



Del Norte County	Modoc County
Glenn County	Shasta County
Humboldt County	Siskiyou County
Lake County	Tehama County
Mendocino County	Trinity County

**No more need to wait and see:**

**“COVID-19 vaccines safe and effective, while the unvaccinated are highly vulnerable to the delta variant,” declare RANCHO health officials**

July 14, 2021

As the second summer of the pandemic unfolds, our region faces unique concerns. Some of our counties have among the lowest COVID-19 vaccination rates in the state. Our region has consistently shown a lower rate of COVID-19 antibodies, meaning more residents are susceptible to the virus. In sum: we are vulnerable. We are entering a summer season that will be affected by the more contagious and more threatening delta variant. And, it is summer with tourism in full force both between counties in our region and travelers from all over the world.

A wide range of views about the virus and the pandemic itself exist in our region. The science about the COVID-19 pandemic has become much clearer over time. Despite this increase in knowledge there are some strongly held beliefs about COVID-19 that have not changed. As your regional health officials we view that as extremely concerning and would like to weigh in on some common vaccine myths. We no longer need to wait and see, because the science and the evidence are clear that these vaccines are safe, effective, and are protecting those who have been vaccinated.

**Myth #1: “I have had the virus, so I won’t get it again.”**

Reinfection is well documented. Infection with the virus creates an immune response for most people, but the response is not consistent from person to person. Some people have to get very sick to get a strong immune response, and some people have almost no symptoms when they are ill. The reality is that we cannot reliably predict who will mount a good immune response from natural infection.

Additionally, many people are assuming that they have had the virus already. But, if you did not get a confirmed test for the virus, research shows you have almost an 80% chance of not having had COVID-19 when you had COVID-like symptoms. The immune response to vaccination is much more safe, predictable, reliable, and shown to create more protective antibodies than infection alone.

***Bottom line: The COVID-19 vaccines result in high levels of protection, while immunity from past infection is unpredictable.***

**Myth #2: “Getting the vaccine is worse than getting COVID-19. Plus, I’m young and healthy.”**

The vaccine causes a sore arm in most people. Some get other minor aches or feel like they have the “flu.” These symptoms last a few days at the most and are thought to represent the reaction of our immune systems. If you are vaccinated, you might have some short-term symptoms but there is a greater chance you won’t end up in the hospital and you won’t die from the virus. With rare exceptions, our local data show that the only people getting seriously ill from COVID-19 are the unvaccinated. State and international data is even more compelling with larger numbers to study.

Though quite rare, there have been cases of inflammation of the heart (myocarditis) and/or the lining around the heart (pericarditis) with Pfizer and Moderna vaccines, mostly in young men in their late teens and twenties. Most cases have been brief and self-limited, recovering on their own or with simple treatments like anti-inflammatories, with rare cases requiring hospitalization. In comparison, COVID-19 infection can and does cause severe myocarditis and pericarditis with the most striking cases associated with MIS-C (Multisystem Inflammatory Syndrome in Children) and MIS-A (Multisystem Inflammatory Syndrome in Adults). There have been over 4000 cases of this condition reported, mostly in the 12-20 year old age group, with 1-2% resulting in death. COVID-19 can and does kill children and young adults-and COVID-19 is now ranked as the 10th leading cause of death among children in our country.

***Bottom line: COVID-19 vaccination is much safer, effective and predictable than the infection, regardless of your age.***

**Myth #3: “The vaccine is experimental - it was rushed into use.”**

The vaccines are relatively new technology, but hardly experimental. The Johnson and Johnson vaccine uses vector or “carrier” technology that has been studied and tested previously in a number of vaccines for almost 20 years, including Zika virus, influenza viruses, respiratory syncytial virus, HIV, malaria, and most recently, Ebola virus. The Pfizer and Moderna vaccines use messenger RNA technology (mRNA). The basic science around this has been studied for nearly a quarter of a century, with the biggest breakthrough discovered in 2005. The mRNA technology has been developed and studied for Zika virus, cytomegalovirus, rabies and influenza. Was production rushed – yes! Production drew on existing technology and was pre-paid so manufacturers were willing to build their facilities before knowing if the vaccine would be approved. A historic success!

***Bottom line: The science used to create COVID-19 vaccines is decades old, is not experimental, and hundreds of millions of people who’ve received the vaccine are proof it is safe and effective.***

**Myth #4: “The vaccine will make me sterile.”**

There is no data to support this. Sperm counts in males have been reported to be normal both before and after vaccination. Women have delivered healthy babies after vaccination, even becoming pregnant between doses during trials. Birth outcomes are closely monitored and to date there have been no unusual problems reported. In fact, during phase 3 studies of Pfizer’s and Moderna’s mRNA vaccines, 36 women became pregnant, half in the vaccine group and half in the placebo group with no difference in birth outcomes.

The fertility myth stems from the theory that antibodies against the coronavirus spike protein might attack proteins in placentas and sperm. This is not true. The proteins are immunologically distinct. Saying they are the same would be the equivalent of saying that two people share the same social security number because both contain the number six.

***Bottom line: COVID-19 vaccines do not reduce fertility.***

**Myth #5: “The vaccine will mess around with my DNA. Somebody is trying to rewrite our genetic code.”**

There is not even a chance that this is the case. mRNA is a temporary copy of the information encoded in DNA molecules (in the nucleus) and then sent out from the cell nucleus to the cell machinery that makes proteins. The mRNA vaccine completely bypasses the nucleus, providing a template for the cell machinery, like a blueprint on a construction project. It is a one-way process, and when the mRNA is done with its protein building work it is digested and recycled. It does not “rewrite” code in one’s DNA.

***Bottom line: COVID-19 vaccines can’t change your DNA. Their only long-lasting effect is to protect you from COVID-19 infection in the future.***

**Myth #6: “We don’t know what the long-term consequences of these vaccines are.”**

Decades of vaccine safety monitoring show that side effects generally happen within six weeks of vaccination, and long-term health problems are extremely unlikely following any vaccine, including COVID-19 vaccine. Also, “long-term” is a relative phrase. We are already well past half a year with the Pfizer and Moderna vaccines. The Johnson and Johnson vaccine can trigger a serious but extremely rare clotting problem, mostly in younger women. The Pfizer vaccine is showing a capacity to stimulate inflammation of the heart in some young persons, but this is very rare, usually resolves on its own or responds well to treatment and is clearly less than the risk of the virus itself.

By contrast, we know that persons of all ages and disease severity can develop “long COVID,” a term for ongoing symptoms months after “recovery.” Some recent studies have shown as many as 70% of hospitalized cases still complain of at least one COVID-19 symptom two months after the acute infection has cleared. As many as 10% of all COVID-19 survivors, including those who had very mild to no symptoms with their infection, develop long-haul COVID symptoms.

***Bottom line: Long-term adverse effects of the vaccine are unlikely, but we are definitely seeing long-term effects from COVID-19 infection itself, even in those who had mild to no symptoms.***

Health officials of the RANCHO region are very concerned that even as the nation seems to be pulling out of the COVID pandemic, our corner of the country has some serious hurdles that remain. The delta variant is on the rise and already has been found in our region, and the COVID-19 vaccines will protect our communities against this variant. And by getting vaccinated, you can help protect our children who are too young to be vaccinated as well as community members who are immunocompromised. The truth for the foreseeable future is that almost all cases with any severe consequence at any age will happen to those who aren’t fully vaccinated. Vaccine is safe, effective, free and widely available, so we hope those holding out will reconsider, and do so as soon as possible. The time to wait and see has passed. It is time to get your COVID-19 vaccine.