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Editorial – Covid-19
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I don't have good news: Covid-19 is the new normal.

But isn't Covid-19 a death sentence?

No, it isn't.

Early in the epidemic, the CDC estimated that 1.4 million people in the US might die. At this writing (mid-June 2020) the estimate is 110,000 people have died. Very recently the Physicians for Informed Consent published a fact sheet about what that actually means and showed that the death rate is at the same level as a bad seasonal flu. (Physicians for Informed Consent, 2020)

In fact, the expectation is that recurring Covid-19 outbreaks will be very much like recurring flu outbreaks. In March 2020, Anthony Fauci (head of the NIH and a prominent figure in Covid-19 news) wrote in the *New England Journal of Medicine* that the Covid-19 death rate "may ultimately be more akin to those of a severe seasonal influenza." (Fauci et al., 2020) In other words, what you have to prepare yourself for is flu season and Covid season.

But until that day, the current outbreak still needs to be brought under control with a continuation of masks and gloves and and handwashing and social distancing and economic travail for the indeterminate future.

Is that what to expect for future Covid seasons? Episodes of masks and gloves and social distancing and hand washing and economic shutdowns in perpetuity? Possibly.

What we're told is that a vaccine is just around the corner, a vaccine that will eliminate the virus. But then you might have also heard (if you were listening carefully) that it will take some time to develop the vaccine (realistically years) and you might also have heard that there's no guarantee that the vaccine will be safe or effective and even if effective might not have a permanent immunological effect (which is supposed to be the big payoff).

Are there alternatives? Yes. Are they being explored by public health agencies? No.

So let's start at the beginning.

Covid-19 is caused by a virus—specifically, a variant of the SARS-COV-2 virus. This type of virus attacks the respiratory system of mammals. When you die from Covid-19, you die because your respiratory system fails. In order to die you first have to be exposed to someone who has the virus.

Some, even most people are not exposed. That's what the masks, etc. are for: those isolation practices keep the virus away from you and also keep the virus in and on you from getting to other people. But if you are exposed, you won't die unless you're infected with the virus—which means the virus has to make it from an already infected person into your respiratory system.

Some, even most people who are exposed don't get infected. But if you do get infected, you won't die unless your body responds to the infection with symptoms such as a dry cough or fever.

Some, even most people who are infected don't develop symptoms. However, this particular virus both a long gestation period and the capacity to be asymptomatic—so that someone could be infected and infectious with showing symptoms. But if you do develop symptoms, you won't die unless your body responds so strongly to the infection that it's overwhelmed. Symptoms are not the action of the virus, they're the action of your body trying to get rid of the virus. Put another way, you die because in the course of trying to kill the virus, your body kills you.

Most people who develop symptoms don't die. Most people recover. And it seems that people who recover have an immunity to the virus—the jury is still out on how long the immunity lasts.

To avoid death by Covid-19, first avoid exposure. But if exposed, avoid infection. If infected, avoid developing symptoms. And if symptomatic, avoid letting the symptoms get so bad that they kill you.

How is it that some people tumble down this cascade yet most do not? Because their immunity works. If exposed, their immunity prevents infection. If infected, their immunity prevents symptoms. If symptoms emerge, their immunity prevents those symptoms from becoming lethal.

Public health is focused on eliminating exposures and preventing infection. Masks and gloves and social distancing and handwashing and etc. And a vaccine.

Historically, how closely associated with the introduction of a vaccine is the decrease in the corresponding infectious disease? For the most part, its not. The declines in the classic infectious diseases, including polio, all began well in advance of vaccines. What initiated the decline was better hygiene, better sanitation, better nutrition, better working conditions, and isolation of the sick from the well. (Humphries and Bystrianyk, 2015)

The equivalent actions you can take (and that public health institutions should be taking) consist of support for your immunity, food that is non-toxic and nutrient dense, and rest, recovery, and environmental stress reduction.

