

Tale of the Two Temperature Danger Zones

Foodservice and Food Retail Temperature Danger Zone

Federal and Georgia state foodservice regulations require that the temperature danger zone (TDZ) of 41°F - 135°F be observed for foods that require temperature and time control for safety (TCS). In addition, foods should spend no more than 4 hours in the TDZ, cumulative from receiving through preparation, service, etc. However, foods that require being cooked to a minimum internal temperature to be considered safe for consumption can have the clock "start over" after that cooking. (E.g., after chicken is cooked to its minimum safe internal temperature, there can then be the 4-hour rule implemented again.) There are other more specific guidelines related to time in the TDZ if all rules about holding food without temperature control are followed for either hot or cold foods.

Consumer Education Temperature Danger Zone

Due to the fact there is less control and oversight provided for consumer food handling in the home, leading agencies and organizations in consumer food safety use different temperature danger zone (TDZ) endpoints and time allowance. The consumer food safety TDZ is taught as 40°F - 140°F. These endpoints provide a little greater margin of safety than the regulatory foodservice TDZ. (In fact, the lower growth limit for some pathogens is right around the 40°F cutoff; others will survive below 40°F and *Listeria monocytogenes* will even grow below 40°F although very slowly.) USDA even uses these guidelines in their recommendations for safe food handling in un-regulated group foodservice situations, such as for churches and civic groups. In addition, consumers are advised to limit the time perishable food spends in the TDZ to 2 hours. And, if it is over 90°F, to limit the time in the TDZ to no more than 1 hour.

Key References/Resources:

FDA Food Code:

<https://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm595139.htm>

GA Rules and Regulations for Food Service:

<https://dph.georgia.gov/food-service-rules-and-documents>

Types of food thermometers and how to use them:

FSIS-USDA factsheet, [Kitchen Thermometers](#)

Fight BAC!® Consumer Education Campaign:

<http://www.fightbac.org/food-safety-basics/the-core-four-practices/>

USDA Consumer Education:

https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/danger-zone-40-f-140-f/CT_Index

https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/safe-food-handling/basics-for-handling-food-safety/ct_index

USDA Cooking for Groups, A Volunteer's Guide to Food Safety:

https://www.fsis.usda.gov/wps/wcm/connect/82770ed6-4ec5-4075-9b09-4a24bef24af6/Cooking_for_Groups.pdf?MOD=AJPERES

FDA Consumer Education:

<https://www.fda.gov/Food/FoodborneIllnessContaminants/BuyStoreServeSafeFood/ucm328131.htm>

Written by: Elizabeth L. Andress, Ph.D., Professor, Foods and Nutrition, and Susan L. Culpepper, CEC and Extension FACS Agent, Douglas County, University of Georgia. 4/16/2018

The University of Georgia is committed to principles of equal opportunity and affirmative action.



UNIVERSITY OF
GEORGIA
EXTENSION