CODEX ALIMENTARIUS COMMISSION





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Opening CRD7

JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FOOD HYGIENE

Forty-eighth Session

Los Angeles, California, United States of America, 7 - 11 November 2016

SAFE FOOD FOR CONSUMERS

Safe Food For Consumers

Christine M. Bruhn, PhD

Director Center for Consumer Research, Retired Department of Food Science and Technology University of California, Davis



- Safe food requires vigilance throughout the food production and distribution system
- Consumers also have a responsibility to handle foods properly
- Mishandling occurs frequently
- Industry and government actions can increase safe handling in the home





The Consumer's Role

Follow basic food safety guidelines

Education messages focus on

- Separate
- Clean
- Chill
- Cook







Guidelines: Separate

Meat and poultry may be stored in location that could lead to cross contamination.



- 66% stored raw chicken on a shelf above other foods
- Only 34% placed raw chicken on bottom shelf or in refrigerator drawer

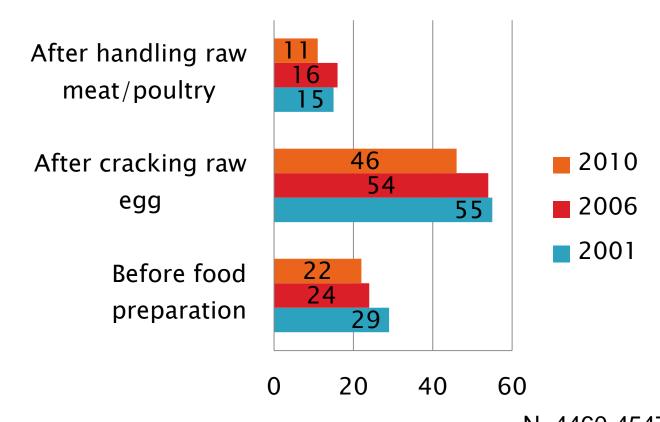
Bruhn, Chicken Preparation in the Home, Food Protection Trends 2014





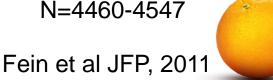


What People Say - Do not wash hands









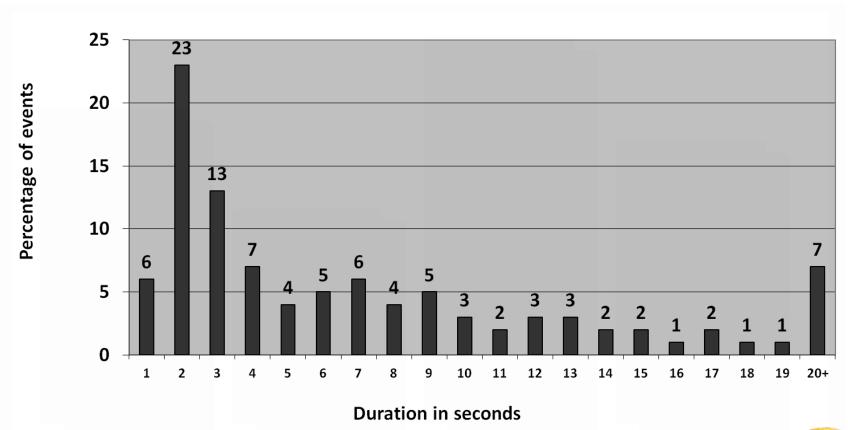
Actual Behavior – Burger preparation

- 57% Did NOT wash hands before food preparation
- 32% Did not wash hands directly after handing raw meat
- 41% Washed hands with soap
- 47% "Dried" hands by shaking off excess water



Phang and Bruhn, Journal Food Protection, 2011

Hand Washing Duration







Phang and Bruhn, JFP, 2011



Actual Behavior - Chicken Preparation

- 64% Did NOT wash hands before food preparation
- 38% Did not wash hands directly after handing raw chicken
- 33% of all hand washing events involved water only
- 41% dried hands with a single service paper towel
- 47% washed the chicken

N=120





Guidelines: Chill

What People Say - US FDA 2010 Survey (n=4568)

