

# DINNER

## CHICKEN & POULTRY

### CLASS 11



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# GENERAL BACKGROUND – HISTORY & FUN FACTS

- Chicken is the number one species consumed by Americans
- Interest in the safe handling and cooking of chicken is reflected in thousands of calls to the USDA Meat and Poultry Hotline, second only to turkey in number of specific inquiries
- **History**
  - The chicken is a descendant of the Southeast Asian red jungle fowl first domesticated in India around 2000 B.C.
  - Most of the birds raised for meat in America today are from the Cornish (a British breed) and the White Rock (a breed developed in New England)
  - Broiler-fryers, roasters, stewing/baking hens, capons and Rock Cornish hens are all chickens



# GENERAL BACKGROUND

## ○ Chicken Inspection

- All chickens found in retail stores are either inspected by USDA or by state systems which have standards equivalent to the Federal government
- Each chicken and its internal organs are inspected for signs of disease. The "Inspected for wholesomeness by the U.S. Department of Agriculture" seal insures the chicken is free from visible signs of disease

## ○ Fresh or Frozen

- The term *fresh* on a poultry label refers to any raw poultry product that has never been below 26 °F
- Raw poultry held at 0 °F or below must be labeled *frozen* or *previously frozen*
- No specific labeling is required on raw poultry stored at temperatures between 0-25 °F



# GENERAL BACKGROUND

## ○ Dating of Chicken Products

- Product dating is not required by Federal regulations, but many stores and processors voluntarily date packages of chicken or chicken products
- If a calendar date is shown, immediately adjacent to the date there must be a phrase explaining the meaning of that date such as *sell by* or *use before*
- The use-by date is for quality assurance; after the date, peak quality begins to lessen but the product may still be used
- It's always best to buy a product before the date expires
- If a use-by date expires while the chicken is frozen, the food can still be used



# GENERAL BACKGROUND

## ○ **Hormones & Antibiotics**

- No hormones are used in the raising of chickens
- Antibiotics may be given to prevent disease and increase feed efficiency
- A "withdrawal" period is required from the time antibiotics are administered before the bird can be slaughtered. This ensures that no residues are present in the bird's system
- FSIS randomly samples poultry at slaughter and tests for residues. Data from this monitoring program have shown a very low percentage of residue violations

## ○ **Additives**

- Additives are not allowed on fresh chicken
- If chicken is processed, however, additives such as MSG, salt, or sodium erythorbate may be added but must be listed on the label



# CHICKEN NUTRITION

- Chicken is high in protein, low in fat and low in cholesterol, making it a good selection for a healthy diet
- Chicken is lower in fat than most other meats and over half of the fat is unsaturated fat, the type that helps lower cholesterol
- The white meat is lower in fat than the dark meat of the chicken but the dark meat is higher in iron, an important nutrient for a healthy body



# CHICKEN NUTRITION

- How to make chicken even healthier:
  - Remove the skin from the chicken before eating. The skin can be removed either before or after cooking to reduce the fat content by almost half. Leaving the skin on during cooking will provide juicier meat.
  - Trim all excess fat from the chicken before cooking
  - Rather than using fat, such as butter and oils, to enhance the chicken's flavor, try other ingredients, such as flavored vinegars, wines, herbs, spices, or citrus fruit
  - Cook chicken without the use of fats by baking, roasting, broiling, grilling, or poaching. Pan fry or stir-fry in olive oil or use a fat free nonstick cooking spray
  - Chicken is lower in fat than most other meats (see nutrition chart-chicken in comparison to other meats)





# NUTRITION CHART

Based on a 3-ounce boneless serving - Cooked without adding fat, salt or other ingredients.

Type of Meat	Calories	Total Fat	Saturated Fat	Protein	Cholesterol
Chicken Breast (skinless)	120	1.5 g	.5 g	24 g	70 mg
Chicken Breast (with skin)	170	7 g	2 g	25 g	70 mg
Chicken Drumstick (skinless)	130	4 g	1 g	23 g	70 mg
Chicken Drumstick (with skin)	180	9 g	3 g	23 g	75 mg
Beef Tenderloin (fat trimmed)	180	8.5 g	3.2 g	24 g	70 mg
Beef Sirloin (fat trimmed)	170	6.1 g	2.4 g	26 g	75 mg
Pork Chop (fat trimmed)	170	7 g	2 g	26 g	70 mg
Lamb Chop (fat trimmed)	180	8 g	3 g	25 g	80 mg
Ground Beef (90% lean)	210	11 g	4 g	27 g	85 mg

# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Rinsing or Soaking Chicken**

