

Cooperative Extension

Beware of Kitchen Pests

Daryl L. Minch, FCHS Educator, Somerset County

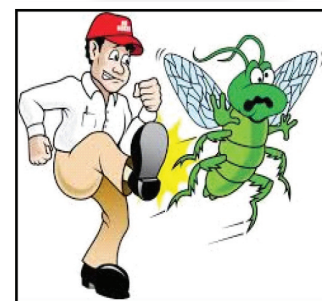
It's not the first time, nor will it be the last, that the dreaded crawly things appeared in my food. At first I thought it was a chance occurrence; then they appeared again. I had a problem. I had kitchen pests, specifically grain weevils. Adults cringe when they find insects in their food; kids say "gross", "cool" or "may I eat one?" In truth, eating them will not harm you. Eating insects is trendy and common in some parts of the world. They provide protein and crunch. However, like most people, I do not want them in my food or pantry!

Pantry pests are not uncommon and they are not a reflection of anyone's housekeeping skills. These insects lay their eggs on/in grains and given the right time and conditions they hatch, eat the food and grow, become adults, mate and lay more eggs. Some of the adults fly and some of the larvae spin cocoons to pupate. They get into food anywhere along the food chain – during growth, harvest, or storage in the warehouse, store or your home. Many hide in packaging, chew through plastic bags and wrapping, and seek cover in the crevasses of shelves and walls. Start with a few and soon everything is infested. Removing infected food, packaging and cleaning is essential to eradication.

I started by reading several Extension publications and then began my all-day project. It took me a long time because (a) I keep a lot of food in my closet pantry (I'm ready for any emergency – culinary, storm or natural disaster) and (b) I should have inspected everything after I saw the first bugs! Below are my "lessons learned" for protecting food from pests and getting rid of them if and when you find them.

- ✓ **Start early in the day;** it may take a while. Play your favorite music. Get someone to help you.
- ✓ **Gather supplies:** garbage bags, vacuum, cleaning solution & cloth (I used an all-purpose household cleaner), plastic or glass food storage containers, scissors, freezer weight plastic bags (quart, gallon and 2-gallon size), markers or China marker (a waxy pencil) and/or masking tape to label repackaged food.
- ✓ **You will need to empty** the entire closet or cabinet and perhaps adjacent cabinets.
- ✓ **Jarred and canned food should not be a problem.** However, it's a good time to check food expiration dates and wipe off any dust. If labels are loose, make sure you don't see any insects. If you do, remove the label (discard after noting needed information), wash the can, then label and date with a permanent marker.
- ✓ **Inspect every paper or cardboard package.** Any with noticeable insects go straight into the garbage bag. Keep it closed to prevent insect escape.

continued on page 7



In This ISSUE

Beware of Kitchen Pests	1,7
Fad Diet, Bad Diet? The Truth about the Gluten-Free Trend	2
The Importance of a Good Night's Sleep and Obesity	3
Hydrate at the Right Rate!	4
Proposed Changes on the Nutrition Facts Label: What can we Expect ?	5
Retirement Planning Across the Generations	6-7
Grilling Essential: Food Thermometers	8

The Truth about the Gluten-Free Trend

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Recently, it seems that following a gluten-free diet by choice is a prevalent nutritional trend; however could this diet be causing more harm than good? Gluten is made up of the two proteins glutenin and gliadin, which are found primarily in food products containing wheat, barley or rye. These proteins are an integral part of food products for maintaining their shape and structure. Eliminating gluten from one's diet is the sole treatment option for people with Celiac Disease or gluten sensitivity. Celiac Disease is an autoimmune disorder that is characterized by structural damage of the small intestine caused by the ingestion of gluten and may present unpleasant gastrointestinal symptoms, while gluten sensitivity presents similar symptoms without intestinal damage. It is not clear why this elimination diet has become so popular through media attention when only 1% of Americans actually suffer from Celiac Disease, but it is important to know the facts before jumping on the bandwagon.

