

IN THIS ISSUE: FOOD SAFETY AT HOME

### Mitigating Foodborne Illness Risk Factors at Home

#### Introduction

The Food and Drug Administration (FDA) recognizes five major foodborne illness risk factors that contribute to most foodborne illness outbreaks in retail food establishments, they are:

- Improper holding temperatures
- Inadequate cooking
- Poor personal hygiene
- Contaminated equipment
- Food from unsafe sources

The Washoe County Health District (WCHD) focuses our retail food establishment inspections on mitigating these risk factors, as well as educating food establishment operators on how and why to avoid each of the risk factors. There is always a risk for foodborne illness, however, during the holiday season this risk increases due to large gatherings with shared foods. WCHD recommends being cognizant of the risk factors when cooking at home and being proactive to prevent foodborne illness from improper food handling at home.

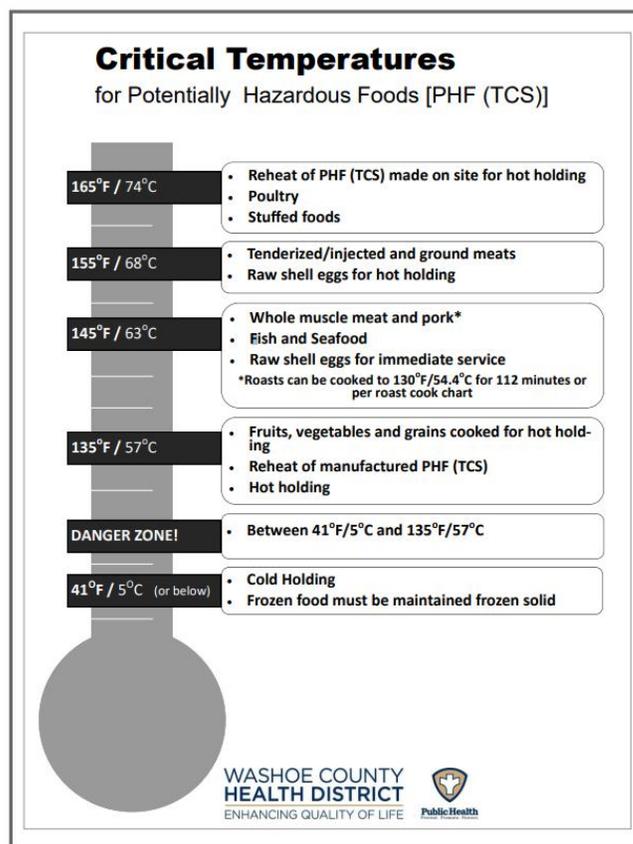
#### Epidemiology

The Centers for Disease Control and Prevention estimates that 1 in 6 Americans (48 million) get sick from foodborne illness each year.<sup>1</sup> November and December see a rise in *C. perfringens* cases that have been associated with foods such as meat, poultry and temperature-abused foods.<sup>2</sup> In 2016, a review of data from the United States' Foodborne Disease Outbreak Surveillance System from 1998 to 2012 revealed that one-third of all outbreaks associated with poultry were linked to toxin-producing pathogens, most commonly *C. perfringens*, *S. aureus*, and *B. cereus*.<sup>3</sup> These toxins are formed as a result of temperature abuse (i.e. improper cooling times, improper hot or cold holding temperatures).

In the time period between January 1 and November 15, 2021, WCHD Environmental Health Services Division received 182 referrals from the WCHD Epidemiology Program of confirmed and probable (meeting CDC case definition) cases of enteric diseases. The most reported enteric disease agents in Washoe County are the non-toxin producing

pathogens *Campylobacter* and *Salmonella*, both of which are most commonly associated with raw or under-cooked poultry but can also be found in unpasteurized milk. The prevalence of these two pathogens seen in our region is consistent with what is seen in all developed countries. *Salmonella* and *Campylobacter* are the two leading bacterial agents of foodborne diarrheal illness in the US.<sup>4</sup>

Figure 1: Critical Temperatures for Time/Temperature Control for Safety Foods



Source: [https://www.washoecounty.gov/health/files/ehs/food-protection-services/Resource-Library/Critical\\_Temperatures\\_for\\_PHF.pdf](https://www.washoecounty.gov/health/files/ehs/food-protection-services/Resource-Library/Critical_Temperatures_for_PHF.pdf)

#### Prevention

To help prevent foodborne illness at home, WCHD recommends:

- Ensuring raw animal foods are **cooked to the proper temperature** as measured with a calibrated thermometer at the thickest part of the food.

- **Preventing cross-contamination:** Do **not** wash poultry. Do wash hands and disinfect workspace after handling raw animal foods.
- **Ensuring leftovers are cooled quickly:** (135°F to 70°F in 2 hours, and 70°F to 41°F in additional 4 hours). If foods are left out of the temperature ranges too long, there is greater risk of toxin production from spore-forming bacteria.
- **Do not leave foods out of safe temperature control for more than 4 hours:** Keep cold foods at ≤41°F, and keep hot foods at ≥135°F.

## Diagnosis & Testing

WCHD strongly recommends and encourages diagnostic testing, especially stool sampling, when patients present with symptoms of gastrointestinal illness. Determining the etiology of the illness increases the likelihood of identifying outbreaks and their sources.

## Reporting

The list of reportable communicable diseases and reporting forms can be found at:

<http://tinyurl.com/WashoeDiseaseReporting>

**Report communicable diseases to the Washoe County Health District. To report a communicable disease, please call 775-328-2447 or fax your report to the WCHD at 775-328-3764.**

## Acknowledgement

Thank you to all health care providers, infection control practitioners, laboratory staff, as well as schools and daycares for their reporting and collaboration to make this work possible.

## References

- 1 Centers for Disease Control and Prevention. Estimates of Foodborne Illness in the United States. Accessed November 2021  
<https://www.cdc.gov/foodborneburden/2011-foodborne-estimates.html>
- 2 Centers for Disease Control and Prevention. Food Safety Tips for Your Holiday Turkey. Accessed November 2021  
<https://www.cdc.gov/foodsafety/communication/holiday-turkey.html>
- 3 Cambridge.org. Poultry: the most common food in outbreaks with known pathogens, United States, 1998-2012. Accessed November 2021  
<https://www.cambridge.org/core/journals/epidemiology-and-infection/article/poultry-the-most-common-food-in-outbreaks-with-known-pathogens-united-states-19982012/D7CEE066E5FE4C970C64063C348AF299>
- 4 antimicrobe.org. Campylobacter species. Accessed November 2021  
<http://www.antimicrobe.org/b91.asp>