

Rapid Lesson Sharing

Event Type: Bee/Wasp Sting Allergic Reaction

Date: September 23, 2025

Location: Buffalo Timber Sale, Northern Hills Ranger District, Black Hills National Forest

Note from the Wildland Fire Lessons Learned Center

While this incident did not occur in a wildland fire context, its story and lessons are applicable to wildland firefighters who regularly operate in and around bee/wasp potential hazards.

The Story and Lessons from this Bee/Wasp Sting Allergic Reaction Incident

On September 23, 2025, at approximately 1315 hours, an engineering technician for the North Zone of the Black Hills National Forest was conducting road suitability reconnaissance for an upcoming timber sale. Because this road is closed to routine motorized use, the employee elected to use an ATV to travel the route.

Operating the ATV approximately one-half mile from his vehicle, he came to a downed log across the road. As he was navigating the ATV over the log, he disturbed a ground nest of wasps. With one axle of the ATV over the log, he dismounted and moved away from the ATV to avoid being stung. However, one wasp did manage to sting him on his left hand.

The employee, who has a known sensitivity to bee/wasp stings, was anxiously trying to get the ATV back over the log and depart the area—but was delayed by the presence of wasps near the handlebar area. Eventually, he was able to free the ATV and returned to his vehicle. At the time of the sting, his autoinjector epinephrine pens were in the vehicle.

By the time he returned to the vehicle, the employee noticed the common signs and symptoms of his allergy to stings. His respiratory effort became labored with wheezing. His heart rate had increased and there was swelling of his left hand. He was calm and alert enough to inject his EpiPen and take an antihistamine, which seemed to ease symptoms. Time from the sting to injection was approximately 15 minutes.

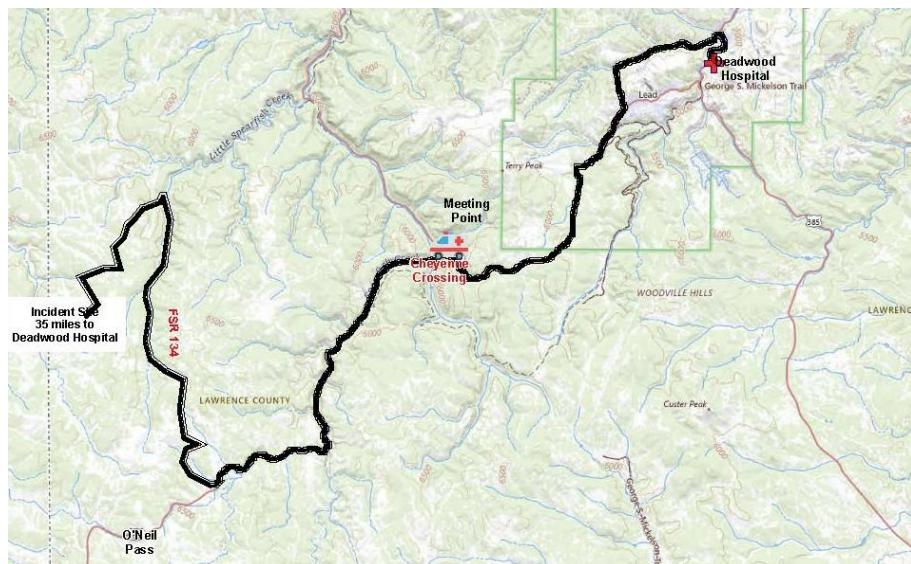


Figure 1.—Map shows where the wasp sting occurred, where the ambulance responded to and met the patient, and the distance to the hospital.

As the employee was departing the area in his vehicle, he became lightheaded and very anxious. He was approximately 20 to 30 miles from the nearest hospital. At around 1400 hours, he attempted to radio the local Forest Dispatch Center for assistance but was unable to contact them.

The Zone's Fire Management Officer (ZFMO) happened to be in the area and was able to hear the initial call for assistance and was immediately concerned regarding the employee's anxious tone over the radio.

The ZFMO contacted the injured employee to help. After hearing what happened, the ZFMO directed the local ranger district office to request an ambulance to meet the injured employee at Cheyenne Crossing, a well-known highway intersection. The employee was able to pull his vehicle into a pullout at this intersection and wait.

Approximately 20 minutes after the initial contact, a local agency Wildland Fire Module (WFM), the ZFMO, and the Forest Risk Management Specialist (RMS) were all able to meet the injured engineer at Cheyenne Crossing and wait with him for the ambulance. The patient was alert and oriented, but anxious with a shortness of breath.

Paramedics arrived just after 1420 hours and administered medication on-site prior to transport. At this point, it was determined that the WFM would drive the patient's work vehicle back to his duty station and the Risk Management Specialist would accompany the patient and assist with hospital liaison duties.

Lessons

Considerations

What do you take with you on a quick field trip away from your vehicle?

The injured employee was quick to note the mistake of not carrying his EpiPens with him. However, when we plan a quick trip from a vehicle, what other crucial items do we leave behind? Have you ever just wanted to see what was around the next corner or on top of a ridge—leaving your phone, handheld radio, PPE items, water in the vehicle. Next, instead of being away from your vehicle for three minutes, it turns into 30 minutes?

Consider a small daypack that carries these essentials and make sure to throw it on when leaving a vehicle.

PPE

At the time of the sting, the employee was traveling the route with a distance meter on his ATV. Checking his distance meter and taking frequent notes, the employee elected not to wear leather gloves—a required PPE element as directed in the District's ATV risk assessment. Would the gloves have prevented a sting?

Efficiency and safety may not always be on a correlational path. Resist the temptation to loosen safety standards in the name of efficiency, especially when operating solo in the field.

EpiPens Expired

The employee discovered the autoinjector pen he had used was expired. Many of us have heard the term "normalization of deviance." The employee has a daily presence in the field at work and is an avid hunter. He has not had an issue with bee stings for several years, despite the near constant exposure to the possibility of nest encounters. Even though he recognizes the seriousness of his sensitivity to bee stings, he still forgot to check expiration dates on his prescribed medication.

One way to counter this issue is to immediately include an e-reminder in your phone or laptop for a specified time. In this case, one year to check status of medications. Most medical facilities have a patient portal that may also be able to send reminders for medication that needs to be refilled. Other considerations for medications that are not consistently used, like EpiPens, are to consider how they are stored. Can direct sunlight, heat, or cold shorten the longevity of a drug's effectiveness, despite the expiration date on the label?

The employee was surprised his symptoms were not alleviated with the initial dose of epinephrine. Of course, this may be because the pen was expired and/or the delay in injection from the onset of symptoms. Another possibility is the secondary reaction and the recurrence of anaphylactic symptoms—even after a proper injection with an effective dose of epinephrine.

If an employee requires the use of an EpiPen due to bee sting, it is recommended that they see a clinician, even if the symptoms alleviate. This is also an important consideration for folks monitoring a bee sting victim—the awareness that symptoms can return.

Allow the physician to examine the employee to assess the need for further treatment. Be familiar with employees who have allergies and their prescribed medication for these allergies. Do they have a second pen if needed and where is it? Have a training session in which the effected employee discusses when a dose is required, when a second dose may be required, and demonstrates how to assist with injection.

This RLS was submitted by:

Brian Rafferty

Forest Fire Operations Risk Management
Specialist
Black Hills National Forest

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