FOOD SAFETY

Anna and **Bill** were watching TV. They saw a special news program about family safety. **Anna** and **Bill** weren't worried. They were careful parents. They used seat belts. They locked their doors. They told **Kay** and **Tim**, their children**,** not to talk to strangers. But, this program was different. This program was about **food** safety. **Anna** and **Bill** were surprised. They didn't know their home might not be a safe place to eat. They watched the whole show.

Anna and **Bill** already knew that people can get sick by eating **food** that has **bacteria**. They didn't know that over half of **foodborne illnesses** may come from home kitchens. They learned that some **foods** grow **bacteria** more easily than others**.** Such **bacteria** grow quickly at room **temperatures**. Moist **foods** that contain **protein** are most risky. Such **foods** are called **perishable foods**. **Anna** and **Bill** learned that **food** safety involves how **food** is chosen, stored, handled, and prepared.

FOOD SELECTION

First, **Anna** learned that she needs to shop differently. Anna learned that cold **foods** need to be kept cold. When **grocery** shopping, she should choose **frozen foods**, **meat**, **seafood**, or **poultry** products last. She learned to separate **raw meat**, **poultry** and **seafood** from other **food** in the shopping cart. These **foods** should be placed in separate plastic bags to keep their juices from dripping on other **foods**.

Anna should not put **meat**, **seafood**, **poultry**, and other **perishables** in the car's trunk where they can get too hot. She also will take **groceries** straight home. If she is more than 30 minutes away from home, she will use a **cooler** for **perishables**. When she gets home, she quickly will put **frozen foods** in the **freezer** first. Next, Anna will put other cold **foods** such as **milk**, **lunch meat,** and **eggs** in the **refrigerator** as soon as possible.

Anna's family likes **seafood.** Anna should buy **fresh seafood** at the **grocery** or **seafood** market**,** not from a roadside stand. **Anna** knows to buy from dealers who **refrigerate** or **ice** their products properly. After **Anna** buys **seafood**, she puts it on **ice**, in the **refrigerator**, or in the **freezer** right away. When **Anna** buys **frozen seafood**, she checks the packages. She makes sure they are not open or torn. She avoids packages that are stacked above the **frost line** in the store's **freezer**. She also avoids packages that look **frosty** or **icy**. These may have been stored for a long time. They could have **thawed** and been **refrozen**. Anna sometimes buys **cooked seafood**. She learned that the **cooked seafood** should not be displayed in the same case as the **raw fish**. **Raw fish** can **contaminate** the **cooked fish**.

Anna and **Bill** never thought much about **food** storage. They bought **food**. They took it home. They used it. They learned that how they store **food** is important. It's also important when they take **food** to eat at school or at work.

HOME. Anna and **Bill** learned that their **refrigerator** and **freezer** must be cold enough to store **food** safely. The **refrigerator** needs to be set at 40°F or colder. The **freezer** needs to be set at 0°F or colder. **Anna** should **refrigerate** or **freeze perishables**, **prepared** foods, and **leftovers** within 2 hours or less. **Bill** must not put too much in the **refrigerator**. Cold air must circulate to keep **food** safe.

Now **Anna** and **Bill** store **raw meat, fish**, and **poultry** on the bottom shelf in the **refrigerator.** They know that placing such items on the bottom shelf keeps the **raw food** juices from dripping on **foods** that are ready to eat. They use the following table to know how long to store **foods**.

PRODUCT	**STORAGE PERIOD: In Refrigerator (40° F)**	**STORAGE PERIOD: In Freezer (0° F)**
Fresh Meat		
Beef: Ground	1-2 days	3-4 months
Beef: Steaks and roasts	3-5 days	6-12 months
Pork: Chops	3-5 days	4-6 months
Pork: Ground	1-2 days	3-4 months
Pork: Roasts	3-5 days	4-6 months
Fish: Lean (such as cod, flounder, haddock)	1-2 days	up to 6 months

Fish: Fatty (such as blue, catfish, perch, salmon)	1-2 days	2-3 months
Chicken: Whole	1-2 days	12 months
Chicken: Parts	1-2 days	9 months
Chicken: Giblets	1-2 days	3-4 months
Lunch meat	3-5 days	1-2 months
Sausage	1-2 days	1-2 months
Gravy	1-2 days	2-3 months
Cheese: Swiss, brick, and processed	3-4 weeks	*
Milk	5 days after the expiration date	1 month
Ice cream, ice milk	-	2-4 months
Eggs: Fresh in shell	3 weeks after the expiration date	-
Eggs: Hard-boiled	1 week	-
Cooked ground meat and ground poultry (hamburgers, meat loaf and dishes containing ground meats)	3 to 4 days	2-3 months

BROWN BAG LUNCHES. **Bill** takes his lunch to work. To save time in the mornings, **Anna** makes lunches the night before. She keeps them in the **refrigerator** overnight. **Anna** learned that she should also get small **freezer gel packs** and **insulated** lunch boxes or bags. **Anna** also can **freeze** single-sized **juice boxes** overnight. The juice will **thaw** by lunchtime, but still keep **perishable foods** cold.

