

Food Safety: a Serious Public Health Concern

Botulism

Botulism is a rare illness caused by nerve toxins released from the *Clostridium botulinum* bacteria. Classic symptoms include double or blurred vision, droopy eyelids, slurred speech, difficulty swallowing, dry mouth, and muscle weakness. If not treated quickly, paralysis can lead to respiratory failure. Foodborne botulism is spread through ingesting contaminated food or drink that were not properly processed or stored. The botulinum toxin is odorless and colorless, so it is not possible to tell if a product is contaminated just by looking at it. Symptoms generally begin 18 to 36 hours after eating the contaminated product but can occur as early as 6 hours or as late as 10 days afterwards. Although botulism is fatal in about 5 percent of cases, it can be treated with antitoxin and supportive care, but often requires prolonged stays in an intensive care unit.

Botulism cases are reported to the California Department of Public Health (CDPH) so that appropriate action can be taken to protect public health. For botulism and other foodborne diseases, CDPH and local public health departments receive case reports, conduct investigations to determine possible sources of exposure, test laboratory specimens to identify and link foodborne illnesses, take action to ensure food items that pose a risk are no longer available, provide information to the public about how to prevent disease, and publish data about overall disease trends and risks. From mid-April through May 16, 2017, ten patients with confirmed or suspect botulism were reported to CDPH from four different counties. All ten patients have been hospitalized and one patient has died. CDPH conducted an exhaustive epidemiologic investigation, including testing conducted by the CDPH Viral and Rickettsial Disease Laboratory (VRDL), that identified nacho cheese sauce sold at a gas station in Sacramento County as the likely source of the outbreak. The cheese sauce sold at the gas station tested positive for the botulinum toxin type A, which is the same toxin type identified in the 10 patients. State and local public health officials removed the nacho cheese sauce from sale at the gas station on May 5. The gas station is no longer selling prepared food. CDPH believes there is no continuing risk to the public.

To protect patient privacy, CDPH is not sharing information about the patients affected in this botulism outbreak, their conditions, or the four counties that have reported cases. CDPH and local health departments have notified health care providers statewide to be aware of the symptoms of botulism. Steps that help prevent many types of foodborne illnesses include: (1) cooking foods to the right temperature; (2) washing hands and surfaces often; (3) refrigerating foods properly; and (4) separating raw meats from other foods.

Norovirus

As of May 22, 2017, over 2,500 gastrointestinal illnesses (vomiting and diarrhea), likely due to norovirus, have been reported among students and staff of >50 Yolo County schools. Norovirus can be very easily transmitted by fecally contaminated food or water, person-to-person contact, aerosolization of vomited virus, and contact with contaminated surfaces. Most norovirus illnesses are not diagnosed by a healthcare provider and resolve with only symptomatic care.

The Centers for Disease Control and Prevention (CDC) estimates that there are between 19-21 million cases of norovirus illness each year in the U.S. resulting in 56,000-71,000 hospitalizations and 570-800 deaths. CDPH does not have data on the exact number of cases in the state because individual norovirus cases are not required to be reported. Nevertheless, CDPH monitors overall norovirus activity by tracking laboratory reported outbreaks. Norovirus activity is seasonal with a usual peak in the wintertime but can continue through spring. The current number of outbreaks

is consistent with the normal seasonal peak of norovirus disease, albeit later in the year than usual. Outbreaks occurring in settings where many people are in close contact for many hours, such as schools and nursing homes, often result in very large numbers of cases.

CDPH has been providing consultation and laboratory testing to Yolo County Health and Human Services Agency for its investigations.. Illness onsets started in late April; however, there has been a marked increase in daily reports of gastrointestinal illness since May 1. Norovirus has been detected in some specimens which have been sent to CDPH's VRDL for genetic sequencing. Other California counties have also reported outbreaks of gastrointestinal illness, potentially due to norovirus, at multiple schools in their jurisdictions including Sacramento, Santa Clara, Stanislaus, and Ventura counties.

CDPH continues to provide guidance and laboratory testing to local health departments responding to norovirus in their communities and assistance with counties' investigation and prevention efforts.