

Moderna may be superior to Pfizer against Delta

The following is a roundup of some of the latest scientific studies on the novel coronavirus and efforts to find treatments and vaccines for Covid-19.

The mRNA vaccine from Pfizer and BioNTech may be less effective than Moderna's against the delta variant of the coronavirus, according to two reports posted on medRxiv on Sunday ahead of peer review. In a study of more than 50,000 patients in the Mayo Clinic Health System, researchers found the effectiveness of Moderna's vaccine against infection had dropped to 76% in July - when the delta variant was predominant - from 86% in early 2021. Over the same period, the effectiveness of the Pfizer/BioNTech vaccine had fallen to 42% from 76%, researchers said. While both vaccines remain effective at preventing Covid hospitalization, a Moderna booster shot may be necessary soon for anyone who got the Pfizer or Moderna vaccines earlier this year, said Dr. Venky Soundararajan of Massachusetts data



analytics company nference, who led the Mayo study.

In a separate study, elderly nursing home residents in Ontario produced stronger immune responses - especially to worrisome variants - after the Moderna vaccine than after the Pfizer/BioNTech vaccine. The elderly may need higher vaccine doses, boosters, and other preventative measures, said Anne-Claude Gingras of the Lunenfeld-Tanenbaum Research Institute in Toronto, who led the Canadian study. When asked to comment on both research reports, a Pfizer

spokesperson said, "We continue to believe... a third dose booster may be needed within 6 to 12 months after full vaccination to maintain the highest levels of protection."

People who received their second dose of the Pfizer/BioNTech vaccine five or more months ago are more likely to test positive for Covid-19 than people who were fully vaccinated less than five months ago, new data suggest. Researchers studied nearly 34,000 fully vaccinated adults in Israel who were tested to see if they had a breakthrough case of Covid-19. Overall, 1.8% tested positive. At all ages, the odds of testing positive were higher when the last vaccine dose was received at least 146 days earlier, the research team reported Thursday on medRxiv ahead of peer review. Among patients older than 60, the odds of a positive test were almost three times higher when at least 146 days had passed since the second dose. Most of the new infections were observed recently, said

coauthor Dr. Eugene Merzon of Leumit Health Services in Israel. "Very few patients had required hospitalization, and it is too early to assess the severity of these new infections in terms of hospital admission, need for mechanical ventilation or mortality," he added. "We are planning to continue our research."

The sacs in the ovaries where eggs are stored are not harmed by Covid-19 antibodies, whether those antibodies are the result of infection or vaccination, a small study suggests. Israeli researchers analyzed fluid from ovarian sacs, or follicles, from 32 women who were having their eggs retrieved to be fertilized by sperm in a test tube.

Fourteen women had not been vaccinated against the coronavirus nor infected with it. The others had either recovered from Covid-19 or received the Pfizer/BioNTech mRNA vaccine, and in these two groups the researchers saw antibodies against the virus in follicle fluid. (CNBC)