

- ▣ Eggs
- ▣ Chapter 16, page 280
- ▣ Guide to Good Food textbook
- ▣ And the Eggyclopedia from the American Egg Board
- ▣ Nutrition
- ▣ Great source of protein
- ▣ Contain amino acids, thiamin, riboflavin, iron, phosphorous, vitamins A and D, and calcium
- ▣ The egg yolk contains high amounts of cholesterol
 - Egg white is the healthiest part of the egg
- ▣ A regular large egg has around 80 calories
 - Majority of calories, cholesterol, and nutritional value found in yolk
- ▣ Grades
- ▣ Determined by four factors:
 - Condition of shell
 - Size of air cell
 - Clearness and thickness of egg white
 - Condition of egg yolk
- ▣ Candling
 - Process to grade eggs
 - Eggs move on rollers over very bright lights
 - Look for blood spots
 - Found on yolk, less than 1% of eggs
 - Not indication of fertile egg
- ▣ Grades
- ▣ Grade AA- best quality (fancy fresh)
 - Clean, unbroken shell
 - Small air cell
 - Thick, clear white which spreads little
 - Yolk stands high and is firm
- ▣ Grade A
 - Clean, unbroken shell
 - Slightly larger air cell
 - White covers larger area than AA, fairly thick but can tell difference between thin and thick layers
 - Yolk fairly firm, stands high
- ▣ Grades
- ▣ Grade B
 - Unbroken shell, clean or slightly stained
 - Larger air cell
 - Thin white and yolk
 - Spreads when broken
 - Rarely seen in stores, used in preparation of other food products
- ▣ Also Grade C, used in food production

- ▣ No nutritional difference among the grades
- ▣ See page 282 of textbook
- ▣ Color
- ▣ Shell of egg is white or tan/brown
- ▣ Determined by breed of chicken
 - Breeds with white ear lobes have white eggs
 - Breeds with red ear lobes have brown eggs
- ▣ No nutritional, quality, or flavor difference
 - Some argue farm fresh tan eggs taste better
- ▣ Size
- ▣ Based on medium weight per dozen
- ▣ 6 basic sizes; XL, L and M most common
 - Jumbo
 - Extra large
 - Large
 - Medium
 - Small
 - Pee wee
- ▣ Size has no relation to quality
- ▣ Storage
- ▣ Store in original carton, large end up
- ▣ Refrigerate
- ▣ Last 4-6 weeks after purchase
- ▣ Only cook cracked eggs, may contain bacteria
- ▣ Refrigerate hard-boiled eggs
 - Use within a week
- ▣ Usage of Eggs
- ▣ Emulsifier
 - Especially the yolk
 - Helps other ingredients stick together
 - ▣ Binds ingredients of foods like meatloaf
 - Help dry ingredients combine
- ▣ Foam
 - Used to add air to foods
 - Air beaten into eggs, usually the whites
 - Helps baked products rise, increased volume
 - ▣ Air used to leaven when heated
 - Egg whites stiffens
 - ▣ Meringue
- ▣ Usage of Eggs
- ▣ Thickens
 - Heat causes egg proteins to coagulate (thicken)
 - Whole eggs or egg yolks used to thicken
 - Adds structure

- 2 eggs whites can be substituted for 1 whole egg
- Liquid
 - Used as a liquid to moisten baked goods
 - Moisture creates steam in oven, helps leaven
 - Usually in combination with another liquid
- Nutrition, flavor and color
 - Usage of Eggs
- Raw eggs
 - Risk of salmonellae
 - Bacteria killed with proper cooking
 - Consume items with raw eggs (such as eggnog) immediately
 - Pregnant women, small children, the elderly, and people who are already ill should not risk eating contaminated raw eggs
- Principles of Egg Cookery
- Eggs coagulate when heated
- Temperature, time, and other ingredients affect
- Too high of temps cause proteins to toughen
- Low temps recommended
- Additional ingredients cause eggs to coagulate at a higher temp
 - Scrambled eggs w/o milk coagulate at lower temps
- Cooking Methods
- Scrambled
 - Break into bowl, beat w/ whisk or fork until blended
 - Other liquid can be added
 - No more than 1 Tablespoon per egg
 - Proteins cannot thicken properly if too much
- Poached
 - Break egg into pan with just enough boiling water to cover egg
 - Small amt of salt or an acid (vinegar) may be used
 - Help proteins coagulate quicker
 - Reduce heat to below boiling, cook 3 to 5 minutes
 - White firm and yolk semi-liquid
- Cooking Methods
- Frying
 - Too high of temps make eggs tough
 - Too low of temps cause egg whites to spread
 - Add eggs to heated skillet w/ a small amt of fat
 - Cover skillet and cook 3 to 5 minutes
- Baking
 - Bake in individual, greased dishes
 - Moderate heat 12-18 minutes
 - Can add variety with cheese or bacon, etc.
- Cooking Methods
- Cooked in the shell

- Soft-cooked
 - Cold water method of cooking
 - Eggs in deep pan, cover with cold water
 - Bring water to boil, cover pan and remove from heat
 - Keep in pan 1 to 4 minutes for soft-cooked (boiled) egg
 - Hot water method
 - Add eggs to simmering (just below boiling point) water
 - Simmer for 1 to 4 minutes, do not boil
- Hard-cooked eggs
 - Either method above, increase cooking time 13-17 min.
- Cool eggs immediately under cold water
 - Cooking Methods
- Microwave
 - Can be scrambled, poached, or baked in microwave
 - Airy egg dishes do not cook well in microwave
 - Cook quickly and continue cooking after removed from microwave while standing
 - Eggs need removed from shell before put in microwave
- Eggs also used in omelets, soufflés, meringues, custards, see page 288-293
- Egg Substitutes
- Because of foods with cholesterol being linked to heart disease
- Made largely from egg whites
- No yolks
- Cholesterol and fat free and low in calories
- Can be used in most egg dishes
- ¼ Cup of egg substitute = 1 egg
- Review
- Complete To Review Questions 1-14 page 295
- Write out and define To Know vocabulary terms on page 295