

COVID-19



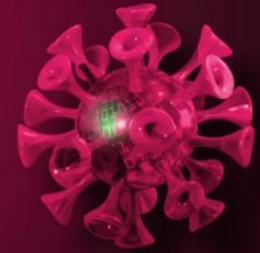
BA.4 and BA.5

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**BA.4
and
BA.5**



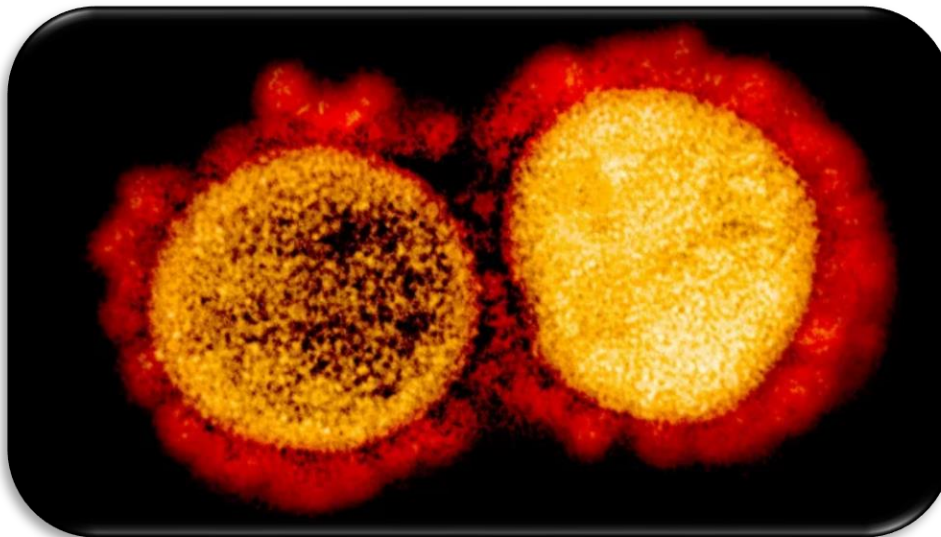
OMICRON BA.4
OMICRON BA.5



BA.4 and BA.5

What is a subvariant?

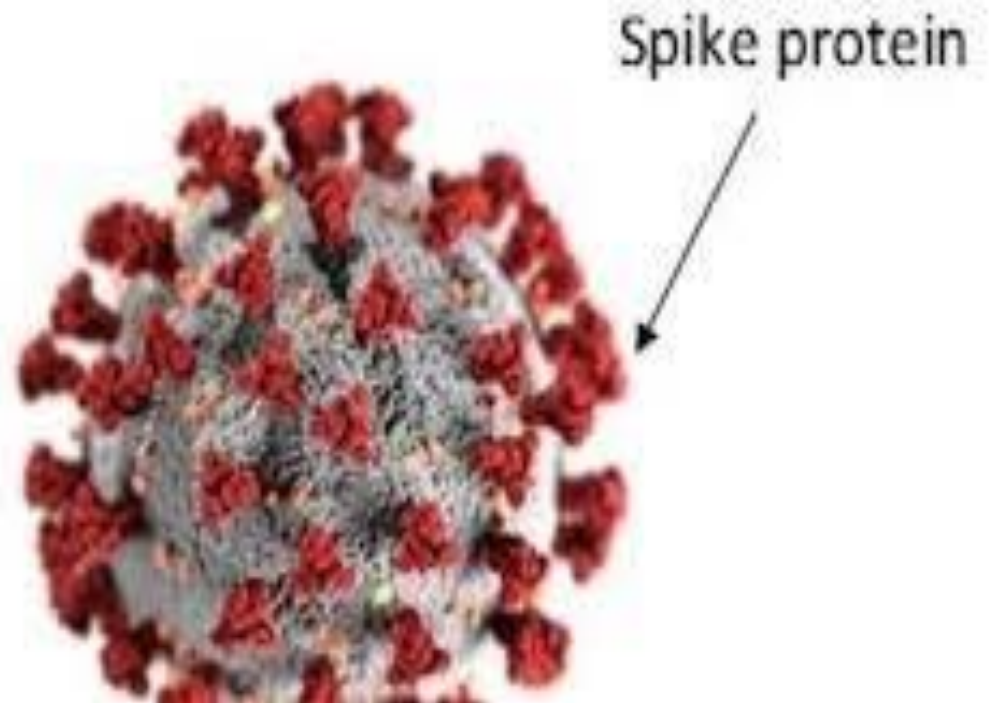
- Because Omicron was contagious than previous COVID variants, it quickly spread worldwide and throughout King County.
- Because Omicron spread and reproduced so much, it had the opportunity to get specific mutations of its own.
- These mutations have not been significant enough to meet the definition of a new variant, however, they have had some slightly different properties.
- For this reason, they have been referred to as “subvariants”.



