents some truly alarming statistics.

Please note: these statistics are not relevant to 'only' developing or poorer countries (a sad impression by many is that the current virus is a 'them' not 'us' problem).

In less than a month, Italy went from having only 3 reported cases to having the highest number of cases and deaths outside of China: 9,172 cases with 463 deaths. On March 8th alone, there was a 50% jump in reported cases. The current mortality rate in Italy is about 4%. Ironically, Italy may be facing an above average mortality rate, due to its above average life-expectancy and concomitant elderly population.

Now let's model this to the US:

As of March 8th, about 500 cases of COVID-19 had been diagnosed in the U.S. Given the substantial underdiagnosis at present (due to the above-mentioned reasons), most experts agree this number significantly underestimates the true scale of latent infections (individuals that are infected but asymptomatic).

Epidemiologic experts are beginning to intelligently (and without media sensationalism) sound an alarming bell:

Without appropriate quarantining, current infection rates suggest that we can expect a doubling of new cases every 6 days. With the latter in mind, let's assume that there are currently 2000 cases in the US. Left unchecked, and with a conservative doubling rate, we are looking at about 1 million new cases by the end of April; 2 million by May 7; 4 million by May 13; and so on.

As the health care system becomes saturated with cases, it will become increasingly difficult to detect, track, and contain new transmission chains. In the absence of extreme interventions like those implemented in China, Italy, Singapore and Taiwan, this trend likely won't slow significantly until hitting at least 1% of the population, or about 3.3 million Americans.

What does a case load of this size mean for the US health care system?

The US has about 2.8 hospital beds per 1000 people, that is, about 0.28% of people can be 'hospital-bedside-treated' in the US at any given time.

If predictions are correct, and:

1. Up to 1% of the US population can become infected by the COVID-19 virus (by mid-May) before the rate of spread slows
2. Even if only 10% of these individuals (i.e. 0.1% of the population) need hospital care
3. With 2.8 hospital beds (for all forms of care needs) per 1000 people

A troubling trend emerges...

Our health care system is quite literally ill-prepared for these numbers. This is not about the severity of the virus; this is about the potential for an utter saturation of our acute-healthcare system – the very system that has to also care for every other manner of health emergency.

So, what now?

- Yes, hysteria over this virus has been unfairly fanned by social media

- No, this virus is not necessarily more virulent or potent than previous coronaviruses
- However, resoundingly yes, it needs to be taken seriously

Beyond the above noted measures of recognizing symptoms, being aware of your environment, practicing appropriate hygiene habits, taking action to self-contain, avoiding non-essential travel etc, we would recommend the following:

1. In the coming weeks, avoid non-essential high trafficked areas as much as possible – particularly 'hot zones' that are currently being over-looked, such as fitness and recreational centers. If at all possible, avoid high density public transportation options such as buses and trains
2. Be particularly alert if you or your loved ones tend to more easily develop symptoms of bronchitis or pneumonia. The latter could mean that you are more prone to the inflammatory effects of lower respiratory infections, and you might be at greater risks for complications secondary to COVID-19 infection
3. Be particularly alert if you or your loved ones are on any form of chemotherapy or immune-suppressing medications (such as those associated with organ transplants)
4. Be particularly mindful of both the very young and elderly in your care. Their respective immune systems are generally not as robust as might be required to effectively combat COVID-19
5. If you feel you are at high risk and/or you develop even mild symptoms of a coronavirus infection, a 10-14-day self-quarantine is highly, highly advised. Please note that there is no such thing as a partial quarantine. If you are at a high risk of severe complications as noted above, contact your healthcare providers
6. If possible, monitor your blood's oxygen levels using a pulse oximeter. A normal range is typically 95 – 100%. Your level should typically never fall below 90%
7. If you have done your genomic testing with The DNA Company and were found to be predisposed to suboptimal cellular methylation (particularly as it relates to your MTHFR, SHTM1 and MTR genes), and/or carry the 'G' alleles of 9p21 and/or the 'G' allele of GSTP1 (rs1695), you may be prone to an exaggerated inflammatory response to viral infections with concomitant lower respiratory tract inflammation. Closely monitor any of the above-mentioned symptoms of coronavirus infection. Be aware that severe symptoms can take as many as 10 days after exposure/infection to manifest. *(Please note that none of these gene variations are associated with the risk of viral infection. Rather, they may be related to the severity of the inflammatory response to viral infections like COVID-19)*
8. Speak to your healthcare provider, functional medical doctor, or naturopath, about safe nutraceuticals and/or antiviral herbs that may be beneficial in boosting your immune system. Importantly, none of these therapies have been shown to reduce the risk of COVID-19 infection. Your healthcare provider might still recommend one or more of these safe additions to your

daily routine as a means of addressing secondary health concerns associated with infection

To conclude, with a mature and purposeful approach to the COVID-19 outbreak, we can keep not only ourselves and our loved ones safe, but our communities as well. The vast majority of COVID-19 cases will be no more severe than the common flu. The primary concern is not the contraction of the virus. The primary concern is its unchecked spread and the related catastrophe this can have on our urgent care/healthcare system.

On behalf of The DNA Company, I wish each of you the best of health and wellbeing. We are available to answer your questions should you have any.

Dr. Mansoor Mohammed, PhD
President and CSO
The DNA Company
1-800-432-9395

PS: As a reality check, and as of the writing of this missive:

- The Canadian Ministry of Health has notified the Canadian public that they expect that between 30-70% of the public will likely contract the COVID-19 virus before the virus is brought to heel. *There are currently no travel restrictions between Canada and the US.*
- Sofie Gregoire, the wife of the Honorable Prime Minister of Canada, Justin Trudeau, tested positive for COVID-19. She recently returned from a speaking engagement in the UK. Based on the onset of symptoms, and the average incubation time of this virus, it is likely that she contracted the virus while in the UK. *There are currently no travel restrictions between the UK, Canada and the US.*

These updates highlight the real possibility that the current travel restrictions implemented by the Canadian and US governments are likely too little, too late – re-emphasizing that the current goal must be containment.