

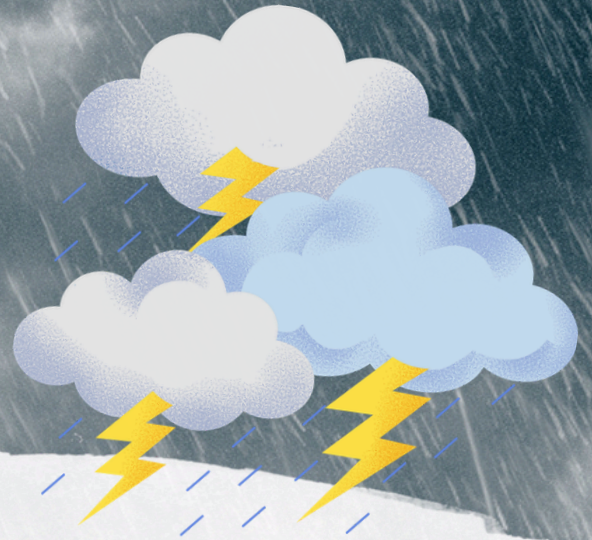


**Safe from a
Tornado!**

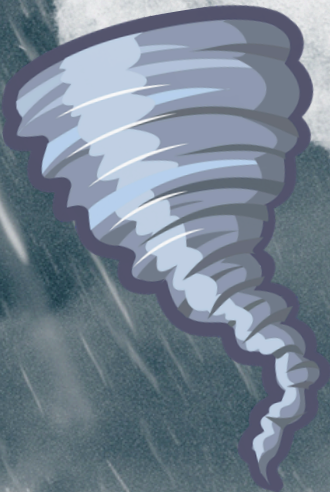
**...But Not a Flesh-
eating Fungus.**

by Penelope Sewnarine





Imagine living through one of the deadliest tornadoes ever recorded. Winds of 200 mph, 1,150 injured, 161 deaths estimated. Only a couple wounds, some scratches, maybe a fracture or slight blunt trauma. Feeling pretty lucky, eh? Well, think again, because now you have to live with a flesh-eating fungus. Not feeling so lucky anymore, right?





Joplin's Turbulent Tornado



In 2011, an EF-5 tornado reaching nearly 1 mile in width carved a 21.6 mile path straight through the city of Joplin in Missouri. As a result, buildings, homes, and neighborhoods were completely devastated, leaving nothing but debris. Businesses like Walmart Supercenters and Pizza Hut were wrecked. Joplin Highschool and St. Johns Regional Medical Center were damaged beyond repair, calling for demolition. Consequently, the cost to repair the city was estimated to be around \$2.8 billion, making the most costly tornadoes in recent history.

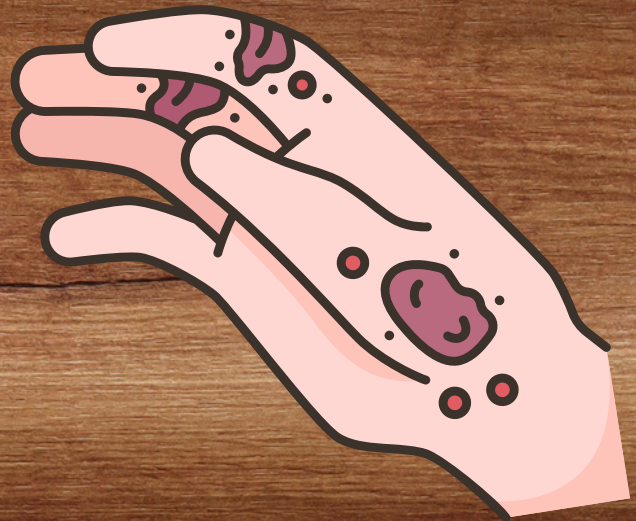
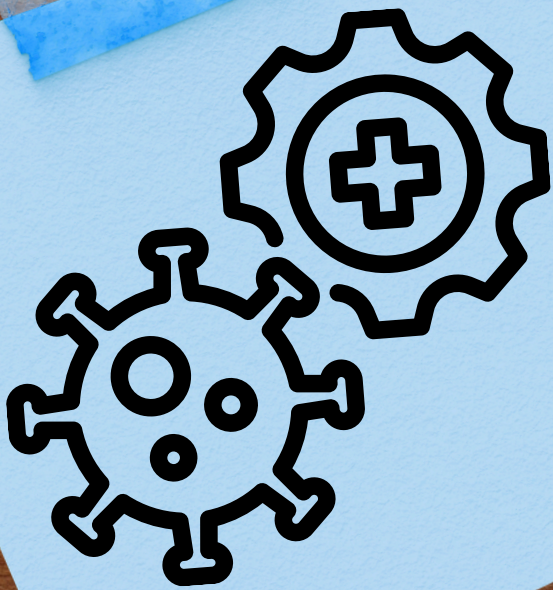


A Tornado Creating a Deadly Threat?

Not only did the tornado devastate the entire area of Joplin and neighboring towns, it uprooted a rare and deadly fungal disease, suspected to be cutaneous necrotizing mucormycosis– a disease causing skin cells to turn black when dead. According to the CDC, a total of 18 suspected case patients with this fungal disease were identified in the Joplin area, 5 of whom died while doctors tried their best to identify the fungus.



You may be wondering — How could a tornado achieve such a thing? With its forceful winds, Joplin's tornado dug up the fungi from underground, swirling around its spores from its twisting center alongside debris picked up by the destruction it caused. After the tornado passed, several survivors of the tragedy began facing serious fungal infections on the skin. However, the infection spread internally, making it an even bigger concern.



The flesh eating fungus responsible for this is known as *Apophysomyces trapeziformis*, commonly found in soils deep underground and decaying vegetation. It typically grows in tropical to subtropical regions, thriving in iron-rich, acidic environments. Cases linked to this infection are relatively low, with roughly 1,500 cases detected worldwide. Normally, this fungus is harmless with nothing to fear.



***The fungus
in question!***

However, when spores directly enter the bloodstream — it can be deadly. Victims of the Joplin devastation who were deeply wounded had traces of splinters and other foreign bodies documented, allowing fungi in the bloodstream. It traveled throughout different body systems, infecting, necrotizing, and damaging tissues. In the long term, having soft tissue injuries can cause nerve damage, tissue damage, and chronic inflammation.

Steven Weersing, only 16 years old at the time of being sucked into the tornado along with his friends, miraculously survived this flesh-eating danger. With only a 5% survival rate and the support of family and friends, Weersing beat the odds of mortality. He spent four months in the hospital, having to remove his right nipple, a few ribs, and parts of his liver, lungs, and heart. Nevertheless, he persevered throughout it all.





Although this fungus is normally found in the Missouri area, and harmless when in contact with light scratches, the tornado changed the lives of many. The survival of the tornado was just the first part. For people like Steven, the real terror began with the fungal infection. If you want to know more about fungal diseases, check out the [CDC website](#) for more information!

