# CHAPTER 3 EGGS AND DAIRY PRODUCTS





- 1 What are the various types of milk and milk alternatives available today? How do they differ from each other?
- 2 What are the various types of cream available today? How do they differ from each other?
- 3 What are cultured dairy products? What fat content do these products have?
- 4 What are the differences between butter and butter substitutes?
- 5 What are the primary kinds of cheese?
- 6 What are the parts of an egg? How are eggs kept safe?
- 7 What are the different ways to cook an egg?



Pasteurization Homogenization Lactose intolerance Casein Cream Fermentation Probiotic Smoke point Butter substitute Whey Curdling Unripened Ripened Processed cheese Albumen Chalazae Coddled Ramekins Shirred eggs Poached eggs Sunny-side up Over easy Basted eggs Omelets Frittatas Quiche Soufflés Pooled eggs



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### INTRODUCTION

DO YOU THINK THAT YOU KNOW EVERYTHING YOU NEED TO KNOW ABOUT EGGS AND DAIRY PRODUCTS SUCH AS MILK, CREAM, YOGURT, BUTTERMILK, BUTTER, AND CHEESE? ALTHOUGH YOU MIGHT ASSOCIATE EGGS WITH ONLY BREAKFAST, THEY ARE OFTEN USED IN LUNCH AND DINNER ENTREÉS, AS WELL AS IN SAUCES AND BAKING. IT IS THE SAME WITH MILK AND CHEESE, WHICH CAN BE USED IN EVERYTHING FROM FRENCH TOAST TO CAKES TO BÉCHAMEL. THESE PRODUCTS ARE ACTUALLY THE BASIS OF ALMOST EVERY MEAL. THEIR UNIQUE FEATURES ALLOW US TO PREPARE A VARIETY OF FOOD ITEMS.

### DAIRY MILK AND MILK ALTERNATIVES

Dairy milk is milk that comes from the mammary glands of mammals, primarily cows. Most milk products are processed to remove harmful bacteria that could make people sick. Two processes applied to milk products are **pasteurization** (pass-cher-i-ZAY-shun) and **homogenization** (huh-MAH-juh-ni-ZAY-shun):

- **Pasteurization:** Milk is heated to kill microorganisms that cause spoilage and disease without affecting its nutritional value. See Figure 3.1.
- **Homogenization:** Milk is strained through very fine holes to break down fat and then is blended into one fluid.



Figure 3.1: The pasteurization process.

Table 3.1 shows types of dairy milk. The type of milk utilized is often based on the nutritional value. Lactose-intolerant guests may want lactose-reduced or lactose-free milk. Lactose intolerance is a common digestive issue that causes a negative reaction to many cultured dairy products, not just milk.

It is also important to recognize that low-fat and skim milks behave differently in cooking than whole milk does. Fat brings flavor, body, and mouthfeel to a dish. If a chef reduces the fat in the milk, the ingredient will perform differently in the recipe.

TABLE 3.1: TYPES OF DAIRY MILK			
TYPE OF MILK	FAT CONTENT	NOTES	
Whole	At least 3.25%	• Closest to the way milk comes from the cow before processing	
Low fat	Available in 1% and 2%	• Creamy but not as rich as whole milk	
Skim	Less than 0.5% (usually 0.1%)	• Least creamy and lowest in calories	
Buttermilk	Depends on the type of fresh milk used	<ul> <li>Made from fresh liquid milk that has bacteria added to it to create a sour taste</li> <li>Does not actually contain butter</li> <li>Has a rich, thick texture and tangy acid taste that is valued in baking and the preparation of many items, such as salad dressings</li> </ul>	
Evaporated	At least 6.5%	<ul> <li>Made from milk by removing 60% of the water</li> <li>Has a slight cooked flavor from its canning process</li> <li>Usually used in baking; helps bring richness without excess moisture</li> </ul>	
Condensed	At least 8.5%	<ul> <li>Tastes richer and sweeter than evaporated milk</li> <li>Made from whole milk by removing 60% of the water and then sweetening with sugar</li> <li>Used in specialty baking when richness and sweetness are desired</li> <li>Cannot replace evaporated or other milk products unless the recipe's sugar content and fat content are adjusted</li> </ul>	
UHT (ultra-high temperature)	Depends on the type of fresh milk used	<ul> <li>Processed with high heat, cooled, and then packaged in a sterile environment to avoid contamination</li> <li>Does not need refrigeration</li> <li>Has a shelf life of nine months</li> </ul>	
Powdered	Depends on the type of fresh milk used	<ul> <li>Usually made from whole or skim milk</li> <li>Made from milk by removing all of the water</li> <li>Can improve the reconstituted flavor by serving the milk very cold</li> <li>Often used in baking</li> </ul>	
Lactose-free milk	Depends on the type of fresh milk used	<ul> <li>Made by adding enzymes to milk to break down the lactose</li> <li>Good choice for those who are lactose intolerant (have trouble digesting lactose)</li> </ul>	

While lactose intolerance is sometimes called a milk allergy, it is not one. **Casein** is a protein found in milk. A casein allergy is a true protein-sensitive allergy, and people with such an allergy must avoid all dairy food. Dairy alternatives, such as soy, rice, almond, and coconut milk, can be used instead. Table 3.2 shows types of plant-based milk.

TABLE 3.2: TYPES OF PLANT-BASED MILK			
TYPE OF MILK	FAT CONTENT	NOTES	
Soy milk (nondairy)	Four grams of fat per eight-ounce serving (fortified)	<ul> <li>Often fortified with vitamins (including calcium, and perhaps vitamin D and riboflavin) and offered in low-fat forms</li> <li>Has a slightly nutty flavor with a rich texture</li> <li>Is available in different flavors</li> <li>Good source of protein; has no cholesterol</li> </ul>	
Rice milk (nondairy)	Three grams or less per eight-ounce serving	<ul> <li>Often fortified with vitamins (check for the addition of calcium, vitamin D, and riboflavin)</li> <li>Usually made with water, brown rice syrup, starch, and other thickeners</li> <li>Has a sweet flavor and a thin texture</li> <li>Is available in different flavors</li> <li>Has less protein than milk or soy milk</li> </ul>	
Almond milk (nondairy)	Two to three grams per eight-ounce serving	<ul> <li>Made from ground almonds and water</li> <li>Low in calories and saturated fat</li> <li>Contains no cholesterol or lactose</li> <li>May be sweetened and flavored (e.g., chocolate, vanilla)</li> <li>Often fortified with calcium and vitamin D</li> </ul>	
Coconut milk (nondairy)	Thick: 20% to 22% Thin: 5% to 7%	<ul> <li>Made from grated brown coconut and water</li> <li>Mild, sweet taste, with little or no coconut smell</li> <li>Often used in baking and cooking</li> </ul>	

#### INTRODUCTION

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#### CREAMS

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### **CREAMS**

**Cream** contains far more fat than milk. Chefs use it primarily for the fat content, which provides richness. Creams with more than 30 percent fat are stable when whipped. They add elegance and flavor to many desserts. Heavy creams also bring richness and a silky texture to sauces and dressings. Table 3.3 shows common types of cream.

