
FROM THE DESKS OF
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Feb 3, 2021

To Our Patients,

I have good news to report. After some very constructive feedback, I will be taking a class on grammar and sentence construction. Soon these newsletters will no longer sound like nails on a chalkboard to the English teachers in our patient community. In all of my 23 years of formal schooling, I have never taken a class on grammar. This picture is of my “twin cousin” Janice and my late Grandma Ruth. Janice and I grew up like twins. We were the same age, in the same grade and went to the same schools, only I was the math and science classes nerd and she was the English classes nerd. She apparently got all of the grammar genes and is now an English teacher in New York!



Also, per your request, here are more puppy pictures from the Mellman’s home. Wilber is growing fast at 4 months, and is securely in the arms of one of our favorite medical assistants, Anna. Sister Charlotte continues to be the most lovable trouble maker. Here she has been caught snoozing on the sofa that she isn’t allowed on.



Next Zoom Session (date correction)
Topic: COVID 19 and Vaccine Updates
Date: February 4, 2021 at 7pm
Meeting ID: 720 320 2061
Passcode: 123456
Zoom link:

<https://us02web.zoom.us/j/7203202061?pwd=eUpVd1pEaDFZSGJaZEs4S1RoV1NtUT09>

COVID-19 Vaccine Updates

Jared Polis announced new eligibility for the COVID Vaccine. Not all vaccinating facilities will be able to accommodate the latest eligibility guidelines, if they are still trying to vaccinate healthcare workers and those 70 year old and above. The new phase, confusingly named Phase 1B.2 (NOT Phase 2) includes:

- People 65-69
- Teachers
- Childcare workers

Because this does not include Phase 2, people under 65 with underlying health conditions are *not yet* being considered.

Colorado Public Radio has recently put together a great website about getting vaccinated that consolidates all of the possible resources:

<https://www.cpr.org/2021/01/06/coronavirus-colorado-vaccine-guide-appointments/>

Statewide:

- [Centura](#)
- [King Soopers](#)
- [Safeway](#) (Appointment times open Friday, Saturday and Sunday)
- [Salud Family Health Centers](#), (970) 484-0999
- [UCHealth](#), 720-462-2255

Front Range:

- [Boulder Community Health](#)
- [Denver Health](#)
- [Clinica Family Health](#)
- [HealthONE](#) (waiting list)
- [Kaiser Permanente](#) , or call 1-855-550-0951 (certain sites are open on a first come first serve basis.)
- [National Jewish Health](#) (open to the public)
- [SCL Health](#), or call 303-812-2051
- [STRIDE Community Health Center](#)
- [Thornton Fire Department](#)

Our patients have been most successful at National Jewish Health, Safeway, UCHealth, and Salud Family Health Centers in Brighton. Consider also asking your own pharmacy.



Ground Hog's Day

I've been told that sometimes my newsletters are too depressing... so I won't tell you what Punxsutawney Phil predicted. But, I will say, statistically he is incorrect 50% of the time.

Words from Kelly our nutritionist...

Nutrition Chats,

Thursdays at 2 p.m.

What do you want to chat about?

I notice when I teach nutrition classes how many of you like to ask questions, share your experiences and discuss nutrition and health with the group.

To that end, I am trying something new – Nutrition Chats.

Each Thursday at 2 p.m., I'll kick off our chat by presenting briefly about a topic, then we'll see where the conversation takes us. To be clear, these are informal sessions vs. classes. Chats will run 30-60 minutes depending on how much fun we're having. 😊 I look forward to your nutrition questions and this chance for us to connect.

Watch these newsletters for upcoming topics and send any topic ideas to me, Kelly Dwyer, kelly@coloradocme.com.

Feb 11, 2 p.m.

- **Dieting pitfalls:** Fad diets may help you shed pounds quickly, but fall short when it comes to keeping weight off. I'll share tips for reframing your approach for the long haul. (Hint: it starts with delicious and nutritious food!)

Feb 18, 2 p.m.

- **Healthy snacks 101:** Tune in to learn about easy, quick and portable healthy snack options.

Feb 25, 2 p.m.

- **Step away from the data:** We have apps that track food, steps, sleep and other health metrics. Helpful as they may be, we can let these tools override our instincts and dictate our choices. I'll offer tips for how to keep tech from controlling your every move and for eating intuitively.

March 4, 2 p.m.

- **Digestion smarts:** Bloating, gas, cramping or constipation? If your digestion is out of whack, consider these simple tips.

Are you ready for a tough topic this week? Let's see if we can tackle it together! I wanted to write a bit about the immune system, since that is what has made COVID-19 so deadly for some and why some people have had strong reactions to the vaccine.

Not All Storms are Hurricanes

Normally the immune system is a wonderful network of biological processes in our bodies made up of organs, cells and chemicals that allow our bodies to fight off infections. The organs involved that have immune function include the lymph nodes and the draining system that connects them, the spleen, the thymus and the bone marrow. Our white blood cells make antibodies to attack viruses, bacteria and other invaders that try to infect our bodies. And then there are a whole host of chemicals called cytokines that participate in the immune response.