- 42% Have a thermometer build into refrigerator
- •21% Put a thermometer in their refrigerator
- Of those who said yes, (n=1444)
- •14% reported 0-30F
- •24% reported 32-35 F
- •50% reported 36-41
- 8% 42-50
- 4% 51 or higher



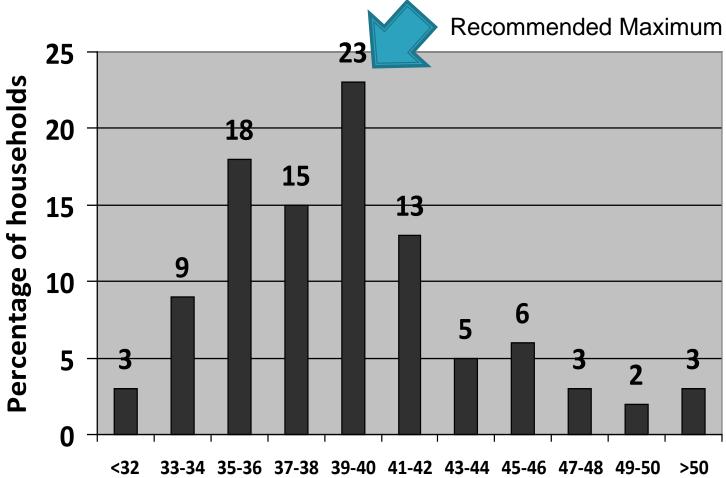
http://www.fda.gov/Food/ScienceResearch/ResearchAreas/ConsumerResearch/ucm25 9074.htm





Guidelines: Chill

Actual Recorded Refrigerator Temperature





Phang and Bruhn, JFP, 2011



Guidelines: Cook

Food may not be thoroughly cooked due to preference and failure to use a thermometer

- 25% Prefer their meat pink
- 83% Use visual clues to determine when meat is done
- > 53% Own a meat thermometer, but use it only for large cuts

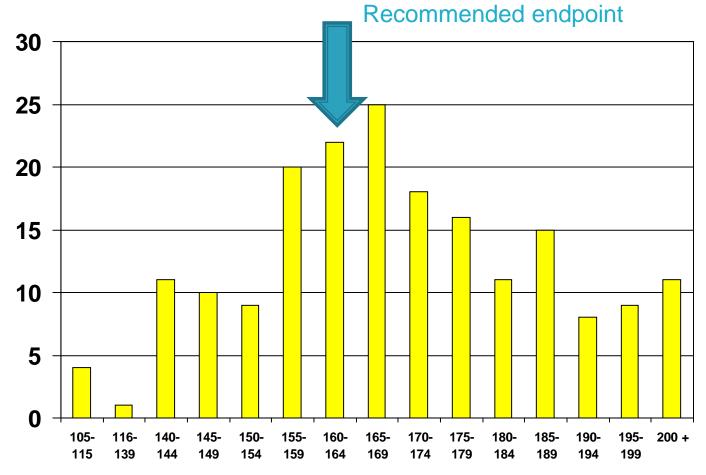




Phang & Bruhn, JFP, 2011

Guidelines: Cook

Actual Burger Temperature ° F – People stopped cooking



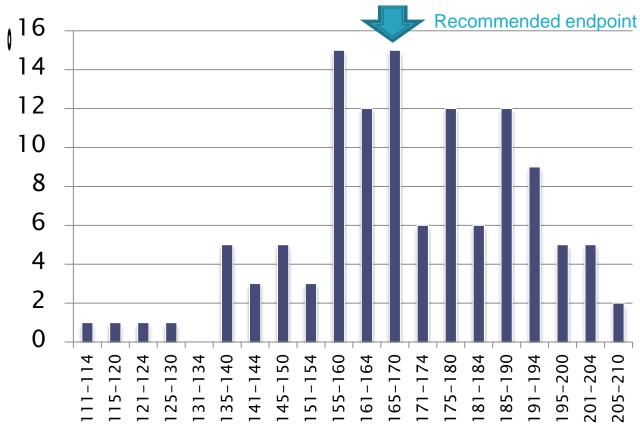




Guidelines: Cook

Actual Chicken Temperature ° F - People stopped cooking

house holds



Temperature ° F

Bruhn, FPT, 2014







Television Chefs and Role Models





Television Chefs As Models

- Chefs make don't always follow cleaning and cooking recommendations
- Consumers believe the chef's practices are acceptable
- Consumers admit they follow the same behaviors at home
- Modeling inappropriate behavior could increase the risk of illness from homeprepared food