TABLE 3.3: TYPES OF CREAM		
TYPE OF CREAM	AMOUNT OF FAT	NOTES
Light whipping cream	At least 30% but less than 36%	Used in sauces and soups, and as a garnish for desserts
Heavy whipping cream	36% to 38%	Used to make whipped cream
Very heavy whipping cream	40%	Produces a greater yield and a longer shelf life for the products made with it
Light cream	18% to 30%	Sometimes called coffee cream
Half-and-half	10.5% to 18%	One part milk/one part cream; technically half-and-half does not have enough

### **CULTURED DAIRY FOOD ITEMS**

Cultured dairy items may include buttermilk, yogurt, sour cream, and crème fraîche (a soured cream with butterfat, pronounced "krem fresh"). Sometimes referred to as "fermented" dairy products, these food items have undergone a process called **fermentation**. What happens to milk during fermentation? Bacterial cultures are added to the milk. Many of these products are fermented with lactic acid bacteria, or lactobacillus. The mixture is then heated to around 110°F (43°C) for several hours. The bacteria eat the sugar (lactose) in the milk. This lowers the pH level of the mixture.

The low pH level causes the "sour" taste we associate with yogurt, sour cream, and buttermilk. Fermentation changes the flavor and extends the shelf life of the food. The extended shelf life allows the item to be kept longer and ensures safer food. There has been a lot of talk about the health benefits of cultured dairy products. The term **probiotic** refers to a dietary supplement containing live bacteria (as lactobacilli) that is taken orally to restore beneficial bacteria to the body. There have been many claims about the health benefits of taking probiotics. However, not much scientific evidence exists to prove these claims. Table 3.4 shows the common types of cultured dairy items.

TABLE 3.4: CULTURED DAIRY ITEMS			
TYPE OF CULTURED DAIRY ITEM	AMOUNT OF FAT	NOTES	
Buttermilk	1% to 2%	<ul> <li>Traditional buttermilk is the liquid left after churning butter out of cream</li> <li>Cultured buttermilk has been fermented using lactic acid bacteria</li> <li>Can separate as it sits; shake before use</li> <li>Also available in a powdered form</li> </ul>	
Yogurt	0.5% to 4%	<ul> <li>Many varieties are flavored with fruit</li> <li>Source of protein</li> <li>Often consumed by vegetarians</li> <li>"Greek" variety has twice as much protein as regular yogurt; 15–20 grams per serving</li> <li>"Greek" yogurt is higher in fat</li> </ul>	
Sour cream	18% to 40%	<ul> <li>Available as "light," "low-fat," and "fat-free"</li> </ul>	
Crème fraîche	30% to 45%	<ul> <li>Unlike U.S. sour cream, it is less sour and thinner, with a higher fat content</li> </ul>	

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### RECEIVING AND STORING MILK, CREAM, AND CULTURED DAIRY ITEMS

Milk can be received at 45°F (7°C) or lower. Then it must be cooled to 41°F (5°C) or lower within four hours. Cream and other dairy products must be received at 41°F (5°C) or lower. All milk, cream, and cultured dairy products should be labeled "Grade A." This means that the product meets standards for quality and safety set by the FDA and the U.S. Public Health Service. Milk, cream, and cultured dairy products should have a sweetish flavor. Items that are too sweet or that have a sour, bitter, or moldy taste should be thrown out.

Always use the FIFO (first-in, first-out) method of stock rotation for these dairy products. With the FIFO method, store products to ensure that the older products are used first. For example, place products with an earlier use-by or expiration date in front of products with later dates. Any dairy product that has passed its use-by, sell-by, or expiration date should be thrown away (see Figure 3.2).

### **BUTTER AND BUTTER SUBSTITUTES**

Different types of butter are chosen based on their flavor and consistency. The best grades of butter are either Grade AA or Grade A. Butter is most commonly used to add flavor, richness, or smoothness to a dish.

Butter is made by mixing cream containing between 30 percent and 45 percent milkfat at a high speed. The finished butter must contain at least 80 percent butterfat content. The remaining 20 percent of the butter is milk solids and water:

- Sweet butter is butter made only from pasteurized fresh cream. It is typically pale yellow and may be salted or unsalted.
- Cultured butter (European butter) is made from fermented cream and has a higher butterfat content and lower salt content than regular butter.

While butter has traditionally been produced in sticks or blocks, spreadable butter and whipped butter are now available. Both have been chemically formulated to spread more easily.

Butter is available salted or unsalted. Most commercially sold butter is lightly salted. Manufacturers add salt to butter as a preservative and sometimes to enhance flavor, but butter should contain no more than 2 percent salt. Chefs often use unsalted butter in desserts and some cooking, because it gives them more precise control over the amount of salt in a dish.

In cooking, butter is often clarified, which means either the chef or the manufacturer has heated it and removed the milk solids and water. Clarified butter is better for many cooking processes because the milk solids in whole, or unclarified, butter burn easily. The point at which an oil or fat begins to burn is called the **smoke point**. Clarified butter has a higher smoke point, which makes it less likely to burn when heated.

A **butter substitute** is any alternative used to replace butter in a recipe. Examples include margarine, olive oils, coconut oil, and soy-based oils, which are all used to avoid cholesterol, but not fat. (Some of these alternatives are more heart healthy than butter, but still flavorful.) Additionally, rice-based oils have less fat content and less cholesterol.



Figure 3.2: Sell-by date on a gallon of milk.

Margarine is one of the most common butter substitutes, but it is a manufactured food product that often contains no milk products. Margarine is made of vegetable oils and animal fats with added flavoring, emulsifiers, colors, preservatives, and vitamins. Contrary to what many people believe, margarine is not much lower in fat than butter. At least 80 percent of margarine's calories must come from fat. Solid margarine is the most popular form. Liquid margarine is often used in sautéing and grilling. One benefit of margarine is that it usually has a higher smoke point than butter.

Both butter and margarine must be stored in tightly sealed containers to prevent them from absorbing the flavors of other foods.

### CHEESE

All cheeses have three basic parts: water, fat, and protein. The amounts vary depending on the type of cheese. Several varieties of cheese are shown in Figure 3.3. For example, cottage cheese can have up to 80 percent water and little fat. On the other hand, a hard cheese like Parmigiano-Reggiano (Pahr-muh-ZHAH-noh – Reh-jee-AH-noh) might have as little as 30 percent water, but a high percentage of fat.

