Pasteurization is heating milk to destroy any pathogens present and to make the milk last longer without spoiling. It is a process invented by a scientist Louis Pasteur to make milk supplies safe. Before pasteurization, thousands of children died every year from foodborne illness in milk.

Homogenization is a process where milk is strained to break down the fat. This lets it sit on the shelf in the refrigerator without separating into milk and cream layers.

Lactose intolerance is a condition where some people’s bodies do not produce the enzyme necessary to digest the sugar in milk (lactose). People who have lactose intolerance and drink milk or eat dairy products experience gas, cramping and diarrhea. You can buy some products that are treated to break down the lactose – so lactose intolerant people can eat them.

A casein or milk allergy is a condition where people’s immune systems react to the proteins in milk. Symptoms of a milk allergy vary from person to person, but may include congestion, sneezing, hives, swelling and trouble breathing.

Lactose intolerance is a digestive thing involves the stomach and intestines. Milk allergy is an immune system thing that involves the blood stream.

There are two types of buttermilk. True buttermilk is the liquid that is left over after cream is used to make butter. The buttermilk that you buy in the grocery is cultured. It is a milk product that is made tangy and thick by adding a culture to milk.

UHT milk is milk that is processed at very high temperatures and then placed into sterilized containers. It is shelf-stable at room temperature, meaning it does not have to be kept in the refrigerator and lasts a very long time.

There are very noticeable flavor differences between UHT milk and fresh milk.

Powdered milk is fat free because it has to be. Milk is dried – that is all the liquid is removed. Dry powdered milk is shelf stable. Once it has water added back to it – it must be refrigerated. Dried milk has a very different taste from fresh milk.

Lactose free milk is treated so that lactose intolerant people can drink it.

Soy, rice and almond milk are not true milks. They are white colored beverages made from the product that gives them their name. They are a milk substitute for people with dairy allergies or those who must watch their cholesterol. These commercially marketed products are enriched with vitamins, minerals and calcium to make them competitive with milk in nutrition.

Milk should be received at 41F or lower. It should smell clean and milky. Milk that is too sweet, smells or taste sour, bitter or moldy should be rejected.

It should be labeled “Grade A” and should be kept refrigerated at 41 or lower at all times. It should be rotated so that the oldest milk is used first (FIFO). Milk should remain good to use after its sell by date, but should be checked carefully. Any suspicious milk should be discarded.

Cream contains a lot more fat than milk so is much higher in calories. It is used for its richness and very silky and fatty mouth feel.

Light cream is the lowest fat product that will whip to make whipped cream. Heavy whipping Cream and Very Heavy whipping cream are both very rich. Half and half and coffee cream will not whip. They are used for coffee creamer and for uses where richness is desired, but cream is not necessary.

Sour cream is cream that has been cultured to thicken it and add a tangy flavor. Sour Cream cannot be cooked over heat or it curdles (forms lumps and separates). It cannot be rescued after separating under heat.

Butter comes in sweet or cultured varieties. Sweet butter may be salted or unsalted – cultures butter is also called European butter. It is also called Plugra (which is a popular brand name).

It is richer and has more fat than sweet butter.

Salt was traditionally added to butter to preserve it and make it last longer. Now sweet butter is available salted or unsalted.

Clarified butter has been heated and the water and milk solids removed. This pure fat butter has a higher smoke point than regular butter. It is popular in Indian food preparations.

The smoke point is the temperature at which an oil begins to smoke. If you heat an oil past the smoke point it breaks down and changes chemically. It make also burst into flames. (This should be avoided at all costs.)

A butter substitute is something designed to replace butter in cooking or eating. Most butter substitutes are made to reduce the fat content. Butter is very high in fat.

Margarine was the first widespread butter substitute available. It was originally called oleo. It is made by making vegetable oils solid by treating them with hydrogen. This process is called hydrogenation. At least 80 percent of margarine’s calories must come from fat. If it doesn’t have that, then it is called a spread. Shedd is famous for its tubs of spread. It is packaged in tubs because it won’t hold its shape in sticks.

All cheeses have three parts – fat, water and protein. Cheese is made from milk that is treated with rennet or another culture to thicken it and separate the curds from the whey. Remember Little Miss Muffet? She was eating her curds and whey. Now you know what that means.

This process of separating the curds from whey with a culture is called curdling.

When cheeses are first made they are fresh. These fresh cheeses like mozzarella, goat cheese, cottage cheese, brie and cream cheese.

Ripened cheeses are held longer and aged. They also have their flavors and textures changed by bacteria. Some like blue cheese have the bacteria added. Other are ripened by natural bacteria present in the cheese. Cheddar, Swiss, Parmesan are all ripened cheeses.

Generally fresh or unripened cheeses are soft, spreadable and wet. Ripe cheeses are firm and dry. Some are so dry they are crumbly.

Eggs are marketed as Incredible and Nature’s Perfect Food. Eggs are very nutritious because the egg is part of the beginning of life.

Most of the eggs that American’s eat are chicken eggs, but eggs are also harvested from geese, ducks and even ostriches.

Unless an American recipe says otherwise, it means a large egg when it says, “Egg.”

Fresh eggs in the shell are good for boiling and other preparations where the whole egg is desirable. Breakfast cooking uses lots of shell eggs. You can buy pasteurized shell eggs which are good for high-risk populations (hospitals and nursing homes) or recipes that call for raw eggs, like homemade mayonnaise.

