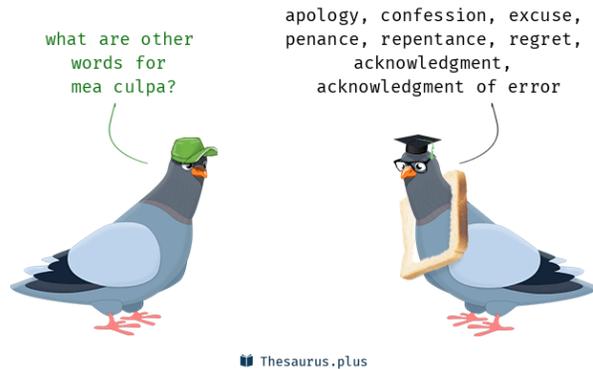


## To my valued patients

### First

If you noticed more typos in the last newsletter, it was again, my fault, *mea culpa*. I sent out a previous version of the newsletter before it had been corrected by my wife, Alisa. She has been a silent star of these newsletters, changing my mangled prose into legible reading.



You may have noticed such errors as plaque instead of plague and some strange sentence and paragraph structures. A shout out to my daughter Sarah for placing this in a format so each of you sees it via email. By the way, I have gotten amazing feedback and I thank each one of you. And to answer the most common question, feel free to pass it on to anyone you think may enjoy the newsletter.

### More great news

Some really good news was just published in the preeminent New England Journal of Medicine. Two thirds of COVID-19 patients who received remdesivir improved. These were not just patients with a mild case of the disease, but severely ill patients in the hospital receiving oxygen support. The study was small, consisting of 61 patients and our own Cedars-Sinai Hospital was a participant in the trial.



The news is hopeful and needs to be followed up with more rigorous studies including controlled trials. During these perilous times, it might bring hope to those whose loved ones have severe disease. If remdesivir greatly helps severely ill patients, might an oral therapy similar to Tamiflu and Xofluza for influenza, be in the offing for those less severely affected for COVID-19? I hope so. It would help us return to normal life and eventually treat the coronavirus like the flu. But at this point, this is just a wish and not an actuality. Let's hope that as our medical research establishment and clinicians keep moving forward, we will see great outcomes.

### **Could you have had coronavirus at the end of last year**

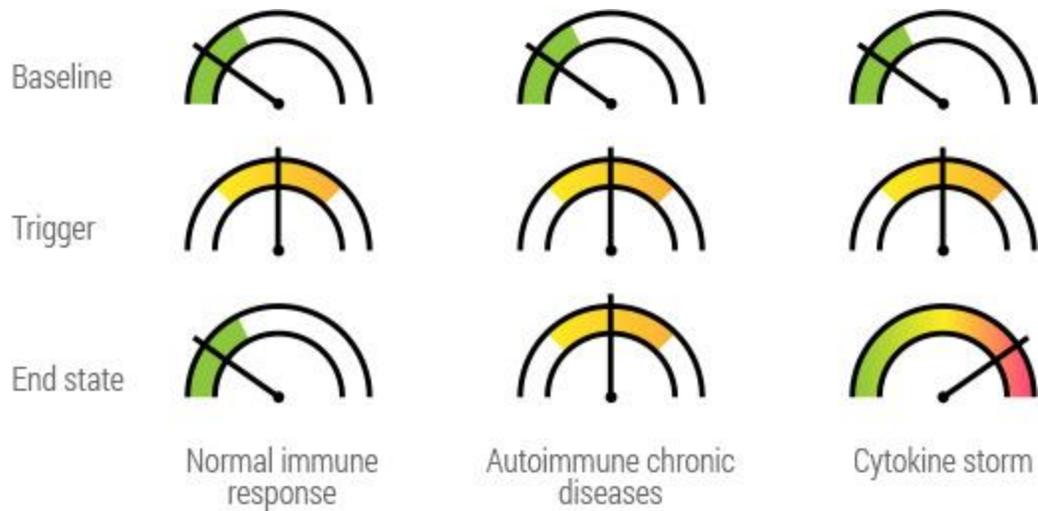
Many of my patients have asked me about a previous illness of theirs that we thought was a simple viral infection. They want to know if it could have been coronavirus. If you were sick in the United States in November or December, the answer is most likely NO. An evolutionary biologist published an article in the Scientist where the virus was tracked back to a single source somewhere in China between mid-November and early December. Here is the published image of the disease as published in February (New York had not yet been hard hit). The west coast hit is Washington state where the cases in the US were first identified.