Dairies make cheese by separating a milk's solids from its liquid, or **whey**, in a process called **curdling**. The proteins, or curds, that form are then usually processed in some way to make a particular type of cheese. A wide variety of processing techniques, ripening methods, and types of milk are used to make cheese.

Cheese can be **unripened** or **ripened**. Unripened, or fresh, cheeses include cream cheese and cottage cheese. Unripened cheeses are soft and have a high moisture content. Ripened cheeses are aged with the modification of added ripening agents, which give the cheese its unique features, such as taste and texture. Some cheeses are ripened by external bacteria put into curds (e.g., Brie, bleu, Roquefort, Camembert). Others are ripened by bacteria naturally present in the curds (e.g., Swiss, Havarti). Because curdling separates the solids from the lactose portion of milk and the aging process changes the remaining lactose into easily digested lactic acid, lactose-intolerant people can eat ripened cheese.

The varieties of cheese range from mild to sharp to extra sharp. Table 3.5 provides a comparison of a variety of cheeses.

Manufacturers make **processed cheese** by grinding, blending, and forming one or more natural cheeses. Emulsifiers help to make the product uniform. Processed cheese is also pasteurized to prevent it from aging. It can have many flavors, including port wine, herbed, and plain processed (such as American). The taste is usually mild compared to aged cheese.

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Figure 3.3: A variety of cheeses.

TABLE 3.5: VARIETIES OF CHEESE			
VARIETY OF CHEESE	CHARACTERISTICS	EXAMPLES	
Unripened, fresh	<ul> <li>Soft and white</li> <li>Should be eaten soon after purchase</li> </ul>	Cottage cheese Cream cheese Ricotta Chevre Mascarpone	
Soft-ripened	<ul> <li>Ripened from the outside (or rind) into the center</li> <li>Rinds are powdery white or golden orange</li> <li>Can be semisoft to creamy in texture</li> <li>Mold and bacterial cultures provide flavor, body, and texture</li> </ul>	Brie Camembert Boursin	
Semisoft, ripened	<ul> <li>Mild cheeses, some with buttery flavor</li> <li>Smooth, sliceable texture</li> <li>Ripened outward from the interior and sometimes ripened from the surface</li> </ul>	Gouda Muenster Fontina Havarti Monterey Jack	
Blue-veined, mold-ripened	<ul> <li>Mold is injected or sprayed into the cheese to spread throughout it while it ages (typically blue or green)</li> <li>Creamy texture and a somewhat strong flavor</li> </ul>	Maytag Blue Gorgonzola Roquefort Stilton	
Firm, ripened	<ul> <li>Bacterial cultures help to ripen the cheese, and curing usually takes a long time</li> <li>Firm texture</li> <li>Mild to sharp flavor, depending on how long it has been aged</li> </ul>	Cheddar Gruyère Emmenthal Colby Swiss	
Very hard, ripened	<ul> <li>Ripened with bacterial culture and enzymes</li> <li>Very slow process (at least two years in most cases)</li> <li>Hard and dry texture; good for grating</li> </ul>	Asiago Parmigiano-Reggiano Pecorino Romano Cotija	
Pasta filata (Italian for "spun paste")	<ul> <li>Curds are stretched and pulled under warm whey, giving them a plastic texture</li> <li>May be stored in brine</li> <li>Flavor ranges from mild to sharp, salty, sweet, and buttery</li> </ul>	Fresh mozzarella Mozzarella Provolone String	

-Hat

### ESSENTIAL SKILLS CONSIDERATIONS IN STORING CHEESE



Figure 3.4: Cheese being wrapped in waxed paper for storage.

### う KNOWLEDGE CHECK

- 1 Explain the difference between condensed milk and evaporated milk.
- 2 What is the best way to handle and store milk?
- 3 What determines if cream will be stable when whipped?

- Wrap cheese in waxed or parchment paper so it can still breathe without drying out. New wrapping should be used each time a cheese is rewrapped. See Figure 3.4.
- 2 The optimal temperature for storing cheese is 35°F to 41°F (2°C to 5°C), at a high humidity level, which typically means toward the bottom of the refrigeration system.
- 3 Double wrap pungent cheeses (those with a strong smell and taste), such as bleu cheeses, so the aroma does not permeate other foods, and so other food aromas do not permeate the cheese. Alternatively, cheese can be wrapped and held in an airtight plastic container or plastic bag.
- 4 Do not freeze cheeses, as they may lose their texture and flavor profile.
- 5 If stored cheese is overly dry or slimy or if it lets off a strong odor, throw it out immediately.
- 4 List the three basic parts of cheese.
- 5 Define each of the following terms:
  - Homogenization
  - Pasteurization
  - Fermentation
- Probiotic
- Margarine
- Pasta filata

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### EGGS

An egg is composed of the outer shell, the white (albumen), and the yolk. The white consists of protein and water. The yolk contains protein, fat, and lecithin, a natural emulsifier (thickener). The membranes that hold the egg yolk in place are called **chalazae** (kuh-LEY-zuh). See Figure 3.5 for an illustration of the main parts of an egg.



Figure 3.5: The parts of an egg.

There are USDA grades for shell eggs—Grades AA, A, and B. Buyers purchase the top two grades (Grade AA and Grade A) for menu items in which the egg's appearance is important. A USDA Grade AA egg means that the yolk is high and the white will not spread much when the shell is broken. A USDA Grade A egg means that the yolk is fairly high and the white will still not spread too much when the shell is broken. Both Grade AA and A eggs have generally clean, unbroken shells. Grade B eggs are not usually purchased fresh by operations, but they might be bought refrigerated or frozen. Grade B eggs are good for use in menu items that will hide their appearance, such as baked items. As eggs age, they lose density. This means the thick part of the white becomes larger, and the egg spreads over a larger area when it is broken. Figure 3.6 shows the differences in how eggs should look according to grade.

Buyers must choose eggs by size—ranging from peewee (15 ounces per dozen) to jumbo (30 ounces per dozen). Figure 3.7 shows the range of actual egg sizes. Many operations use large eggs (24 ounces per dozen) for all purposes. In fact, most recipes are based on this size. Size and grade together determine the cost of eggs. What if the recipe calls for jumbo eggs and you only have medium eggs in stock? You will find that many recipes call for a certain number of ounces of egg. So, if you know how many ounces are in a jumbo egg and a medium egg, you can calculate how many medium eggs you will need to equal the amount called for in the recipe.

Young hens produce smaller eggs, which are generally of a better quality than larger eggs. Medium eggs are best for breakfast cooking because the appearance of the cooked eggs is important.