Anna learned that some **foods** do not need to be kept cold. They are called **shelf-stable foods**. These include whole **cereal, potato chips, crackers**, **peanut butter sandwiches**, **cookies**, unopened **juice** boxes, commercially dried **fruit**, and other **foods** found on **grocery** shelves. Some fresh **fruits** and **vegetables** do not need to be **refrigerated** as long as the room **temperature** is not too hot. **Bill**, **Tim**, and **Kay** learned that they should store their lunches in a **cooler** away from sunlight or heat. They should discard any **perishable foods** they don't eat.

Anna knows that she needs to keep the lunch containers clean. She should wash plastic boxes with hot **water** and soap each day. She should clean **insulated** bags as suggested by the manufacturer. The children should put backpacks on the floor, not on the counters or kitchen table. Backpacks carry **germs**.

HANDLING FOOD

Anna and **Bill** learned that storing **food** properly is not the only thing they need to do to keep **food** safe. They need to handle **food** safely, too. They need to wash their hands often and keep the kitchen clean.

HANDWASHING. **Anna** learned that clean hands are key to safe **food** handling. **Anna** should wash before touching **utensils** used to prepare **foods** or

vegetables and **fruits** that are served **raw**. She should wash after working with **raw meat**, **fish**, or **poultry**. She should wash after going to the bathroom or changing a diaper. She should wash after sneezing, coughing, or smoking. She should wash after taking out the garbage or petting a cat or dog. When she has an infection or a cut on her hand, she should wear rubber or plastic gloves. She should use disposable gloves and change gloves between tasks.

Anna and **Bill** teach **Tim** and **Kay** how to wash their hands properly. First, they should wet hands with warm **water**. Using **soap**, they should rub hands together and rub between fingers, and over wrists and thumbs. They should clean under fingernails. Hands should be washed for about 20 seconds. This is about the time it takes to hum "Happy Birthday" or recite the alphabet. They should rinse hands with clean, warm running **water** and dry with paper towels. They should turn off the **water** faucet with the paper towel to keep hands clean.

KITCHEN CLEANLINESS. Anna and **Bill** know that they have to keep the kitchen clean. They learned they must wash cutting boards, knives, **utensils**, sink and counter tops in hot **soapy water** after preparing each **food** item and before going on to prepare the next one. They should use plastic cutting boards instead of wooden ones. They should have two boards, one for **raw meat** and another one for other **foods**. They should use paper towels to clean up kitchen surfaces. Touching a kitchen cloth or towel when hands are dirty and then using the dishrag or towel to wipe counters or tables spreads **germs**. When **Anna** and

Bill do use kitchen cloths and towels, they should change them daily or more often. They should wash them often using the hot cycle of the washing machine. **Anna** and **Bill** already knew to clean the inside of the **refrigerator** and **microwave** regularly. They did not know they needed to clean and **sanitize** the kitchen sink drain, disposal and connecting pipe regularly, too. They learned that **bacteria** can grow quickly in these places.

PREPARING FOODS

Anna learned that **food** can become unsafe when it is prepared. **Anna** learned new ways to get **food** ready, cook it, and save **leftovers**.

THAWING. Anna used to let **food thaw** on the counter. She learned that she should never **thaw food** that way again. Instead, she should put **foods** in the **refrigerator** to **thaw** overnight. This step maintains **food** quality and is safer. If **Anna** needs to **thaw** something quickly, she can put **meat** or **poultry** in airtight packaging in cold **wate**r. She must change the **water** every 30 minutes. She learned that she should **thaw** food in the **microwav**e *only* if it will be cooked right away.

MARINATING. Like **thawing**, food should be **marinated** in the **refrigerator**, not on the counter. If some of the **marinade** is to be used as a **sauce** on the cooked **food,** Anna should keep it separate. **Anna** can't reuse **marinade** after it's been used with **raw meat** or **poultry**.

AVOIDING CROSS CONTAMINATION. **Cross-contamination** occurs when **germs** spread from one **food** to another. This happens most often when **raw** or **unclean foods** touch **foods** that will not be **cooked** (or **reheated**) before eating. **Anna** learned that anything that **eggs**, **raw meat**, **poultry**, or **seafood** touches should be washed with hot **soapy water**. This includes cutting boards, counters, **utensils**, and hands. She should not put cooked **foods** on the same plate that held **raw meat, poultry** or **seafood**. She should use separate cutting boards for **raw meats** and **vegetables**. She also should store **raw meat** in the **refrigerator** below other **foods**.