One of the many things gone wrong in the public health response to Covid-19 is the failure to support those

whose body is least able to respond to a Covid-19 infection. That could have been done with the huge amount of money made available for stopping Covid-19 but instead was allocated almost entirely to developing a vaccine. You don't have much control of that process, but you do over how you support your immunity, the food eat, and the rest you take. (Berman and Fawcett, 2009)

The cascade from exposure to death is not the same for everyone. If the ultimate effect of public health is to prevent death and disability from Covid-19, shouldn't public health agencies act to protect those most likely to die? People older that 65 account for 90% of Covid-19 deaths. In all ages, people with compromised immunity and chronic disease such as diabetes, heart disease, and lung disease are more likely to die. Environmentally, the death rate varies considerably between cities: one estimate is that the rate in New York City is 4 times that in Los Angeles. No estimates are available for rural, exurban, and suburban places or small cities and towns. And as I'm sure you're aware, people of color and people of lower income and people suffering from discrimination are more likely to fall down the cascade. So in addition to immunity, nutrition, and rest add place as a catchall for environmental exposures and social stressors that affect the likelihood of death by Covid-19.

I want to pause and take special note of the assault on immunity by a variety of environmental exposures. Over some you have considerable control: tobacco smoke; agricultural chemical drift; urban air; noise; toxic chemicals in personal care products, furniture, bedding, clothing; microwave radiation (cell- and smartphones, iPads, wi-fi, and their infrastructure). (Ketcham, 2020; Pall, 2018)

Is it just age that puts old people at greater risk or is it something else? You would be right to think immediately of the prevalence of overmedication and under- and malnourishment among the elderly. You also might think of the consequences of overmedication and under/malnutrition on the intestinal microbiome of old people as an integral part of their immunity. A recent study found that subjects with a particular microbiome profile were more likely to be infected with Covid-19—but only if they were over 60. (Gou et al., 2020)

Viruses—including disease-causing viruses—are part of your intestinal and other microbiomes (such as skin and the organs of breath). The organisms of those microbiomes include fungi, archaea, protozoans, and worms as well as bacteria and viruses. These organisms comprise an ecology that, among other things, controls or contributes to controlling the population of each member organism, including pathogens. It's really a third element of your immune response.

You have an adaptive immune response, which produces antibodies that recognize and destroy pathogens based on a previous exposure to the pathogen. You have an innate immune response to foreign organisms that might be pathogens by creating an inhospitable environment (through processes such as inflammation and fever), by creating agents that directly attack those foreign organisms (for example, the host of cytokines), and by stimulating an adaptive immune response that remembers how to neutralize that foreign organism. And you have microbiomes all over your body (not just in your gut) that act to control the population of potentially harmful organisms and stimulate your innate immune response. In fact, it's being found that many organisms that are ordinarily associated with disease (such as poliovirus) can have beneficial effects—when they are part of a healthy microbiome ecology. (Pfeiffer and Virgin, 2016)

This new understanding of the microbiome has emerged in the last two decades. It brings into question the linear thinking that shows up in the progression from exposure to infection to disease to death and even the dominance of the germ theory of disease. This new understanding raises questions about overzealous hygiene—for example, the observation that children raised in rural environments have more robust immunity than urban children. It even raises thoughts that exposure to a pathogen under appropriate conditions might be good for your immunity. It reminds me of the common practice when I was growing up of gathering all the children in an extended family into one house when one child came down with measles or other childhood disease.

Although the science that surrounds the intestinal microbiome is the most developed, every function in your body has its own microbiome—your respiratory function, for example, from your nose to your lungs has its own. As you might know, overly aggressive hygiene with the use of antibiotics and antiseptics disrupts the diversity of your microbiome and therefore its capacity to neutralize pathogenic organisms. (Patel, 2015)

Public health that focuses on developing a vaccine has many problems. (Fisher, 2020) One of these problems, emphasized by the new understanding of the microbiome, is that starting at adaptive immunity leaps over the natural progression of immune responses. The results are short-lived and ineffective. What your body wants to do on its own is first control infection through your microbiome, then call on your innate immune response, which then leads to an adaptive immune response.