Figure 3.6: Differences in eggs according to their grade.



Eggs come in a variety of forms, as shown in Table 3.6 on the next page.

Figure 3.7: Range of egg sizes.

TABLE 3.6: MARKET FORMS OF EGGS		
FORM	USAGE	
Fresh (shell) eggs	These are most often used for breakfast cooking or instances in which a whole shell egg is required. Use pasteurized shell eggs if the operation mainly serves high-risk populations, such as those in hospitals or senior-care centers, or when making hollandaise sauce, poached eggs, or any other dish calling for eggs that are not fully cooked.	
Frozen eggs • Whole eggs • Whites • Yolks • Whole eggs with extra yolks	Frozen eggs are usually made from high-quality fresh eggs and are excellent for use in scrambled eggs, omelets, French toast, and baking. They are pasteurized and are usually purchased in 30-pound cans or milk carton—style containers. Frozen eggs take at least two days to thaw at refrigerated temperatures.	
Dried eggs • Whole eggs • Yolks • Whites	Use dried eggs primarily for baking. They are not good for breakfast cooking.	
Egg substitutes	Egg substitutes may be entirely egg-free or made from egg whites, with dairy or vegetable products substituted for the yolks. These substitutes are important for people with cholesterol-free diet requirements.	
Organic and other alternatives	Many guests now look for organic products and/or products that indicate humane treatment of the animals that produced the items. Organic eggs come from chickens that have been raised without the use of antibiotics, pesticides, or hormones. Some organic eggs receive certification through the USDA's National Organic Program, which confirms the processes used by the producer. Hens that are fed only vegetable-based food products produce vegetarian eggs. Omega-3 eggs are another kind of egg that has become common in the market. Eggs naturally have some omega-3 fatty acids, but some egg companies feed their hens special diets to ensure their eggs have even more of the substance.	

Like all purchased items, evaluate and order eggs based on characteristics such as their color, form, packaging, intended use, and preservation method. Figure 3.8 shows fresh eggs, an egg substitute, and dried eggs.



Figure 3.8: Dried eggs (top left), fresh eggs (bottom left), and egg substitute (right).

### **Receiving and Storing Eggs**

Eggs can be received at an air temperature of 45°F (7°C) or lower. Store eggs and egg products in refrigeration of 41°F (5°C) or lower and frozen eggs in the freezer until ready to be thawed.

To be acceptable, shell eggs must also meet the following criteria:

- No odor
- Clean and unbroken shells

Reject any shell eggs with an off odor, a sulfur smell, or dirty or cracked shells. Liquid, frozen, and dehydrated eggs must be pasteurized by law. They also must have a USDA inspection mark. Upon delivery, check packages for damage or signs of refreezing, and make sure that the use-by date has not passed. Reject any packages that are damaged or have an expired use-by date. Place dried egg products in a cool, dry storeroom.

## 

**Cage-Free and Free-Range Eggs** Guests may also look for the use of cagefree and free-range eggs. These descriptors refer to the way the chickens were treated on the farms and are related to how much space and outdoor access they have; however, the terms are not regulated legally and their definitions vary by farm. An operation that wants to purchase these types of eggs should research the producer before doing so.



#### How Salmonella Affects Eggs

Salmonella is a kind of bacteria that makes people sick and is sometimes found in food. Salmonella can be found on the inside and outside of eggs. Refrigerating eggs at the correct temperature prevents Salmonella from increasing. Cooking eggs reduces the bacteria in them. You cannot tell if an egg has Salmonella just by looking at it. Chickens carry the bacteria in their bodies and pass the Salmonella to the egg. All types of eggs are at risk for Salmonella. In one recent incident, more than 380 million eggs were recalled because of a suspected *Salmonella* outbreak. The Salmonella outbreak could have been caused by rodent problems, infected hens, or contaminated feed.

### **HIS ESSENTIAL SKILLS CRACKING AND OPENING AN EGG**

- 1 Crack the egg using a sharp snap of the wrist, striking the egg against a hard surface. This leaves a dent in the shell. Too hard, and you have a mess. Too soft, and the shell does not break. See Figure 3.9a.
- 2 When you have made the dent, use two thumbs in the dent and pull the two sides of the egg apart. See Figure 3.9b.
- 3 Let the egg drop into a small bowl. Always crack eggs into a bowl instead of directly into the product. See Figure 3.9c.
- 4 Inspect the egg for small bits of shell. Use your fingers or the egg shells to remove any bits of the shell. See Figure 3.9d.
- 5 Then, add the egg to the product. See Figure 3.9e.

Note: Make sure the eggshells are clean. If the shell is clean, bacteria will not enter the egg by cracking it open.



Figure 3.9a: Strike the egg against a hard surface.



Figure 3.9b: Pull apart the two sides of the egg using your thumbs.



Figure 3.9c: Let the egg drop into a separate bowl.



Figure 3.9d: Use the egg shell to remove small bits of shell.



Figure 3.9e: Add the egg to the product.



**Cracking and Opening an Egg** For a video on cracking and opening an egg, please go to: Textbooks.Restaurant.org/Videos.

### **ESSENTIAL SKILLS SEPARATING EGG WHITES AND YOLKS**

- 1 Crack the egg using a sharp snap of the wrist, striking the egg against a hard surface. This leaves a dent in the shell. Too hard, and you have a mess. Too soft, and the shell does not break.
- 2 When you have made the dent, use two thumbs in the dent and open the egg carefully, allowing the unbroken yolk to settle into one side of the shell as the white pours off into the bowl.
- 3 Gently move the egg to the other open shell half, allowing the rest of the white to flow out. See Figure 3.10a.
- 4 There should be no speck of yolk in the white.
- 5 Put the yolk into a separate dish. See Figure 3.10b.

Note: An egg separator or spoon can help with this process.



Figure 3.10a: Allow the white to flow out.



Figure 3.10b: Separate the yolk from the white.

### **COOKING EGGS**

Chefs can cook eggs in many ways, from hard cooked to scrambled to soufflés. Different egg preparations require different cooking times; when preparing eggs, it is important to carefully time the cooking.

A grayish-green color can develop when a shell egg is cooked too long or a scrambled egg is held too long before service; this comes from the development of iron sulfide. It is a natural reaction that occurs between the iron content in the yolk and the sulfur content in the egg white. While the color does not generally develop sufficiently to impact the flavor quality of the egg, it reduces the eye appeal of the egg.