Frozen eggs are good for scrambled eggs, omelets and baking.

Dried eggs were actually included in the first cake mixes – so all you had to do was add water or milk. But homemakers objected that it didn’t seem like cooking. So out came the dried eggs. Dried eggs are used for baking. They are very perishable and should be refrigerated.

Egg substitutes are made of egg whites and are fat free. They are important for people who need cholesterol free food. They are suitable for baking, but not much else.

Shell eggs are the oddball. They can be received at 45F. The way to check is to take the temperature of the truck on which they were shipped. You can take the temperature of the inside of a shell egg without breaking it. Eggs should be kept refrigerated.

Cooked eggs should be cooked to 145F for safety if they are served immediately. Eggs that are held should be cooked to 155F.

Pooled eggs are shell eggs that have been cracked and then put together in bowl or container. Pooled eggs should be kept at safe temperatures and cooked to safe temperatures. The container should be washed when empty – even if more eggs will be placed in it.

When handling eggs, care should be taken not to time temperature abuse them and not to cross contaminate other foods with the raw egg product. Take out only as many eggs as you need and leave the others in the refrigerator.

**Breakfast Foods**

Pancakes are cooked in a frying pan or on a griddle. Waffles are cooked in specials irons that give them dimples and cook both sides at once. Crepes are fancy very thin pancakes from France. They are made from a much thinner batter that swirled around a frying pan and then browned lightly on both sides. Crepes are served folded or rolled and may be filled with savory fillings or sweet ones. Crepes Suzette is a famous French Crepe dish.

French toast is bread that is dipped in an egg mixture and then fried like a pancake. It is served in similar ways to toast.

Hash is a mixture of chopped meat, potatoes and onions. It is often fried until the potatoes and meat are crisped. Corned beef is a popular meat to mix into hash. That is called Corned Beef Hash.

The difference in hashed brown potatoes and home fries is the state of the potato when it is prepared for service. In hashed brown potatoes, they are pre-cooked and then fried crisp in strips, cubes or shreds. In home fries the potatoes are cut and prepared from raw.

The word cereal is an ancient food word. It has been with us much, much longer than Cheerios or Rice Krispies. Cereal used to be the word used to describe a dish made from cereal grains, like wheat, corn, rice, barley, millet or oats. Oatmeal is a hot cereal. So is cream of wheat and polenta. Polenta is the fancy Italian word for grits or corn meal mush. Cereal for cooking and serving hot comes in two forms whole, cracked or flakes is one type. Oatmeal, cracked wheat and bulgar fall into this category. The other time is granular. This is ground finer and includes farina, cream of wheat and cornmeal.

Americans prefer a medium roast coffee. Europeans prefer stronger roasts. The way people drink coffee is very individual. Some go black (these people usually prefer a smooth mild roast.) Some do milk only; some sugar only and some with milk and sugar.

Starbucks and other coffee bars have popularized a wide variety of coffee drinks served hot or cold.

Hold brewed coffee only one hour. After that it gets very strong and bitter.

**Sandwiches**

Hot sandwiches are often served with grilled or toasted bread and a not filling. Melted cheese often makes hot sandwiches rich.

One of the most famous open-faced sandwiches is a Hot Brown, it is a Kentucky recipe. Research it on the Internet or in cookbooks to learn more about it.

Grilled or toasted sandwiches are pan-fried or prepared in a sandwich press. The George Foreman grill is basically a sandwich press. A Panini is an Italian grilled sandwich. Sometimes sandwich presses are now called Panini Presses.

Pizza is bread with a topping/filling. The calzone is more sandwich shaped with the bread on the outside. I’ll leave it up to you to decide if pizza really is a sandwich.

Cold sandwiches are bread, filling and spread – not heated. Submarines are also called hoagies or subs or heroes. Around here we call the subs (probably because of Subway.) Submarines are not a traditional Southern food. They were brought here by Italian immigrants.

A wrap is flat bread wrapped around some kind of filling.

The tried-and-true club sandwich is the most famous multi-decker. It is bacon, turkey ham and cheese with lettuce tomato and mayonnaise. It usually involves three slices of bread and two layers of filling. The club or any other large sandwich should be cut before serving. Clubs are usually cut in half diagonally and then again to form four small triangles.

Canapés are usually small elaborately prepared bite-sized foods. Canapes are often served on crackers or special breads baked into small squares. This bread is called “cocktail” sized. Cocktail Rye is a common type to find in stores. Canapés should be pretty, flavorful and hold well. Very wet toppings are not going to make good canapés.

The spread of a sandwich whether, mayonnaise, mustard or butter is designed to protect the bread from the moisture of the filling and keep the bread from getting soggy.

Butter as a sandwich condiment (a condiment is a spread used to add flavor to a sandwich or other item) is more of a British tradition. Small sandwiches without crusts called Tea sandwiches often feature buttered breads.

Flavor butter with herbs, spices, onions or garlic to add zip to a sandwich. These flavored butters are called compound butters.

Portion control is important in sandwich prep because using too much of the ingredients cuts down on profits. A sandwich station should have good mis en place. Proper equipment for preparation, storage and refrigeration and be easy to keep clean.

Bread should not be refrigerated. Refrigerating bread speeds up staling. Bread should be stored in plastic bags so it doesn’t get soggy or dry out.

Whew! Aren’t we all glad that’s over?