- It is not necessary to wash raw chicken
- Any bacteria which might be present are destroyed by cooking

## ○ **Liquid in Package**

- Many people think the pink liquid in packaged fresh chicken is blood, but it is mostly water which was absorbed by the chicken during the chilling process
- Blood is removed from poultry during slaughter and only a small amount remains in the muscle tissue
- An improperly bled chicken would have cherry red skin and is condemned at the plant



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Fresh Chicken:**

- Chicken should feel cold to the touch when purchased
- Select fresh chicken just before checking out at the register
- Put packages of chicken in disposable plastic bags (if available) to contain any leakage which could cross-contaminate cooked foods or produce
- Make the grocery your last stop before going home.
- At home, immediately place chicken in a refrigerator that maintains 40 °F, and use within 1 or 2 days, or freeze at 0 °F
- If kept frozen continuously, it will be safe indefinitely



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Fresh Chicken:**

- Chicken may be frozen in its original packaging or repackaged
- If freezing longer than two months, over wrap the porous store plastic packages with airtight heavy-duty foil, plastic wrap or freezer paper, or place the package inside a freezer bag
- Use these materials or airtight freezer containers to repackage family packs into smaller amounts or freeze the chicken from opened packages
- Proper wrapping prevents "freezer burn," which appears as grayish-brown leathery spots and is caused by air reaching the surface of food
- Cut freezer-burned portions away either before or after cooking the chicken
- Heavily freezer-burned products may have to be discarded because they might be too dry or tasteless



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Ready-Prepared Chicken:**

- When purchasing fully cooked rotisserie or fast food chicken, be sure it is hot at time of purchase
- Use it within two hours or cut it into several pieces and refrigerate in shallow, covered containers
- Eat within 3 to 4 days, either cold or reheated to 165 °F (hot and steaming)
- It is safe to freeze ready-prepared chicken
- For best quality, flavor and texture, use within 4 months



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Safe Defrosting**

- There are three ways to defrost chicken:
  1. in the refrigerator
  2. in cold water
  3. in the microwave
- Never defrost chicken on the counter or in other locations
- It's best to plan ahead for slow, safe thawing in the refrigerator
- Boneless chicken breasts will usually defrost overnight
- Bone-in parts and whole chickens may take 1 to 2 days or longer



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Safe Defrosting**

- Once the raw chicken defrosts, it can be kept in the refrigerator an additional day or two before cooking
- During this time, if chicken defrosted in the refrigerator is not used, it can safely be refrozen without cooking first
- Chicken may be defrosted in cold water in its airtight packaging or in a leak proof bag
- Submerge the bird or cut-up parts in cold water, changing the water every 30 minutes to be sure it stays cold
- A whole (3 to 4-pound) broiler fryer or package of parts should defrost in 2 to 3 hours. A 1-pound package of boneless breasts will defrost in an hour or less



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Safe Defrosting**

- Chicken defrosted in the microwave should be cooked immediately after thawing because some areas of the food may become warm and begin to cook during microwaving
- Holding partially cooked food is not recommended because any bacteria present wouldn't have been destroyed
- Foods defrosted in the microwave or by the cold water method should be cooked before refreezing
- Do not cook frozen chicken in the microwave or in a slow cooker
- However, chicken can be cooked from the frozen state in the oven or on the stove. The cooking time may be about 50% longer





# HANDLING AND COOKING CHICKEN SAFELY

## ○ Stuffed Chicken

- We do not recommend buying retail-stuffed fresh whole chicken because of the highly perishable nature of a previously stuffed item
- Consumers should not pre-stuff whole chicken to cook at a later time; Chicken can be stuffed immediately before cooking
- Some USDA-inspected frozen stuffed whole poultry **MUST** be cooked from the frozen state to ensure a safely cooked product (follow preparation directions on the label)

## ○ Marinating

- Chicken may be marinated in the refrigerator up to 2 days
- Boil used marinade before brushing on cooked chicken
- Discard any uncooked leftover marinade



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Safe Cooking**

- Cook a whole chicken to a safe minimum internal temperature of 165 °F as measured using a food thermometer
- Check the internal temperature in the innermost part of the thigh and wing and the thickest part of the breast
- For reasons of personal preference, consumers may choose to cook poultry to higher temperatures
- For approximate cooking times to use in meal planning, see the following chart compiled from various resources