Make hard-cooked eggs by simmering and then shocking the eggs. Shocking is putting the eggs into cold water immediately after cooking to stop the cooking and make them easier to peel. Eggs should be simmered, rather than boiled, because boiling can cause fragile eggshells to crack and make the egg tough. In addition to breakfast dishes, hard-cooked eggs are an important ingredient in a number of other popular preparations, such as cold hors d'oeuvres, canapés, salads, and garnishes. INTRODUCTION DAIRY MILK AND MILK ALTERNATIVES CREAMS CULTURED DAIRY FOOD ITEMS RECEIVING AND STORING MILK, CREAM, AND CULTURED DAIRY ITEMS BUTTER AND BUTTER SUBSTITUTES CHEESE EGGS COOKING EGGS

# VIDEO

Separating Egg Whites and Yolks For a video on separating egg whites and yolks, please go to: Textbooks.Restaurant.org/Videos.

### ESSENTIAL SKILLS SIMMERING OR HARD COOKING EGGS IN SHELL



Figure 3.11a: Carefully lower the eggs into the water.



1 Select eggs that are free of cracks; cracked eggs will leak in cooking and not be useable for service.

- 2 Bring enough water to completely cover the eggs to a boil; then immediately reduce the heat to a simmer, 180°F to 185°F (82°C to 85°C).
- 3 Carefully lower the eggs into the water. See Figure 3.11a.
- 4 Cook for 3 to 8 minutes for soft-boiled eggs; cook 10 minutes for hard-boiled eggs. See Figure 3.11b. (Excess cooking time will result in a grayish-green tone developing in the outer edge of the yolk.)
- 5 Serve immediately or cool immediately to be used cold later.

**Tip:** Cool and peel hard-cooked eggs immediately after they have finished cooking. This prevents a green ring from forming around the yolk.

Cooking times for shell eggs:

- Coddled (gently, lightly cooked): 30 seconds; lower cold eggs into already simmering water
- Soft-cooked (yolk and white are partially liquid): 1 to 2 minutes
- Medium-cooked (yolk is partially firm): 3 to 5 minutes
- Hard-cooked (yolk and white are solid): 10 minutes

Figure 3.11b: Eggs simmering in water.

# NUTRITION

#### **Backyard Chickens**

A recent trend in the United States is people raising chickens in their own backyards. The number-one reason people are choosing to keep chickens in their backyards is for fresh eggs. Fresh eggs offer a nutritious source of protein and are rich in flavor, appearance, and texture. Fresh chicken eggs are sometimes more nutritious than store-bought eggs because of the diets of the chickens—backyard chickens often roam freely and can therefore eat insects and plants. However, people who keep chickens need to know what they are doing, and backyard chickens can still contract and transmit diseases such as *Salmonella*. Combine baked eggs with a number of additional ingredients to create a fun, satisfying breakfast. To bake eggs, place the shelled eggs into individual **ramekins** (RAM-uh-kins), which are small, ceramic, oven-proof dishes. Combine them with other ingredients, such as butter, cream, or cooked bacon. Or, layer them on top of cooked food, such as mashed potatoes or a thick tomato sauce. Then, bake the eggs until the whites are fully cooked.

Shirred eggs are a variety of baked eggs that have been baked in a flatbottomed dish, such as a ramekin. Like baked eggs, cook shirred eggs with other ingredients, such as cheese, vegetables, meats, and sauces. Cook shirred eggs in butter (and sometimes cream) in a ramekin. The size, shape, and material of the baking dish can affect the texture of the finished item. The egg must be fresh because its appearance is very important in the service of this dish. Most important: freshness will prevent the yolk from breaking.

### ESSENTIAL SKILLS BAKING EGGS

- 1 Prepare the baking dish by buttering it generously.
- 2 Add any additional ingredients to the baking dish in an even layer.
- 3~ Bake the eggs at 325°F (163°C) until the whites are set and milky in appearance.
- 4 Unmold the eggs, if desired, garnish, and serve hot. See Figure 3.12.



Figure 3.12: Baked eggs.

### **COOKING SHIRRED EGGS**

- 1 Butter a baking dish and place it on a hot stove top.
- 2 Break the eggs into a separate dish (see Figure 3.13a), and then slide them into the shirred dish when butter has slightly browned.
- **3** Finish the eggs in an oven set to 325°F (163°C) to set the white portion and produce a hot but liquid yolk.
- 4 Serve immediately. See Figure 3.13b.



Figure 3.13a: Break the eggs into a separate dish.



Figure 3.13b: Shirred eggs.



**Poaching Eggs** For a video on poaching eggs, please go to: Textbooks.Restaurant.org/Videos. For **poached eggs**, shell the eggs (remove from the shell) and simmer the eggs in water. A properly poached egg should be tender and well-shaped, meaning the yolk is centered and the white is not rough or ragged.

Poached eggs are popular in classic dishes such as eggs Benedict (a half English muffin topped with Canadian bacon, ham, or bacon; a poached egg; and hollandaise sauce) and eggs Florentine (similar to eggs Benedict, but with spinach instead of or underneath the meat). Poached eggs are also used as a topping, such as for hash (meat chopped into small pieces and cooked a second time, usually with chopped potatoes).

Scrambled eggs should have a light texture, creamy consistency, and delicate flavor. They are best when served very hot. Blend the eggs just until the yolks and whites are combined, and then add any seasonings. Cook scrambled eggs over gentle heat while constantly stirring and scraping from the bottom and sides of the pan to keep them creamy and prevent them from burning.

### ESSENTIAL SKILLS POACHING EGGS

- 1 Combine water, salt, and vinegar in a shallow skillet or pan and bring it to a simmer.
- 2 Break the eggs into a clean cup, and then slide the eggs carefully into the poaching water (see Figure 3.14a). Cook until the whites are set and opaque. See Figure 3.14b.
- 3 Remove the eggs from the water with a slotted spoon and blot them on a single-use paper towel.
- 4 Trim, if desired, and serve hot. See Figure 3.14c.



Figure 3.14a: Slide the eggs carefully into the poaching water.



Figure 3.14b: Cook until the whites are set and opaque.



Figure 3.14c: Poached eggs being plated for eggs Benedict.

Fried eggs are quick and easy to prepare. To make sure that eggs are fried with the yolks high and centered, use fresh eggs and an appropriate amount of cooking fat, cook the eggs to 145°F (63°C) for at least 15 seconds, and serve immediately. If they are going to be held for a few minutes, cook the eggs to 155°F (68°C). The yolk should be cooked to whatever doneness the guest requests. Eggs fried up, sometimes called **sunny-side up**, are fried only on the bottom. Eggs fried **over easy** are fried on the bottom, then turned over and fried very lightly on their top sides. **Basted eggs** are fried and then steamed in a covered pan.

VIDEO Scrambling Eggs For a video on scrambling eggs, please go to: Textbooks.Restaurant.org/Videos.