For example, adjuvants contained in vaccines are designed to provoke an innate immune response that will lead to the creation of antibodies. But often as a consequence the adjuvant overstimulates the innate response and causes

an acute reaction (such as fever or allergy) or a chronic allergic reaction (such as asthma). As another example, booster shots are a common part of vaccination protocols—which simply means that the vaccine is ineffective at causing a permanent immune response—unlike that commonly found with naturally acquired immunity. (Obukhanych, 2012; Thaiss et al., 2016)

Just within its own narrowly focused scientific universe, public health institutions in the new normal of Covid-19 should pay far more attention to naturally acquired immunity—for example, making sure that vulnerable populations such as the elderly or the immunocompromised are well-nourished, well-rested, and their immunity well-protected. Public health institutions need to broaden their scientific horizons to incorporate science such as what I've just described regarding microbiomes. They and the political institutions within which public health operates need to broaden the political horizons to incorporate that science as well. I'm not holding my breath.

At least one implication of microbiome science is that the Covid-19 virus will inevitably be incorporated into your microbiome where it will become part of your microbial ecology. And that would be done by public health institutions devoting the appropriate level of resources to preventing people, especially those who are vulnerable, from tumbling down the cascade from exposure to death by (repeat after me) providing immune support and protection, safe and healthy food, the means to rest and reduce stress, and a safe place to live (environmentally and socially).

After the Covid-19 is brought under control, will you have to contend with other exotic pathogens like the Covid-19 virus? Almost certainly.

There's been a discussion about the Covid-19 virus's origin. For the purpose of controlling the current outbreak, the origin story is not particularly relevant. But it is very relevant to what we can expect in the future. I'm sorry, once again, but it is not good news.

There's agreement that the virus is a descendant of a coronavirus found in bats. Coronavirus is a type found in mammals' respiratory systems. Because a virus can infect one type of animal does not mean it can infect another—because it can infect a bat does not mean it can infect a human. A virus's life plan consists of invading a cell, highjacking the cell's biology to make copies of itself, and then have all those copies released into their immediate environment (typically by bursting out) to invade other cells. If for some reason there are no suitable cells available, a virus can go into a suspended state and wait until a suitable host comes along.

In order to jump from one species to another, it must have the biology to invade the new host's cell—otherwise, the virus doesn't do anything and the new host's biology either destroys it, neutralizes it, or incorporates it into a microbiome ecology.

It's generally accepted that the Covid-19 virus made the jump in Wuhan, China. One Covid-19 origin story says that the virus made the jump from bat to human with some other species as an intermediate (such as a species of snake) that is sold as food in the so-called wet meat market in Wuhan. This is the natural zoonotic origin story —"zoonotic" meaning a human pathogen that originates in another animal.

The other Covid-19 origin story says that the virus made the jump in the lab of China's biosafety program at Wuhan where the bat virus was (still is) under study—which means genetically manipulated to understand the pathogenic biology of the virus in order to better prepare for a pandemic. Call this the artificial zoonotic origin story.

When Covid-19 first appeared, the consensus leaned toward the natural zoonotic narrative. It continues to be the dominant narrative in the mainstream media. What it mistakenly focuses on is the human practice of eating exotic meat from the wild, calling to mind unhygienic food and food preparation. However, that's not the problem. The problem is human practices that simplify food producing ecologies—whether in the wild by disrupting ecologies, reducing biodiversity, and thereby impairing the capacity of those ecologies to keep pathogens in check or in civilization through monoculture and simplifying the ecologies upon which industrial agriculture builds (also reducing the biodiversity and thereby impairing the capacity of those ecologies to keep pathogens in check).

Remember the discussion about human microbiomes and their role in controlling pathogenic organisms? The same is true for both ecologies in your body and ecologies on the land. It's important to know that ecologies on the land include their own microbiomes—so that, for instance, the antiseptics found in hand sanitizers simplify soil microbiomes and so affect the resilience of plants against diseases.

This is captured nicely in the book title *Big Farms Make Big Flu: Dispatches on Infectious Disease, Agribusiness, and the Nature of Science* by epidemiologist Rob Wallace. (Wallace, 2016, 2020) The upshot is that as food production ecologies are simplified, more pathogens of all kinds will jump species and as a consequence more pandemics of formerly exotic and inconsequential microbes will emerge.

