

Self-sufficiency in the time of coronavirus.

By now this topic is pretty much on everybody's mind in our community. The question is what is the actual risk to each of us and what can we do about it. To the first part of that question as to what the actual risk is, the answer is almost as individual as we are. The virus has been around long enough to become a pandemic and now the quantity of data we have to know where it is it what it is doing is becoming more reliable. On a global scale, there are some reliable resources that are being updated in almost real time. For those who like to see maps here is one of the better websites:

<https://gisanddata.maps.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>

For those who like to look at tables and spreadsheets, here is another:

<https://www.worldometers.info/coronavirus/coronavirus-cases/>

And for more local information on prevalence within our area, here is a map that is hopefully updated on a regular basis:

<https://www.mercurynews.com/2020/03/04/map-coronavirus-cases-in-the-bay-area-northern-california/>

Of course, none of these can drill down to the level of anyone's particular risk depending on where they live, who they live with and where are they and everyone else they come in contact with have been in the last 24 hours, let alone the last two weeks. This is further complicated by the fact that those who have been exposed may not be having any symptoms for up to two weeks after exposure or may not even be symptomatic to suspect they have a significant illness in the first place. For every person that has been tested and found to be positive for the Corona/Covid-19 virus, there may be anywhere from 10 to 100 or more who are infected and don't get tested or don't even know they are sick.

As far as getting tested, announcements have been made that certain commercial labs will have hundreds of thousands of tests available next week, but getting those administered requires someone to have the right type of swabs, the proper technique to gather the samples and the proper paperwork to order the test which may or may not be covered by insurance. Just as we have seen illogical and unnecessary hoarding of bottled water and toilet paper, the same panic mentality will probably also apply to those seeking testing.

The most important thing to consider before doing any medical test is to fully understand and plan for what will be done based upon the results. The virus is already out in the general population and the majority of those who are infected, at least 80% will have mild symptoms and staying home and the usual treatments for the common cold or flu are all that would be necessary. The most important reason for being tested is if one is planning to visit, live with or care for someone else who's in the very high-risk population group. The problem is if one of these caregivers tests negative but then is exposed a day later they are back to becoming a carrier of this virus to the people who are most in danger from it.

Just about every media outlet has information on how to prevent spread of the virus as well as symptoms associated with it, who is at greatest risk and what are the basic measures to prevent the spread. Some of these outlets especially on the Internet can be extremely alarmist because that gets peoples' attention. Stick to the basics and go to the CDC website first:

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

OK, by now there's enough information out there as to where the infections, serious illnesses, deaths and recovered people are globally and even regionally. As to what to do about it, refer to the CDC website first for preventive measures. If you wish to go further, there are some basics with respect to lifestyle, diet and supplements that may considerably increase the resistance to this virus and lessen the severity of any illnesses from it. There is probably a growing list based on scientific research on hundreds of drugs, compounds, herbals and vitamins that may make a difference, I will try to keep the list to three which are very simple.

1. Vitamin D, particularly vitamin D3 which is now widely recognized as the most important supplement source of this vitamin. Over the past 10 years I've tested thousands of vitamin D levels and found most of them in people to be on the low side of what is known as the "reference range". On top of that, dietary requirements for vitamin D can vary as much as tenfold based on genetic mutations which are fairly common. Although the recommended daily allowance, which is the minimum amount of vitamin D supplementation to prevent disease is only 400 IU per day, nearly everyone I've tested could benefit by taking at least 5000 IU a day and in some cases 10,000 IU or more just to get their level within the middle of the reference range of 30-100ng/ml. There are many other reasons than boosting your immune system to supplement with vitamin D, but focusing on immune defenses, here are some examples from the medical literature:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3308600/>

<https://www.ncbi.nlm.nih.gov/pubmed/19237723>

<https://www.ncbi.nlm.nih.gov/pubmed/28202713>

2. Next on the list is vitamin C. This has been discussed back-and-forth for decades ever since Dr. Linus Pauling, winner of two Nobel prizes wrote his book on the topic. I remember he was a friend of my grandfather (founder of the Palo Alto medical foundation) and heard him tell my grandfather one night that if he took more vitamin C his farts wouldn't be so bad. Although some people think Dr. Pauling went overboard, there's more evidence now that he was probably right. It's not necessary to take the amounts that he took on the order of 13 to 20 g a day, but if one is worried about increased risk of viral illness is at least 1 g a day would be a good idea, 3 g per day if one has been exposed to an illness and 5 g per day if one is starting to get sick. The main side effect for some people is diarrhea if they are overdosing, but that usually occurs at doses of 10 g per day or more. A good commercial source of this is a product known as Emergen-C, although I think this has been found out it is probably becoming as coveted

and hoarded as toilet paper. For those who like to know some of the science, here are some references:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5707683/>

<https://www.ncbi.nlm.nih.gov/pubmed/10543583>

<https://www.ncbi.nlm.nih.gov/pubmed/23700397>.