### ESSENTIAL SKILLS SCRAMBLING EGGS

- 1 Beat eggs until they are well blended (see Figure 3.15a); if adding milk, the standard proportion is ½ cup per six eggs. Water can also be used in place of milk.
- 2 Heat the frying pan and add fat.
- 3 When the fat bubbles, add the beaten eggs to the pan.
- 4 Stir eggs, shaking the pan to keep the eggs moving. See Figure 3.15b. Cook to a creamy consistency with no white showing.
- 5 Serve immediately on a warm plate. See Figure 3.15c. If the eggs are being held for service, place them in a lightly oiled (preferably buttered) warm pan. Holding eggs for an excessive time will result in a grayish-green color on the bottom and sides of the eggs.



Figure 3.15a: Beat eggs until well blended.



Figure 3.15b: Stir or move eggs constantly.



Figure 3.15c: Plated scrambled eggs.

### ESSENTIAL SKILLS MAKING A FRIED EGG



Figure 3.16: An egg frying.

- 1 Heat a frying pan and add fat (such as clarified butter, bacon fat, shortening, oil, or margarine).
- 2 Break an egg into a small dish.
- 3 When the fat in the frying pan bubbles, slip the egg into the pan. See Figure 3.16.
- 4 Serve fried eggs immediately on a warm plate.

Here are the details for how to cook the various styles of fried egg:

#### Over easy:

- Cook the egg until the white is set.
- Flip the egg by pushing the pan forward and pulling back sharply, or use a spatula.
- Continue to cook until the white is firmly set with a soft yolk.

#### Hard fried:

- Cook the egg until the white is set.
- Puncture the yolk with the edge of the spatula or fork and then flip the egg.
- Continue to cook until the white and the yolk are firmly set.

#### **Basted:**

- Fry the egg on one side; do not flip the egg.
- Moisten the egg during cooking with hot fat or cover the pan, allowing the egg to steam slightly until the yolk is slightly whitened.
- Cook until the white is firmly set and the yolk is hot but soft.

#### Sunny-side up:

• Cook the egg, without flipping or basting, until the white is set.



**Making a Fried Egg** For a video on making a fried egg, please go to: Textbooks.Restaurant.org/Videos. Make **omelets** by slightly beating eggs and then cooking them in a skillet with a filling, such as cheese, mushrooms, onions, or ham. Omelets are made rolled, flat, or souffléed. A rolled omelet should be golden yellow with a creamy, moist interior and must be made to order. Flat omelets (also called **frittatas**) may be made in individual portions or in larger quantities. Souffléed omelets have a light, fluffy texture because the egg whites are whipped before cooking.



**Rolled Omelet** For a video on rolled omelets, please go to: Textbooks.Restaurant.org/Videos.

### **ESSENTIAL SKILLS ROLLED OMELET**

- 1 Blend the eggs, liquid (milk, cream, and/or water), and seasonings.
- 2 Pour the egg mixture into a heated and oiled pan.
- 3 Swirl the pan over the heat, stirring and scraping the eggs simultaneously until curds begin to form. See Figure 3.17a.
- 4 Add a filling, if desired.
- 5 Cook the omelet until it is set.
- 6 Roll the omelet—completely encasing the filling—out of the pan directly onto a heated plate. Shape it, if necessary. See Figure 3.17b.
- 7 Rub the surface with butter, if desired.



Figure 3.17a: Stir and scrape eggs until curds begin to form.



Figure 3.17b: Roll omelet out of the pan onto a heated plate.

### FLAT OMELET (FRITTATA)

- 1 Blend the eggs, liquid (milk, cream, and/or water), and seasoning.
- 2 Sauté any garnish ingredients. See Figure 3.18a.
- 3 Pour the egg mixture into a hot, oiled pan over the garnish, swirling the pan so the egg mixture covers the entire bottom of the pan.
- 4 Cook, without stirring, until the edges are set.
- 5 Finish the omelet in a hot oven, adding other garnish ingredients, such as grated cheese. See Figure 3.18b.
- 6 Brown under a broiler, if desired.



Figure 3.18a: Sauté garnish ingredients.



Figure 3.18b: Frittata finished in a hot oven.

### **ESSENTIAL SKILLS SOUFFLÉED OMELET**

- 1 Whip the eggs until they are frothy. See Figure 3.19a. Add any seasonings and garnish ingredients.
- 2 Pour the egg mixture into a heated and oiled pan.
- 3 Cook the omelet until the edges and bottom are set. See Figure 3.19b.
- 4 Finish in a hot oven.

Tips for perfect omelets include the following:

- Always use high heat.
- Use the appropriate omelet pan (8 or 10 inches).



Figure 3.19a: Whip the eggs until they are frothy.



Figure 3.19b: Cook the omelet until the edges and bottom are set.

Other favorite egg dishes that can be carried over to lunch or dinner include quiche (KEESH) and soufflés (soo-FLAYs). **Quiche** is a savory egg custard baked in a crust. Blend eggs with milk or cream until smooth and then add a variety of other ingredients. In one traditional quiche, the Florentine, blend the eggs with spinach and onion, cheese (usually Gruyère or Swiss, but other cheeses can be used), and crisp bacon or cooked ham. Regardless of ingredients, season the mixture of eggs and other ingredients, pour it into an uncooked pie crust, bake it in a moderately heated oven, and serve it hot. Quiches are easy to reheat in a microwave oven just before serving.

**Soufflés** are made of eggs and can be either savory or sweet. While they can be served at any meal, soufflés take time to bake and must be made to order. Make a soufflé by enriching a sauce base (generally béchamel) with egg yolk, whipped egg whites, and flavorings. The egg whites cause the soufflé to puff during cooking. Soufflés are not difficult to prepare, but timing is everything. The kitchen staff and the serving staff must work together very closely to assure that the guest receives the soufflé while it is still hot and puffy. Cheese soufflés are very popular.

### ESSENTIAL SKILLS MAKING SOUFFLÉS

- 1 Prepare a base (usually a béchamel sauce) and add the flavoring.
- 2 Whip egg whites and fold the whites into the base. See Figure 3.20a.
- **3** Fill the molds. See Figure 3.20b.
- 4 Place the molds in a hot oven.
- 5 Once they are done, serve the soufflés immediately. See Figure 3.20c.



Figure 3.20a: Fold the whites into the base.



Figure 3.20b: Fill the molds.



Figure 3.20c: Serve soufflés immediately.

No matter how they are prepared, always follow safety steps to ensure properly cooked eggs:

- Handle pooled eggs carefully. Pooled eggs are eggs that are cracked open and combined in a container. Cook pooled eggs immediately after mixing, or store them at 41°F (5°C) or lower. Wash and sanitize the containers used to hold pooled eggs before making a new batch.
- Keep shell eggs in cold storage until ready for use. Take out only as many eggs as needed for immediate use.