If a young child were to get a cold, rhinovirus would invade their body through the nose. In order to fight off the infection, the child might get a low grade fever, a runny nose, and inflamed nasal passages to fight the infection. This is a normal immune response. The reason we never become immune to the common cold is because there are over 90 versions of the common cold in Colorado alone. While you develop immunity to the ones you have had in the past, there are so many out there that you will inevitably get a cold again and again in your lifetime.

Sometimes the immune system thinks that your own body is the invader and it will attack itself. This occurs in autoimmune diseases like rheumatoid arthritis, lupus, crohn's disease, ulcerative colitis and many more diseases.

With COVID-19, the body's immune system reacts to the invading virus, but in some people it reacts more strongly than necessary. In doing so it damages (usually temporary) more healthy organs than it should. This is technically different from when the body intentionally attacks itself as it does with auto immune diseases. When the chemicals overreact to an invader, like COVID-19, it is called a cytokine storm.

All Possible Symptoms From Cytokine Storm
Pneumonitis - inflamed lungs
Pulmonary edema - water on the lungs
Dyspnea -shortness of Breath
Hypoxia - low oxygen
Lymphadenopathy - swollen glands
Hepatomegaly - enlarged liver
Transaminitis - elevated liver enzymes
Hypoalbuminemia - low protein levels
Liver injury
Cholestasis - sludge in the bile ducts
Liver failure
Acute kidney injury
Kidney failure
Confusion
Delirium
Aphasia - unable to speak or understand
Seizures
Hearing loss
Fever
Anorexia - loss of appetite
Fatigue
Hypotension - low blood pressure
Tachycardia - high heart rate
Cardiomyopathy - enlarged heart
Vasculitis - inflamed blood vessels
Arthritis
Nausea
Vomiting
Diarrhea
Ascites - fluid in the abdomen
Rash
Edema - swelling under the skin
Cytopenias - low blood counts
Coagulopathy - blood clots
Shock
Hemorrhage - bleeding

The onset and duration of the cytokine storm varies depending on the cause and the treatment of the disease, in this case COVID-19. The most common symptoms are fever, fatigue, loss of appetite, headache, muscle and joint aches, and neuropsychiatric symptoms (i.e. foggy head, confusion, depression, numbness and tingling). Some have diarrhea or a rash. When it affects the lungs, patients can experience cough, shortness of breath and chest pain, which can progress to hospitalization and admission to the intensive care unit. Worse case scenario, patient also get blood clots (disseminated intravascular coagulation), bleeding, low oxygen levels and severely low blood pressure.

So when you get sick from an infection, your symptoms are a combination of those produced by the invader and those caused by your own body trying to get rid of the invader. In this chart, I've included all possible symptoms of the cytokine storm, as we have seen patient with every possible manifestation. Sometimes the symptoms are mild like a spring sun shower, other times like a drenching downpour and at its worst a category 5 hurricane. Some of the symptoms like fatigue, memory fog and hearing loss have lingered, like puddles and washed out gulleys.

For the scientists, during a cytokine storm there are elevations in chemicals called interferon gamma, interleukin-6, interleukin-10, and soluble interleukin-2 receptor alpha, a marker of T cell activation. Most of the medications that have been tried to prevent COVID-19 deaths block these molecules from working. Emapalumab blocks interferon gamma. Anakinra, siltuximab, and tocilizumab all try to block pathways around interleukin-6.

Now, let's turn to the vaccine. The purpose of getting a vaccine is to coerce the body into producing an immune response to a protein that looks identical to the invader that you are trying to avoid. So with the COVID-19 vaccine, it produces a protein that can't give you COVID-19 but can trick the immune system into reacting so that your body can build protection against future exposures. As a result you may feel mild common symptoms from the cytokines as your body fights off the vaccine and also builds antibodies. If you have not had COVID-19, the first vaccine will likely give you a brief sore arm and some fatigue. The second vaccine will likely give you a brief sore arm, fever, chills, body aches and fatigue. If you have had COVID-19, the first shot is really your second exposure to the virus so it will hit you harder than your friends who did not have COVID-19. Your first vaccine will likely give you a brief sore arm, fever, chills, body aches, and fatigue with the second shot being more mild. But then voilá! You are protected.

Questions for Dave and I and me (Thank you for the correction! You know who you are!)

1. After I get the vaccine why do I still need to wear a mask?

10 days after you get the second vaccine you will be ~95% protected against the most common strains of COVID-19. You will be mostly protected against severe disease from the variants at this point, as well. However, you can still contract the virus, without it making you sick, carry it around in your nose and spread it to others who have not yet been vaccinated. This will remain true until 75% of the population is vaccinated. If we travel excessively or gather without masks before 75% of the population is vaccinated, then we will see variants at a much higher rate. Future variants may or may not be covered by the vaccine, and they will likely be more contagious and may make people more ill.

Continue to send questions. Remember you can no longer reply to this email. Instead, email me at Jeannette@coloradocme.com.

Stay warm and hopeful,

Jeannette and Dave

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