3. The third supplement which now has a growing list of benefits for health outside of preventing infections is the common spice known as curcumin or turmeric. It has recently become popular due to the evidence of it helping improve memory and reverse inflammatory changes in the brain that are associated with Alzheimer's disease as well as being a natural anti-inflammatory for arthritis. However, evidence is now coming out regarding curcumin's role as an antiviral. Typical dose is for this are between 500 and 1,000 mg daily. The more effective forms of this are often combined with an extract of pepper called bioprene. The best quality brands of curcumin will be found by manufacturers who attest that it is GMP certified. Here are a couple references including one where it has been shown to be specifically effective against one form of Coronavirus.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6509173/>

<https://pubs.acs.org/doi/10.1021/acsanm.8b00779>

Armed with all this information, you have done the best you can to avoid areas of high risk and exposure and avoid those who appear to be sick or where they may be congregating. You are getting adequate sleep and avoiding as much stress as possible and having regular exercise, have quit smoking, especially vaping and cut down some on your drinking. You have taken the supplements mentioned above, but somehow you still got sick. What do you do now?

If you are one of the people on the list of those who are at higher risk, you need to contact your physician and let them know that you may need to be tested and seek more aggressive treatment or possibly hospitalization. If, however you are like the majority of people who will have only a mild illness representing the cold or flu, you should treat it accordingly, knowing that until you prove otherwise, that's what it is instead of coronavirus. This means staying at home and not infecting anyone else regardless of what virus you have. Resting, staying well hydrated including warm drinks as even that may weaken any virus that gets in your mouth. One of the better ones would be your favorite tea with honey which isn't just a sweetener but has medicinal properties to reduce respiratory inflammation.

Think of all the things your grandmother used to do and try to employ the ones you can including "Steaming". Viruses prefer cold dry air and don't do well in warm humid air. Adding your favorite aromatic substance such as menthol, eucalyptus, "Essential oils" or even just Vicks vapor rub or a couple of mentholated cough drops to a pot of steaming water and breathe in the vapors is an old-time remedy that still works well in reducing respiratory inflammation. Don't forget chicken soup. There are some cases with many of the common viruses we see each winter that can progress to a secondary infection. The most common one I see in my practice or what we call "walking pneumonia". These are infections caused by more mild bacteria that often have symptoms of low or no fever, a chronic dry cough, profound fatigue and respiratory symptoms that resemble asthma even in those who don't have it. These infections

are easily treated by common antibiotics in the class that include Zithromax and Biaxin. The most severe cases may require a more potent antibiotic known as Levaquin. These people, although they don't have asthma do often benefit from all of the above home remedies as well as occasionally bronchodilator and/or steroid inhalers to reduce the lung inflammation. A natural anti-inflammatory for the lungs can also be found in a supplement known as quercetin.

Now that you have isolated yourself and are treating yourself appropriately and have stocked up with 20 gallons of hand sanitizer and 1000 rolls of toilet paper, what else do you need to consider? How long do you plan to stay in isolation? That depends on how fearful you are of getting sick, but more importantly how much risk you have based on your age and pre-existing conditions. Most important are the truly necessary items such as food and medicine you have to sit out the duration. Opinions vary wildly on this and they run anywhere from two weeks to two months. We are still not at the point where the growth curve for infections in the United States has begun to level out, which makes predicting actual quarantine/isolation times difficult.

Sources for food can be done by way of home delivery although many of us are in such a remote area that the usual services don't come here. Your next resource would be friends and neighbors who are healthy who can shop for you and leave it at your doorstep. Another resource for the South skyline area is the organization known as Mountain Neighbors Helping Neighbors. They have been supported through donations from the South skyline Association, but as of yet have not had anyone request their services in our area. They can be found at:

<http://mnhn95033.org/index.shtml>

They can be contacted by either email: MNHN95033@gmail.com or by phone at 408-316-2938.

A bigger problem will be having adequate supplies of necessary medications to meet your needs. At the most recent Whitehouse press conference with all of the promises of relief in this pandemic, I do not recall anything said about requiring Insurance companies to allow and pay for more than one month of prescription medications. Some pharmacies have the option for patients to do this, but it may be restricted by Insurance reimbursements. There may also be limitations of certain medications due to components that are supplied from China, although most of those are involved in medical equipment. For those who plan to isolate or self Quarantine, make sure you take stock of all the necessary medications you have and contact your physician to see if they can authorize a three month supply instead of the usual one month.

Most of us live here because we value and appreciate the remote beauty of our area and in many cases, our own self-sufficiency as well as the sense of community and dedication that many of us have in helping each other. Take care of yourselves, take care of each other.

Regards,

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