The other Covid-19 origin story is an artificial zoonotic narrative—specifically, the story of a virus cooked up in

a lab and accidentally released. As I mentioned, Wuhan is the location of China's biosafety research laboratory. When Covid-19 became a prominent issue, the Chinese government and the lead coronavirus researcher vigorously argued that an escape wasn't possible. The evidence seemed to bear this out. But as time has passed, the natural zoonotic story has become increasingly implausible. For example, the crucial intermediate species that links bat virus to human virus has yet to be identified. (Latham and Wilson, 2020)

In addition, despite protests to the contrary, the Wuhan lab is almost certainly doing the kind of research intended to produce exactly a Covid-19 virus. Further, the security of the lab has been questioned from both within and outside the lab itself. The likelihood of an accidental escape is plausible not because it's China. The United States is building the equivalent of the Wuhan lab in Manhattan, Kansas under the auspices of the Department of Homeland Security, which reported to Congress that the chance of a catastrophic accidental release over 50 years was 70%. The National Research Council found that the report grossly underestimated the risk and grossly overestimated the safety measures proposed for the new facility.

A US agency investigation of accidental release of organisms from the highest level biohazard labs in the US over the six years between 2009 and 2015 found 749 incidents. A significant number of those incidents were not reported initially but were only discovered in the course of investigating another incident.

Both the natural and artificial zoonotic narratives are plausible. Both are about how ecological disruption by humans causes a virus (or other pathogen) to jump from wild animals to humans. Going forward what matters is that both sources will almost certainly create public health hazards. So even if Covid-19 eventually dies out and does not become a recurring event, other pathogens will almost certainly emerge. An estimated 60% of emerging infectious disease is expected to be naturally zoonotic. (Robbins, 2015) No estimate is available for how many are expected to be artificially zoonotic.

It's a frightening future. Some of the fright is entirely justified; some is cooked up intentionally or unintentionally to achieve public health, public relation, and public order goals. But frightening is not hopeless. You have the power to protect yourself: take care of and protect your immunity (including your microbiome), eat well, rest, live in a safe place, and don't let the soup of fear cooked up by infectious disease panics disable you.(Berman and Fawcett, 2016; Fawcett, 2016)

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They also organize mass protests in Europe, like the one on August 29, 2020 where 12 million people signed up and several millions actually showed up. Why do these 500+ medical doctors say the pandemic is a global crime? What do they know, that we donâ€™t? One of the many protests against the â€œplandemicâ€ that you will not see in the mainstream media.Â As we know the new COVID-19 disease appeared in China towards the end of 2019. Therefore it was named COVID-19 which is an acronym for Corona Virus Disease 2019.Â â€œThere is NO QUESTION there is going to be a challenge for the coming administration in the arena of infectious diseases. â€œThere will be a SURPRISE OUTBREAK. Thereâ€™s NO DOUBT in anyones mind about this.â€ The CDC estimates that between 12,000 and 61,000 people have died in the US in each flu season between 2010-2011 and 2018-2019; its preliminary figure for 2018-2019 is 34,157 deaths. March 2: Trump says a vaccine is coming "relatively soon". Trump said: "We had a great meeting today with a lot of the great companies and they're going to have vaccines, I think relatively soon. And they're going to have something that makes you better and that's going to actually take place, we think, even sooner." Facts First: "Relatively soon" is too vague a phrase But we also know that the CDC has not been forthcoming with their reporting on COVID either: SHOCK REPORT: This Week CDC Quietly Updated COVID-19 Numbers â€“ Only 9,210 Americans Died From COVID-19 Alone â€“ Rest Had Different Other Serious Illnesses. We also reported on our own study in July where we reported basically the same thing.Â Because the authorities in the US and across the world use various standards in determining if a death should be considered a coronavirus death, these numbers could not be trusted, even in the US. Therefore we believe that the only measurement we can use to really see the impact of COVID is overall deaths. This is because we really have no faith in what deaths are classified as COVID due to issues with the classification process. "Make no mistake, this is a coup d'etat that we will stop in the name of justice and free and fair elections," stated Maria Strollo Zack, Chairman of Nations in Action. The Institute for Good Governance issued the following statement: Our mission is to provide the full truth, expose the perpetrators of this horrific crime, and ensure that every person involved, regardless of position, be prosecuted to the fullest extent of the law.Â Implement the most severe penalties for participants who had knowledge or participated and refuse to assist in the investigation. Maria Strollo Zack, founder of Nations In Action added, "States must prosecute all illegal voting activities and provide immediate legislative remedies. There can only be zero tolerance for criminal interference in American elections.