# HANDLING AND COOKING CHICKEN SAFELY

## Approximate Chicken Cooking Times

Type of Chicken	Weight	Roasting 350 °F	Simmering	Grilling
Whole broiler fryer+	3 to 4 lbs.	1 1/4 - 1 1/2 hrs.	60 to 75 min.	60 to 75 min*
Whole roasting hen+	5 to 7 lbs.	2 to 2 1/4 hrs.	1 3/4 to 2 hrs.	18-25 min/lb*
Whole capon+	4 to 8 lbs.	2 to 3 hrs	Not suitable	15-20 min/lb*
Whole Cornish hens+	18-24 oz.	50 to 60 min.	35 to 40 min.	45 to 55 min*
Breast halves, bone-in	6 to 8 oz.	30 to 40 min.	35 to 45 min.	10 - 15 min/side
Breast half, boneless	4 ounces	20 to 30 min.	25 to 30 min.	6 to 8 min/side
Legs or thighs	8 or 4 oz.	40 to 50 min.	40 to 50 min.	10 - 15 min/side
Drumsticks	4 ounces	35 to 45 min.	40 to 50 min.	8 to 12 min/side
Wings or wingettes	2 to 3 oz.	30 to 40 min.	35 to 45 min.	8 to 12 min/side

+ Unstuffed. If stuffed, add 15 to 30 minutes additional time.

\* Indirect method using drip pan.

# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Microwave Directions:**

- Microwave on medium-high (70 % power): whole chicken, 9-10 min./pound; bone-in parts and Cornish hens, 8-9 min./pound; boneless breasts halves, 6-8 min./pound
- When microwaving parts, arrange in dish or on rack so thick parts are toward the outside of dish and thin or bony parts are in the center
- Place whole chicken in an oven cooking bag or in a covered pot; for boneless breast halves, place in a dish with 1/4 cup water; cover with plastic wrap



# HANDLING AND COOKING CHICKEN SAFELY

- **Microwave Directions:**
  - Allow 10 minutes standing time for bone-in chicken; 5 minutes for boneless breast
  - The USDA recommends cooking whole poultry to a safe minimum internal temperature of 165 °F as measured using a food thermometer
  - When cooking pieces, the breast, drumsticks, thighs, and wings should be cooked until they reach a safe minimum internal temperature of 165 °F



# HANDLING AND COOKING CHICKEN SAFELY

## ○ Partial Cooking

- Never brown or partially cook chicken to refrigerate and finish cooking later because any bacteria present wouldn't have been destroyed
- It is safe to partially pre-cook or microwave chicken immediately before transferring it to the hot grill to finish cooking.

## ○ Color of Skin

- Chicken skin color varies from cream-colored to yellow
- Skin color is a result of the type of feed eaten by the chicken, not a measure of nutritional value, flavor, tenderness or fat content
- Color preferences vary in different sections of the country, so growers use the type of feed which produces the desired color



# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Dark Bones**

- Darkening around bones occurs primarily in young broiler-fryers. Since their bones have not calcified completely, pigment from the bone marrow can seep through the porous bones
- Freezing can also contribute to this seepage. When the chicken is cooked, the pigment turns dark. It's perfectly safe to eat chicken meat that turns dark during cooking.



# HANDLING AND COOKING CHICKEN SAFELY

## ○ Pink Meat

- The color of cooked chicken is not a sign of its safety. Only by using a food thermometer can one accurately determine that chicken has reached a safe minimum internal temperature of 165 °F throughout
- The pink color in safely cooked chicken may be due to the hemoglobin in tissues which can form a heat-stable color
- Smoking or grilling may also cause this reaction, which occurs more in young birds





# HANDLING AND COOKING CHICKEN SAFELY

## ○ **Fatty Deposits**

- Chickens may seem to have more fatty deposits or contain a larger "fat pad" than in the past
- This is because broiler fryer chickens have been bred to grow very rapidly to supply the demand for more chicken
- Feed that is not converted into muscle tissue (meat) is metabolized into fat. However, the fat is not "marbled" into the meat as is beef or other red meat, and can be easily removed. Geneticists are researching ways to eliminate the excess fat



# HANDLING AND COOKING CHICKEN SAFELY

## ○ Storage Times

- Since product dates aren't a guide for safe use of a product, how long can the consumer store the food and still use it at top quality? Follow these tips:
  1. Purchase the product before the date expires
  2. Follow handling recommendations on product
  3. Keep chicken in its package until using
  4. Freeze chicken in its original packaging, overwrap or re-wrap it according to directions in the above section, "How to Handle Chicken Safely"



# RECIPES

- Southwestern Lime-Chicken Hash
- Oven Fried Chicken #1
- Oven Fried Chicken #2

## Rotisserie Chicken Recipes:

- Sweet & Sour Chicken Stir Fry
- Chicken and Broccoli Tetrazzini
- Stacked Sour Cream Chicken Enchiladas

Refer to handout for details