Studies Have Shown

- Consumers do not always practice recommended behaviors
- What people say is not always what they actually do
- Cross contamination is likely
- Pathogens may not be inactivated due to inadequate cooking







Newer Technologies Can Increase Safety

Example – Irradiation

Irradiation makes food safer by reducing harmful bacteria that could cause illness

- 55% would buy the irradiated meat/poultry if it was the same price as non-irradiated item (n=765)
- 68% would pay 10% more for the irradiated item (n=418)

Example - Irradiation Benefits Message

Irradiation can prevent foodborne illness (stomach flu) because it greatly reduces harmful bacteria like Salmonella, E coli, and Listeria. It also replaces toxic chemicals used to destroy bacteria on spices.

Food stays fresh longer because irradiation reduces the number of bacteria that cause spoilage

Irradiation can even replace toxic chemicals currently used to destroy insects that hitch hike on fresh fruits.



Newer Technologies Can Increase Safety

Example – Irradiation, After reading benefits

72% would buy the irradiated meat/poultry

Among those who would not buy (n=205)

- 78% said they needed more information
- ▶ 6% thought irradiation was not safe



Action Steps - I

Acknowledge that the consumer handling is not always effective in reducing foodborne hazards

Expand educational efforts to sensitize people regarding safe handling practices

Collaborate with food celebrities to model safe handling

Include sanitation, cooking and storing information when communicating about food

Focus on washing

Use soap, dry with paper towels Sanitize kitchen counter Don't wash raw meat/poultry







Action Steps II

Include thermometer readings in recipes

Advise people to calibrate their thermometer

Urge refrigerator manufacturers to show temperature readings in all models

Lower barriers to the use of advanced technologies

- Streamline the approval process
- Support tax incentives for investment
- Fund public and industry education







Communicate Through Trustworthy Sources

Believable

- Open and transparent message
- Accurate presentation of risks

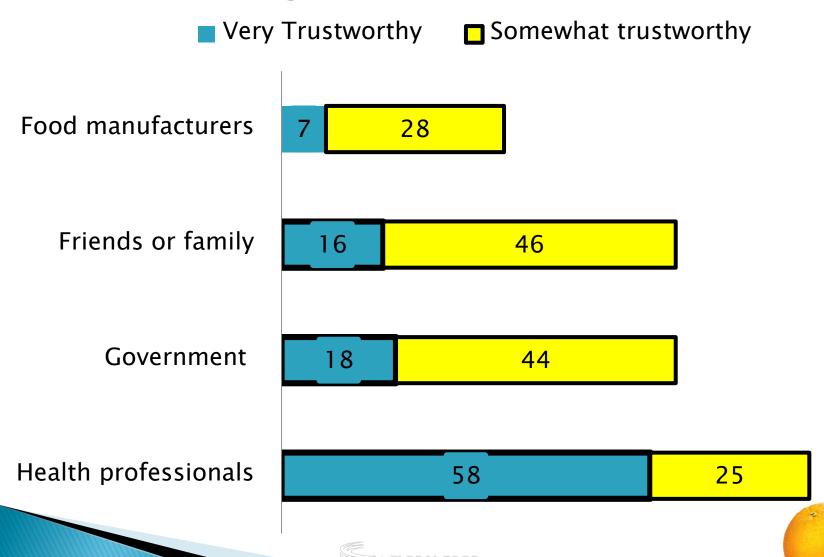
Expertise

Shared values

Consumers interest in mind



Trustworthy Information Sources



Feng, Bruhn, Marx, 2016

Acknowledgement

The research reported was supported by the National Institute of Food and Agriculture, USDA award number 2012-68003-30155, Outbreak Inc, and Foster Farms

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