# O KNOWLEDGE CHECK

1 Define each of the following terms:

- Albumen
- Omelet

• Yolk

- Frittata
- Chalazae
- Quiche
- Ramekins

- 2 Identify and define four different ways of cooking eggs.
- 3 What are pooled eggs?

# SUMMARY

#### In this chapter, you learned the following:

- There are many types of milk with various amounts of fat; the type of milk used is often based on the nutritional value desired. Lactose-free milk is available for people who are lactose intolerant. Plant-based milks are available for those who suffer a casein allergy.
- Cream contains far more fat than milk, ranging from light cream (minimum 18 percent) to heavy whipping cream (40 percent or higher). The type of cream used in cooking is based primarily on its fat content.
- Butter is made by mixing heavy cream at a very high speed. Butter itself must have at least 80 percent butterfat content; the remaining 20 percent is milk solids and water.
- The pasteurization process is what kills the bacteria in milk that could otherwise make people sick. All milk and milk products should be labeled Grade A, stored at 41°F (5°C) or lower, and handled using the FIFO (first-in, first-out) method. Any milk that has passed its use-by, sell-by, or expiration date should be thrown away.
- All cheese has three basic parts: water, fat, and protein. The amounts vary depending on the type of cheese. Cheese comes in three primary textures: soft, semisoft, and hard. Cheese can also be either fresh (unripened) or aged (ripened).
- Eggs are chosen by their grade (AA, A, or B) and size (ranging from peewee, the smallest, to jumbo, the largest).
- Eggs can be cooked using many different methods, including simmering, frying, poaching, and baking.







### CASE STUDY FOLLOW-UP

Refer back to the unit-opening case study, and answer these questions.

- Question 1: Eggs would be on any brunch menu. Considering quality, timing, and efficiency, what egg dishes would you put on Downtown Grille's brunch menu?
- Question 2: Cheese can be used to flavor many breakfast dishes. Think of three ways in which you might incorporate cheese into Downtown Grille's new brunch menu.

### CHAPTER ACTIVITIES

#### Language Arts: No Whey!

Cheese is made from the solid components of milk with the liquid whey removed. How does this work? Why does fresh milk remain liquid without solid particles falling out of the solution? How is cheese made? How long does it take? What are some of the potential pitfalls? Research cheese making in both small independent and large commercial operations. Write up your findings in a one-page paper.

#### Science: Green Eggs and Chemistry

Eggs have iron in the egg yolk, while the protein of the egg has some amino acids that contain sulfur. The sulfur is released during cooking. Free sulfur reacts with the iron to form a green compound called iron sulfide. When an egg is hard-cooked, the longer the egg simmers in the cooking water, the more sulfur is liberated. This drives the reaction, and the greenish iron sulfide appears at the borders of the yolk. This discoloration can be avoided by using correct cooking times for the altitude, removing the eggs promptly to a pan of cold water, and peeling the eggs as soon as they can be handled. Cook three hard-cooked eggs. Find a standard, reliable recipe and cook one egg exactly according to the recipe, and then move it to cold water. Cook another egg three minutes longer. Cook the third egg the correct amount of time, but simply remove the pan from the heat, leaving the egg in the hot water. After all three eggs have cooled, peel them and observe any differences in the color of the yolk.

#### Math: Weights and Measures

In speaking of weights and measures, it has been said that "a pint is a pound, the world around." Place a 1-pint measure on a portion scale (do not forget to zero or tare the scale), and weigh out 16 ounces of skim milk. Is the weight the same as its volume? If so, why do you think this is? Continue the same experiment with whole milk, light whipping cream, half-and-half, heavy whipping cream, and sour cream. Are the products equal in weight AND volume? If so, which ones? If not, why do you think that these measurements are different? What would cause a 16-ounce volume of liquid to be unequal to a 16-ounce weight of the same liquid?

#### Collaboration: The History of Dairy

Working alone or in a group, select a century. Research the production and use of dairy products in that time period. Pick a specific location: France, the United States, China, etc. Chart the production and usage of milk, eggs, and cheese in that time frame and area.

Compare your charts in class. Are there differences in usage based on area or culture? Were these products used more by the upper or lower classes? How were they used?

#### Career Readiness: From Milk to Ice Cream

Research the process of making ice cream using milk. Where does the milk come from? What happens to it? What is involved in the process, from start to finish? Create a PowerPoint or similar presentation that shows the steps involved.

#### Critical Thinking: Breaking Down Milk

When milk comes out of the cow, it is all one liquid. Milkfat, or cream, rises to the top and is skimmed off. Nonfat milk is sometimes called skim milk for this reason. Cream is collected and used for various recipes, including butter production. The difference between each of these is fat content. What are the fat limits on milk, cream, and butter? Create a graphic that shows the relationship between milk, cream, and butter.

### EXAM PREP QUESTIONS

# 1 The purpose of pasteurizing milk is to

- A kill pathogens.
- B break down milkfat.
- C add vitamins and minerals.
- D prevent spoilage by sunlight.

#### 2 Two nondairy milk options are

- A rice and soy milk.
- B skim and rice milk.
- C soy and lactose-free milk.
- D lactose-free and evaporated milk.

# 3 All milk products should be stored at what temperature?

- A 41°F (5°C) or lower
- B 43°F (6°C) or lower
- C 47°F (8°C) or lower
- D 51°F (11°C) or lower

# 4 What is the difference between ripened and unripened cheese?

- A Ripened cheese is typically sweeter than unripened cheese.
- B Ripened cheese is better for cooking than unripened cheese.
- C Ripened cheese is aged with bacteria, while unripened cheese is fresh.
- D Ripened cheese is processed and pasteurized, while unripened cheese is not.

# 5 Most recipes are based on what size of egg?

- A Small
- B Medium
- C Large
- D Extra large

#### 6 Pooled eggs should be stored at

- A 41°F (5°C) or lower.
- B 43°F (6°C) or lower.
- C 47°F (8°C) or lower.
- D 50°F (10°C) or lower.

#### 7 Baking is typically used in the cooking of which two types of eggs?

- A Shirred eggs and soufflés
- B Soufflés and coddled eggs
- C Poached and shirred eggs
- D Scrambled eggs and omelets

#### 8 Which cream item produces a greater yield and a longer shelf life for the products made with it?

- A Light whipping cream
- B Very heavy whipping cream
- C Light cream
- D Half-and-half

#### 9 Which product remains after churning the butter out of cream?

- A Traditional buttermilk
- B Cultured buttermilk
- C Yogurt
- D Crème fraîche

# 10 Why do many chefs clarify the butter they use for cooking?

- A Clarified butter has an extremely low smoke point.
- B Clarified butter provides the extra color required for many dishes.
- C Clarified butter has the milk solids and water removed, which may burn easily.
- D Clarified butter is not used in the industry.