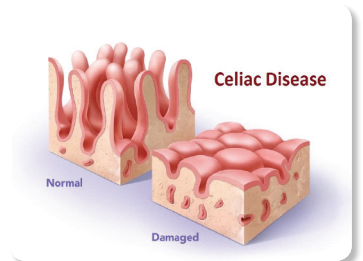
One common misconception is that following a gluten-free diet will promote weight loss, however evidence-based scientific research to support this does not yet exist. As a matter of fact, research has confirmed that starting a gluten-free diet has caused weight gain in Celiac patients, which may be due to increased consumption of grains that are prepared with gluten-free ingredients, among other factors. When comparing grain products such as breads, pretzels, or crackers with their gluten-free alternatives, it is evident that many gluten-free products are higher in calories, total fat and sugar. For example, according to the USDA National Nutrient Database for Standard Reference, one 29 gram slice of whole wheat bread contains 71 calories, 0.9 grams of total fat and 1.2 grams of sugar, while one 25 gram slice of gluten-free whole grain bread contains 77 calories, 2.3 grams of total fat and 2.45 grams of sugar.

Additionally, one of the top reasons a person may follow a gluten-free diet is because they believe it is overall healthier than consuming gluten-containing foods. Again, while there

is no such research that supports this claim, following this elimination diet may increase the risk of vitamin and mineral deficiencies. Taking a look again at a slice of gluten-free bread, it contains approximately 29% less fiber, 72% less iron, 59% less thiamin, 71% less niacin and 72% less zinc than a slice of commercially prepared whole wheat bread. Further research must be conducted in order to determine if a gluten-free diet is beneficial beyond its important role in the Celiac and gluten sensitive population.



If you are still unsure whether a gluten-free diet is beneficial for you, getting tested for Celiac Disease or for a food allergy may be the next step. The National Institute of Health's best practice clinical guidelines state that a double-blind placebo-controlled oral food challenge following an in-depth medical history and physical exam is the gold standard for the diagnosis and management of food allergies, however one test is not enough on which to base a diagnosis. Before starting an elimination diet and for more information contact your physician or a Registered Dietitian/Nutritionist.



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The Importance of a Good Night's Sleep and Obesity

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Obesity is a growing epidemic in our nation with 35% of adults and 17% of children having a body mass index (BMI) placing them in an obese category, according to the Centers for Disease Control and Prevention (CDC). Poor nutrition and lack of physical activity play a large role in this epidemic, but one cannot overlook limited sleep as a potential contributor to an obesogenic environment.



Sleep is particularly important for children as research has shown that children with limited amounts of sleep tend to weigh more and have an increased risk for future chronic diseases like type two diabetes.

One study by Magee and Hale reported that in 2009, 71% of children between the ages of 8 and 18 had a television, 50% had a gaming console, and 33% had access to the internet from their bedrooms. Parents may not be aware that their children have technology within their reach at night and are sleeping less. The Academy of Nutrition and Dietetics recommends setting a bedtime routine for your child to help them ease into sleep including a warm bath or story at bedtime. This routine may help in transitioning to a more relaxed state before bedtime without the use of glowing screens or bright lights. According to the Sleep Foundation, exposure to light activates a nerve pathway in the brain which may make it harder to fall asleep or stay asleep.



Limited sleep may cause an increase in fatigue, reducing the amount of daily physical activity and encourage poor food choices. Staying awake for longer amounts of time are linked to higher consumption of fat in the diet and an increased

consumption of calories before bedtime. One study indicated that there may be a relationship between sleep deprivation and an increase in calorie consumption. The study found the average caloric consumption of those that were sleep deprived increased by 549 additional calories over the control group. Other studies, including some at Rutgers, have found an increase in ghrelin, a hormone that increases our appetite, along with a decrease in leptin, a hormone that decreases our appetite. However, more research needs to confirm that changes in leptin and ghrelin hormones are the result of over-eating due to sleep deprivation.

Obesity caused by increased calories in the diet, could potentially lead to type two diabetes, stroke, heart disease, and certain types of cancers. The CDC estimated the annual cost of obesity related illness in 2008 to be near \$147 billion dollars. The high levels of obesity and the startling rate of healthcare costs are a cause for concern of all Americans. It is important to make sure we are taking care of ourselves and our overall health including: adequate sleep, sufficient daily physical activity, and the consumption of nutrient dense foods. These behavior changes should help to improve the health of individuals and families and help to reduce the levels of obesity in our country. Take small steps to make sure you and your family get sufficient sleep daily.

Tips for a Good Night's Sleep

Healthy sleep habits can make a big difference in your quality of life.

