

# CDC: mRNA COVID-19 vaccines preferred as best protection against serious infection, death

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The omicron variant currently represents 3–13% of new COVID-19 infections in the U.S., and it appears to be much more contagious than

the Delta variant. COVID-19 vaccination is more important than ever. The American Heart Association continues to align with expert guidance from the U.S. Centers for Disease Control and Prevention (CDC), the nation's infectious disease experts, regarding COVID-19 vaccines and boosters.

Last Thursday, the CDC recommended the mRNA COVID-19 vaccines as the preferred vaccines for most adults. The two-dose mRNA vaccines, produced by Pfizer-BioNTech or Moderna, are preferred rather than the single-dose, adenovirus-vector [vaccine](#) from Johnson & Johnson (Janssen). The new recommendation is in response to recent data indicating an increased risk of a rare condition called thrombosis with thrombocytopenia syndrome (TTS; also known as vaccine induced thrombocytopenia with thrombosis, or VITT) after receiving the Johnson & Johnson COVID-19 vaccine.

TTS is the combination of low blood platelet count (thrombocytopenia) and thrombosis. One type of thrombosis associated with TTS is cerebral venous sinus thrombosis (CVST), which refers to blood clots in the brain's veins—not in the arteries, as is the case for most strokes. CVST is a rare but serious type of stroke caused by a blood clot in a part of the brain known as the venous sinus, involving veins that carry blood away from the brain. CVST clot symptoms are very similar to several other neurological conditions, and the symptoms may include:

- severe headache;
- blurry vision;
- fainting or loss of consciousness;
- weakness;
- sensory changes;
- confusion or trouble speaking;
- nausea and vomiting; or
- seizures.

CVST occurs in the veins of the brain. In addition to CVST, other types of thrombosis associated with TTS include clotting in the veins of the legs (deep vein thrombosis or DVT), lungs (pulmonary embolism or PE), and abdomen. Symptoms associated with these other types of [thrombosis](#) include abdominal pain, leg pain, difficulty breathing or shortness of breath.

Among the TTS cases reported in the U.S., the most [common symptoms](#) were severe headaches; vomiting; back pain; fatigue; weakness or the inability to move one side of the body (hemiparesis); inability to speak or understand speech (aphasia); loss of consciousness; and abdominal pain.

Cases of TTS occurred several days after being vaccinated with the one-dose Johnson & Johnson COVID-19 vaccine. From March 2 through August 31, 2021, there were 54 cases of hospitalized patients with TTS in the U.S., out of 14.1 million doses of the Johnson & Johnson vaccine administered, representing a case rate of 3.8 cases per million doses. The 54 documented cases of TTS were adults ages 28–62, the majority of whom were women (37 women vs. 17 men). There are no reports to-date of TTS after receiving the Johnson & Johnson vaccine as a booster dose.

"The CDC's latest data indicate that TTS is a rare, yet serious, possible side effect after receiving the Johnson & Johnson COVID-19 vaccine. Individuals who receive the Johnson & Johnson COVID-19 vaccine should be monitored for symptoms of TTS and seek immediate treatment," said American Heart Association volunteer expert and co-author of the Association's April 2021 special report on TTS, Mary Cushman, M.D., M.Sc., professor of medicine and co-director of the Vermont Center for Cardiovascular and Brain Health at University of Vermont's Larner College of Medicine in Burlington, Vermont. The Association's special report, [Diagnosis and Management of Cerebral Venous Sinus Thrombosis with Vaccine-Induced Immune Thrombotic](#)

[Thrombocytopenia](#), provides important guidance about TTS—the signs and symptoms and the best treatment options.

The American Heart Association/American Stroke Association, a global force for longer, healthier lives for all, affirms the CDC's guidance on COVID-19 vaccines and boosters. The Association remains concerned about the continuing gaps in COVID-19 vaccination among people from all eligible age groups in the U.S., including people from diverse racial and ethnic groups and pregnant people, particularly given the new omicron variant. The Association continues to recommend all adults and children ages 5 and older in the U.S. to receive the COVID-19 vaccine as soon as they are eligible, as recommended by the CDC and fully approved or authorized for emergency use by the FDA.

Provided by American Heart Association

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