COOKING. **Anna** and **Bill** learned that thorough cooking makes **foods safe** because it kills **bacteria.**

Meats should be cooked to the right **temperature**. Whenever possible, **Anna** should use a **meat thermometer**. It shows the **temperature** inside the **meat**. To check the **temperature** of **meat**, **Anna** should place the **meat thermometer** in the thickest part of the **meat** and away from the **bone**. Anna has used a **meat thermometer** before. She knows how to wash the **meat thermometer** between uses. She knows how to read the **meat thermometer**. The **meat thermometer** has numbers on it. The numbers show **degrees** of **temperature**. On **Anna's meat thermometer**, the numbers increase by 20 **degrees**. Lines show exact **degrees**. Some lines are large. Some are small. Each line equals 5 **degrees**.

Figure 1 shows a **meat thermometer**. **Beef**, **veal** and **lamb** steaks and roasts should be cooked to 145°F. **Pork** and **ground beef** should be cooked to 155° F. **Poultry** should reach 165° F. **Fish** should be cooked until it flakes easily with a fork.

FIGURE 1 Meat Thermometer

Eggs must be cooked thoroughly, too. **Anna** thought that only dirty or cracked **eggs** could be bad. She learned that you can't tell if an **egg** has **bacteria** just by looking at it. It is risky to eat **undercooked eggs**. Anna should cook both the **egg yolk** and **white** until firm. Eating **raw** cookie dough, uncooked cake batter, or any other mixture containing **raw eggs** also is risky. Anna can use **pasteurized eggs** or **egg substitutes** in foods like homemade **ice cream** and **mayonnaise**.

Anna learned that when using the **microwave**, she should stop the microwave several times during the cooking process and turn the dish. She also should follow recommended **standing times**. These steps help **foods** cook properly.

SAVING LEFTOVERS. The program said that it is important to cool and **reheat foods** the right way to keep them **safe**. The program said improper cooling of **food** is the biggest cause of **foodborne illness**.

Anna learned that she should **refrigerate** or **freeze leftovers** right after a **meal**. She also learned that she should not let **food** stay at room **temperature** for more than 2 hours or for 1 hour in 90° weather.

When in doubt, Anna should throw it out. Large pieces of **meat** or **poultry** should be cut into pieces 4 pounds or less to cool. **Anna** should pour thick **foods** like **soup**, **beans**, and **stew** into shallow pans no more than 2 inches deep and place in an ice bath to cool them quickly. She should date **leftovers** so they can be used within a safe time. They are generally safe for three to five days. **Leftovers** should be **reheated** to 165° F or above.

EATING OUT

The last part of the TV program was about **food** safety when eating out. **Anna** and **Bill** were surprised to learn that about half of every **food** dollar in the US is spent outside the home. This includes take-out **foods** from **restaurants** and ready–to-eat **foods** from **supermarkets**.

Bill and **Anna** were already careful to check out the overall appearance of the **restaurant** or **store**. They looked at who worked there to see if they were neat

and clean. They learned that if they had any doubts, they should eat elsewhere. They should order carefully.

They learned that they should apply what they learned about home safety to **restaurants**. They should order **hamburgers well-done** and **eggs** cooked thoroughly. They should be sure that plates, glasses, and **utensils** are clean. **Fresh foods**—like **salads** or **fruit**—should look and smell **fresh**. Hot **foods** should be hot. Cold **foods** should be chilled. When they get **leftovers** in a "doggie bag," they get the **food** home and in the **refrigerator** within 1 hour.

WHEN THE POWER GOES OUT

Sometimes the power goes out after a storm or hurricane. When this happens, **Anna** learned that the family must keep the **refrigerator** door closed as much as possible to keep the cold air inside. Refrigerated food should be safe as long as the power is out no more than four hours. If the power will be out for several days, Anna should get **ice** to pack inside the refrigerator. **Cooked** and **perishable foods** are most at risk. Discard any perishable food such as meat, poultry, fish, eggs, and leftovers that have been above 40°F for 2 hours. Some **foods**, like **fruits** and **vegetables**, and hard **cheeses** may mold and should be thrown out. **Butter** or **margarine** may become rancid and should be thrown out. **Foods** like unopened bottled **juices** and **condiments** are **safe**.

A full **freezer** can stay at **freezing temperatures** for about 2 days. A half-full **freezer** stays at freezing **temperatures** for about 1 day. **Frozen** foods that are still **frozen** are OK. If potentially risky **foods** (such as **meats** or **casseroles**) **thaw** but are still cold or have **ice** crystals on them, **Anna** should cook them as soon as possible. The cooked **foods** then can be **frozen.** Discard any perishable food such as meat, poultry, fish, eggs, and leftovers that have been above 40°F for 2 hours.

Anna learned that she cannot depend on how a **food** looks or smells. She should not taste **suspect foods**. **Anna** remembers what to do with the following rhyme: When in doubt, throw it out.

Now **Anna** and **Bill** know what to do. They will change the way they choose, store, handle and prepare **food**. They will make their home **safer** for their family. They will also tell their friends and relatives about **food** safety. **Food safety** is important for everyone.