The story changes if you were sick in February. When we have antibody testing, we should be able to answer for you if you had exposure or the coronavirus .

### **Cytokine storm is not a change in the weather**

Many of you following my newsletters or even more scientific news may have heard the term "cytokine storm." What is it and what does it mean in terms of a COVID-19 infection? Let's first start with what normally happens when you encounter a germ. Usually, your immune system, through the use of immunoglobulins, attacks the invader, kills it off and you get better; then your immune system stands down. But sometimes, in some people, the immune system revs up and then instead of standing down once it has attacked the invader, it continues to ramp up out of control.



COVID-19 is not the only condition that generates a cytokine storm. It can occur in an array of conditions and can be triggered by infection, faulty genes or autoimmune disorders in which our body thinks its own tissues are invaders. Regardless of the source, a cytokine storm is produced because the substances named cytokines, made by our body, go on a rampage via the blood stream.

It appears when the cytokines raise the immune system too high, the immune system may not be able to stop itself. These immune cells spread throughout the body attacking healthy tissue and blood cells. The blood vessel walls open up to let the immune cells into the tissue and the vessels get so leaky that organs like the lung may fill with fluid not allowing oxygen to get from the air into the body. That is why you are hearing about patients requiring oxygen and ventilators to help people stricken with the coronavirus get air past the fluid collections in the lungs into the lung tissue and then into the blood stream.



This is not the first time a cytokine storm was linked to a pandemic. It is believed that cytokine storms caused fatalities in the 1918 flu pandemic and the 2003 outbreak of SARS. It is also thought that fatal cases of swine flu (H1N1) an influenza virus, also resulted from cytokine storm.

So, if you hear about research in clinical trials in which a cytokine blocker is used you will now understand it. I mentioned some of these drugs in the April 6 newsletter.

<http://reedwilson.com/wp-content/uploads/2020/04/April-6-newsletter-COVID-19.pdf> .

### **This is insanity**

Social isolation is totally unnatural. We are holed up in our homes, walking 6 feet from our neighbors and friends and disguised as would-be bank robbers when outside. What we may see is a pandemic of mental disorders in addition to the COVID-19. We do have some experience with other disasters but mostly we are in uncharted territory. For example, 5% of the population had major depressive disorder one month after hurricane Ike. 10% of New York City adults experienced a major depressive disorder after 9/11. 25% of New Yorkers reported an increase in alcohol use after the 9/11 attack.

We know there will be substantial increases in anxiety and depression, substance use, loneliness and domestic abuse. There is a high likelihood that you or your loved ones and friends will suffer. It is important to be especially understanding of depression, anxiety and anger during these times.



We do have some techniques which may help, but nothing can eliminate the mental health effects of this pandemic. Everyone will experience some loneliness and the use of digital technologies can help, but never replace, personal contact.

Developing and implementing routines, particularly for children, can help keep a sense of purpose.

Those suffering mental health problems should not be stigmatized. Psychological disease is not a weakness, it is just a different biological chemical reaction to stress, which varies from person to person. We need to reach out to everyone we know and check in on them to see if we can help. If they need more professional assistance, we should encourage them to seek help. It is important to realize that the mental health ramifications of this biologic pandemic will not end when we lift restrictions. It will shift to a mental health pandemic that may very well last much longer than a virus.

Stay healthy, stay well.

### **Art and medicine**

We have already seen Vincent Van Gogh and he would have been a great subject for mental health and art. Today I thought I would head in a different direction with Pablo Picasso's "The Blue Room."



Painted during his notorious Blue Period, Picasso's, "The Blue Room" highlights the artist's strong melancholic feelings and depressive tendencies. Using different shades of blue and little to no other color, Picasso is portraying his somber mental state and path toward his unravelling mind. His obsession with the strange and morbid, i.e., the prostitute featured in this painting, only brought him closer to derailing his state of mind. Painting during the year of his friend's, Carlos Casagemas' death, this painting can be said to be a statement of isolation and distrust of the world.