BA.4 and BA.5

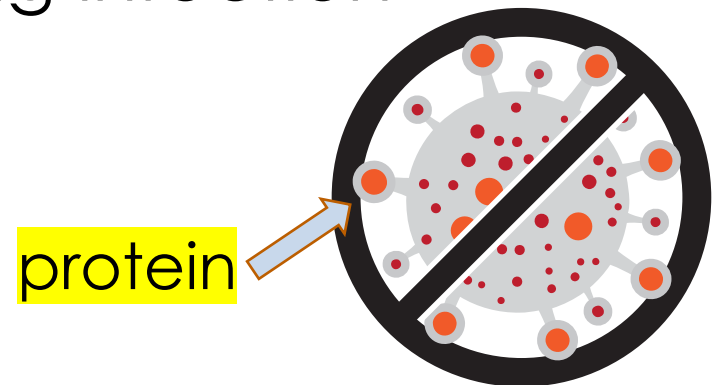
- BA.4 and BA.5 is increasing within King County, across Washington State and the Country.
- BA.4 and BA.5 are both highly contagious subvariants of Omicron.
- Key mutations in these subvariants allow them to better infect cells and cause disease.
- This is because they carry their own unique mutations in the viral spike protein that might weaken its ability to latch onto host cells and avoid some immune responses.
- The Centers for Disease Control and Prevention (CDC) announced that BA.4 and BA.5 have, together, make up most of the new cases of COVID.

REMINDER



HOW DO THE COVID-19 VACCINES WORK?

- The COVID vaccines teach our bodies to make a protein that looks just like the one found on the surface of the COVID virus.
- The body learns to identify that protein so that if COVID-19 virus enters the body, the body immediately starts producing infection-fighting antibodies.



HOW DO THE COVID-19 VACCINES WORK?

- The vaccines produce a harmless spike protein that mimics (or imitates) the one that is on the surface of the virus that causes COVID-19.
- Our cells display the spike protein piece on their surface.
- Our immune system recognizes that the protein does not belong there. This triggers our immune system to produce antibodies and activate other immune cells to fight off what it thinks is an infection.
- At the end of the process, our bodies have learned how to help protect against future infection with the virus that causes COVID-19.
- The benefit is that people get this protection from a vaccine, without ever having to risk the potentially serious consequences of getting sick with COVID-19.

BA.4 and BA.5

- BA.4 and BA.5 are more infectious than previous COVID variants and Omicron subvariants, and are better able at bypassing immunity and antibodies from vaccines and previous infections.
- Vaccines are also naturally getting less effective when people are not getting their boosters on time.
- These two items may explain why these subvariants have been able to spread quickly and are so contagious.
- There is not information or evidence, yet, that they cause more severe disease.
- Therefore, even vaccinated and boosted people vulnerable to multiple Omicron infections and reinfection.

BA.4 and BA.5

- Lab studies consistently suggest that antibodies triggered by vaccination are less effective at blocking BA.4 and BA.5 than they are at blocking earlier Omicron strains, including BA.1 and BA.2.
- That may explain why these subvariants have spread even faster than others in the Omicron family.
- Also, the natural waning of vaccine protection against infection over time, along with the immune evasiveness of BA.4 and BA.5, might explain why these subvariants have been able to spread quickly.
- There is not information or evidence, yet, that they cause more severe disease. But they can cause more infection since they are so contagious.
- Therefore, even vaccinated and boosted people vulnerable to multiple Omicron infections and reinfection.



For more information about COVID-19:

kingcounty.gov/covid

Public Health 
Seattle & King County