### F

### RECIPE ASPARAGUS, MUSHROOM, AND CHEESE OMELET

COOKING TIME: 20 MINUTES • YIELD: ONE INDIVIDUAL OMELET



#### DIRECTIONS

- 1 Heat medium skillet over medium-high heat for a minute or two, until hot.
- Reduce heat to medium and add the butter, swirling it to coat the bottom of the pan evenly.
- 3 In a small bowl, use a fork to whisk together the eggs with the water and the pepper.
- 4 When butter is melted and sizzling, pour the egg mixture all at once into the pan.
- 5 Place the asparagus in one layer over the eggs, and place the sliced mushrooms down the center; sprinkle evenly with thyme.
- 6 Reduce heat to low, cover, and cook over low heat for about 3 minutes, until omelet is almost completely set.
- 7 Sprinkle evenly with the cheese, cover the pan, and continue to cook over low heat for another minute or two, until cheese is melted and omelet is set.
- 8 Take the omelet off the heat, and use a wide spatula to carefully fold the omelet in half.
- 9 Gently slide the omelet out of the pan and onto a warmed plate. Drizzle with any remaining melted butter from the pan, and garnish.

#### INGREDIENTS

2–3	Large eggs
1 tbsp	Water
1 dash	Ground black pepper
⅓—¼ tsp	Finely chopped fresh thyme
3–4	Asparagus spears, lightly steamed
1–2	Italian brown button mushrooms, in
	¼-inch-thick slices, lightly steamed
2 tbsp	Unsalted butter
¼ <b>сир</b>	Shredded cheddar cheese
1 sprig	Fresh thyme, for garnish (optional)

# RECIPE NUTRITIONAL CONTENT

Calories	412
% calories from fat	65
Total fat	29 g
Saturated fat	10 g
Cholesterol	660 mg
Sodium	879 mg
Carbohydrates	7 g
Dietary fiber	1 g
Protein	29 g
Vitamin A	820 IU
Vitamin C	15 mg
Calcium	94 mg
Iron	4 mg

Nutritional analysis provided by MasterCook®



#### COOKING TIME: 1 HOUR 20 MINUTES • YIELD: ONE 9-INCH QUICHE



#### DIRECTIONS

- 1 In a skillet over medium-high heat, cook the bacon until crisp; transfer bacon to a paper-towel-lined plate using a slotted spoon; let bacon drain.
- 2 Discard all but 1 tablespoon bacon drippings from pan.
- 3 Sauté onion for 5 minutes until soft and tender—do not brown; stir in parsley. Place onion and parsley mixture into a small stainless-steel bowl, and cool over an ice bath.
- 4 In a mixing bowl, whisk together the eggs, half-and-half, nutmeg, salt, and pepper.
- 5 Place chilled onion mixture and bacon in bottom of pie crust; cover with cheese.
- 6 Pour egg mixture into par-baked pie shell.
- 7 Bake in an oven at 350°F (177°C) for about 35–40 minutes or until a knife inserted into the center comes out clean (cover pie crust edges as appropriate if crust becomes too dark).
- 8 Remove quiche from oven. Let stand for 10 minutes.
- 9 Cut into wedges and serve.

#### INGREDIENTS

5 slices	Bacon, small dice
1 cup	Small-diced onion
1 tbsp	Finely chopped parsley
3	Large eggs
12 oz	Half-and-half
¼ tsp	Dry mustard
1 dash	Ground nutmeg
½ tsp	Kosher salt
¼ tsp	Fresh ground black pepper
1¼ cups	Grated Gruyère cheese
1	(9-inch) pie shell, partially bake

d

# RECIPE NUTRITIONAL CONTENT

Calories	284
% calories from fat	64
Total fat	20 g
Saturated fat	9 g
Cholesterol	117 mg
Sodium	428 mg
Carbohydrates	14 g
Dietary fiber	1 g
Protein	11 g
Vitamin A	506 IU
Vitamin C	4 mg
Calcium	243 mg
Iron	1 mg

Nutritional analysis provided by MasterCook®

# RECIPE EGGS BENEDICT

COOKING TIME: 25 MINUTES • YIELD: 8 SERVINGS



#### DIRECTIONS

- Prepare hollandaise: Fill the bottom of a double boiler partway with water. Make sure that water does not touch the top pan. Bring water to a very low simmer. In the top of the double boiler, whisk together egg yolks, lemon juice, cayenne pepper, Worcestershire sauce, hot sauce, and 1 tablespoon water. Cook over water bath until yolk mixture becomes pale yellow and has a ribbon-like, thick texture. Remove entire water bath from stove.
- 2 Add the melted butter to the egg yolk mixture 1 or 2 tablespoons at a time while whisking the yolks constantly. If the hollandaise begins to get too thick, add a teaspoon or two of warm water. Continue whisking until all butter is incorporated. Whisk in salt. Remove top pan from water bath. Keep sauce warm.
- 3 To poach eggs: Place 2 quarts of water into a saucepan. Bring water to a gentle simmer, and add vinegar. Carefully break eggs into a ramekin; place one egg at a time, gently, into simmering water, and poach for 2½ to 3 minutes. Yolks should still be soft in the center, with whites completely set. Remove eggs from water with a slotted spoon and set on a warm plate.
- 4 While eggs are poaching, brown the Canadian-style bacon in a medium skillet over medium-high heat and toast the English muffins.
- 5 Spread the toasted muffins with softened butter, and top each one with a slice of Canadian-style bacon, followed by one poached egg. Place 2 muffins on each plate and drizzle with hollandaise sauce. Sprinkle with chopped chives and serve.

#### **INGREDIENTS**

4	Egg yolks
3½ tbsp	Lemon juice
1 pinch	Ground cayenne pepper
⅓ tsp	Worcestershire sauce
Few drops	Hot sauce
1 tbsp	Water
l cup	Clarified butter, melted
¼ tsp	Salt
8	Eggs
2 qt	Water
1 tbsp	Distilled white vinegar
8 strips	Canadian-style bacon
4	English muffins, split and toasted
2 tbsp	Butter, softened
	Chives chopped for garnish

### RECIPE NUTRITIONAL CONTENT

Calories	467
% calories from fat	74
Total fat	38 g
Saturated fat	21 g
Cholesterol	406 mg
Sodium	709 mg
Carbohydrates	15 g
Dietary fiber	1 g
Protein	16 g
Vitamin A	1482 IU
Vitamin C	9 mg
Calcium	97 mg
Iron	2 mg

Nutritional analysis provided by MasterCook®