

# Dr. Delgado COVID-19 Update 08-07-20

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## Convalescent Plasma Update

COVID-19 patients treated with the blood of those who have recovered from the infection die at significantly lower rates than those given standard treatments alone, according to a preliminary analysis.

In their analysis, posted July 30, the researchers looked at a dozen trials where hospitalized COVID-19 patients received convalescent plasma (CP) therapy — a treatment that involves drawing blood plasma from recovered patients and injecting the antibody-rich fluid into sick patients. The 12 trials, conducted at various sites around the world, included more than 800 participants in total, and when taken together, strongly suggest that patients given plasma were less than half as likely to die as patients given other treatments, according to the report.

Specifically, the mortality rate among patients given plasma was 13%, compared with 25% among patients given standard treatments. While that's trending in the right direction, the new analysis wasn't peer reviewed, and neither was some of the trial data the analysis looked at. What's more, only three of the 12 studies were randomized controlled trials (RCT's),

where patients are randomly assigned to receive a treatment or standard of care, which is the gold standard for assessing medical treatments.

In crunching all the numbers, you start seeing mortality benefits that appear "substantial," meaning CP patients do seem to die at significantly lower rates. However, more RCTs will be needed to nail down specific details, such as which patients benefit most from the treatment, or when the plasma should be given over the course of the infection to produce the best results.

Even if CP is proven effective one other obstacle stands in the way of its widespread use: the limited number of certified blood banks. Most hospitals across the United States are not equipped or certified to perform apheresis in-house, meaning they cannot separate plasma from red blood cells and other components in donated blood. Providing support to the certified blood banks across the nation will be crucial for the success of this therapeutic strategy.

## **More on Immunity**

Previous infections with common cold viruses can train the immune system to recognize SARS-CoV-2, the virus that causes COVID-19, according to a new study.

The study, published Aug. 4 in the journal *Science*, found that immune cells known as T cells that recognize common cold coronaviruses can also recognize specific sites on SARS-CoV-2 — including parts of the infamous “spike” protein it uses to bind to and invade human cells.

While speculative, it appears that, in some people, pre existing T- cell memory against common cold coronaviruses can cross-recognize SARS-CoV-2, down to the exact molecular structures. It's possible that this immune reactivity may translate to different degrees of protection against COVID-19. Having a strong T-cell response, or a better T-cell response may give you the opportunity to mount a much quicker and stronger response. Previous studies have shown that upwards of 50% of people never exposed to COVID-19 have T cells that recognize SARS- CoV-2. This ability has been seen in people around the world.

Some blood samples contained T cells that reacted to more than 100 specific sites on SARS-CoV-2. The researchers showed that these T cells also reacted to similar sites on four different coronaviruses that cause common cold infections. These studies provide very strong direct molecular evidence that memory T cells can recognize sequences that are very similar between common cold coronaviruses and SARS-CoV-2.

Whether further research into these findings will lead to further proteins being targeted and, besides the spike, might harness

this T cell cross reactivity to enhance the potency of an immune response from a vaccine remains to be seen.

## **Idaho Statistics**

As of August 7, Idaho has recorded a **13% increase** in just the past week in newly reported cases per 100,000 residents. Ada County continues to lead the state with 741 new cases during this period while Blaine County reported just 7 new cases this past week.

In addition, the entire state of Idaho reported a concerning **increase of 18% in reported deaths** (34) due to Covid-19 over the last week, but none were reported in our county.

Hospital/ventilator capacity remains adequate in our state hospitals, but have been increasing proportionately with the rise in cases.

These numbers demonstrate that the virus continues to transmit in our population rapidly and aggressively and that vigilance both individually and collectively as to mitigating transmission remains paramount.

Continuing current mask mandates indefinitely and strict adherence to social distancing/proper hygiene will aid Blaine County in minimizing the expected rise in cases. Any activities or decisions that will lead to altering these basic principles (i.e., eliminating mask mandates or school openings) will almost certainly exacerbate our current local rates of infection.

Remain steadfast in caring for yourselves and for others in our community with the use of face masks, social distancing and regular hand hygiene. Continue to make efforts to stay connected to each other and offer assistance to those that may not be reaching out as they should.

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