

☰ Topic Page: [Tornadoes](#)

Definition: **tornado** from *Philip's Encyclopedia*

Funnel-shaped, violently rotating storm extending downwards from the cumulonimbus cloud in which it forms. At the ground its diameter may be only c.100m (300ft). Rotational wind speeds range from 150 to 500km/h (100 to 300mph). Tornadoes occur in deep low pressure areas. They are most frequent in the Midwest and the S USA, where the names 'cyclone' or the informal 'twister' are also used..



Image from: [A waterspout occurs when a tornado passes over... in Guide to Global Hazards](#)

Summary Article: **tornado**

From *The Columbia Encyclopedia*

dark, funnel-shaped cloud containing violently rotating air that develops below a heavy cumulonimbus cloud mass and extends toward the earth. The funnel twists about, rises and falls, and where it reaches the earth causes great destruction. The diameter of a tornado varies from a few feet to a mile; the rotating winds may attain velocities of 200 to 300 mi (320–480 km) per hr, and the updraft at the center may reach 200 mi per hr. The Enhanced Fujita scale is the standard scale for rating the severity of a tornado as measured by the damage it causes. A tornado is usually accompanied by thunder, lightning, heavy rain, and a loud “freight train” noise.

In comparison with a cyclone or hurricane, a tornado covers a much smaller area but can be very violent and destructive. Under the right conditions, however, a large storm system can produce multiple (more than a hundred in rare cases) and longer-lasting tornadoes over a wide area, leading to widespread damage. The atmospheric conditions typically required for the formation of a tornado include great thermal instability, high humidity, and the convergence of warm, moist air at low levels with cooler, drier air aloft. Wind shear at the back of large thunderstorm can create horizontally spinning vortices that are pulled into the stormcloud by updrafts to form a mesocyclone, a rotating, upward-flowing columnar air mass; a tornado may form from the base of an intense mesocyclone.

Although tornadoes have occurred on every continent except Antarctica, they are most common in the continental United States, where tornadoes typically form over the central and southern plains, the Ohio valley, and the Gulf states. The area where the most violent storms commonly occur in the United States is known as Tornado Alley, which is usually understood to encompass the plains from N central Texas north to the Dakotas, with the peak frequency historically located in Oklahoma. Tornadoes are also common in the South from Louisiana and Arkansas east to Georgia, an area sometimes called Dixie Alley, where they may be more destructive and deadly due to greater population density. A tornado typically travels in a northeasterly direction with a speed of 20 to 40 mi (32–64 km) per hr, but tornadoes have been reported to move in a variety of directions and as fast as 73 mi (117 km) per hr—or to hover in one place. The length of a tornado's path along the ground varies from less than one mile to several hundred. Tornadoes occurring over water are called waterspouts.

See J. Verkaik; A. Verkaik, *Under the Whirlwind: Everything You Need to Know about Tornadoes but Didn't Know Who to Ask* (1998);

Bluestein, H. B. , *Tornado Alley: Monster Storms of the Great Plains* (1999).

APA

Chicago

Harvard

MLA

tornado. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from <https://search.credoreference.com/content/topic/tornadoes>



The Columbia Encyclopedia, © Columbia University Press 2018



The Columbia Encyclopedia, © Columbia University Press 2018

APA

tornado. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from <https://search.credoreference.com/content/topic/tornadoes>

Chicago

"tornado." In *The Columbia Encyclopedia*, by Paul Lagasse, and Columbia University. 8th ed. Columbia University Press, 2018. <https://search.credoreference.com/content/topic/tornadoes>

Harvard

tornado. (2018). In P. Lagasse & Columbia University, *The Columbia encyclopedia*. (8th ed.). [Online]. New York: Columbia University Press. Available from: <https://search.credoreference.com/content/topic/tornadoes> [Accessed 21 November 2019].

MLA

"tornado." *The Columbia Encyclopedia*, Paul Lagasse, and Columbia University, Columbia University Press, 8th edition, 2018. *Credo Reference*, <https://search.credoreference.com/content/topic/tornadoes>. Accessed 21 Nov. 2019.