These sleep practices, if followed consistently, can help you enjoy the benefits of good sleep:

- Stick to a sleep schedule of the same bedtime and wake up time, even on the weekends. This helps to regulate your body's clock and could help you fall asleep and stay asleep for the night.
- Practice a relaxing bedtime ritual. A relaxing, routine activity right before bedtime helps separate your sleep time from the rest of your day. Avoid bright lights and activities that wind you up with stress, anxiety or even excitement. All of these can make it hard to fall asleep, get sound and deep sleep, or remain asleep.
- Avoid naps, especially in the afternoon. Napping may help you get through the day, but if you find that you can't fall asleep at bedtime, eliminating naps, even short catnaps, may help.
- Exercise regularly: Physical activity improves sleep quality and increases sleep duration.
- Improve your sleep space: Your bedroom should be cool, free from noise and light. Consider using eyeshades, earplugs, "white noise" machines, humidifiers, fans and other devices.
- Pay attention to light. Avoid bright light in the evening and expose yourself to sunlight in the morning. This will keep your circadian rhythms in check.
- Avoid substances like alcohol, caffeine, cigarettes and other drugs.
- Set aside the smartphone and laptop. The type of light emanating from these devices activates the brain and makes it hard to relax into sleep.
- Leave work out of the bed. Keep your work out of your sleeping environment. If any activity or item gives you anxiety about sleeping, omit it from your bedtime routine.

Adapted from "Healthy Sleep Tips" from the National Sleep Foundation.

Hydrate at the Right Rate!

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Hydration is one of the most important parts of healthy physical activity. Making sure that you are drinking the right amount of fluids before, during, and after physical activity is essential to providing your body with the fluids it needs to perform properly. A good rule of thumb is to aim to drink half of your body weight in ounces daily.



Be a Weather Watcher

Both exercise and warm weather can increase your body temperature. Your body cools itself by sweating, but it can become harder to stay cool during humid weather since moisture doesn't evaporate as quickly from your skin. Your heart rate rises as your body works harder to remain cool. When the weather heats up, it is very important to make sure that you are drinking enough fluids throughout the day to stay hydrated. Drinking water, rather than pouring it over your head, is the only way to rehydrate and cool your body from the inside out.

Watch Your Water Weight

You may be surprised by how easy it is for you to lose a few pounds of water weight through sweating. Try to weigh yourself before and after each workout, and replace each pound of weight loss with 3 cups of water. Water is the ideal hydration choice because it moves quickly through your digestive system and into your tissues. Stay hydrated by sipping small amounts of water throughout the day; avoid chugging down fluids right before exercising to avoid stomach discomfort and bloating.

Scout Your Sports Drinks

Many sports drinks may look appealing, but they can also contain a lot of added sugar. It is important to consider your performance goals before you select a drink. For the average workout of 60 minutes or less, your body usually won't need anything other than water. If you are sweating heavily or exercising for more than 60 minutes, it is likely that you've lost a lot of electrolytes, including sodium, chloride, potassium, calcium, and magnesium. For these types of long workouts, a low-calorie beverage that contains electrolytes may help you to rehydrate more efficiently.

Do a Bathroom Check

When you are sufficiently hydrated, your urine will be the color of straw or lemonade. If it is clear, you may be drinking too much. If your urine is a dark color, such as the color of apple juice, it is a sign of potential dehydration.

Defend Against Dehydration

Dehydration typically results when a person does not replace the fluid their body loses at an acceptable rate. Dehydration can occur in almost every physical activity scenario. It does not have to be in warm weather, and you don't have to be visibly sweating. You can become dehydrated in the water, at a pool or lake, or skiing on a winter day.

If you notice the signs of dehydration and treat it quickly, you should recover completely. Early signs include:

- Thirst
- Flushed skin
- Premature fatigue
- Increased body temperature
- Faster breathing and pulse rate

Later signs include:

- Dizziness
- Increased weakness
- Labored breathing with exercise



Stay hydrated, enjoy your workouts and the upcoming warm weather!

References:

1. *Sports Nutrition: A Practice Manual for Professionals*. 5th ed. C.A. Rosenbloom et al., eds. Chicago, IL: Academy of Nutrition and Dietetics, 2012.
2. Denny, Sharon. "Hydrate Right During Physical Activity." *Eatright.org*. Academy of Nutrition and Dietetics, 23 Mar. 2015. Web.

Proposed Changes on the Nutrition Facts Label: What can we Expect ?

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Have you ever been confused when reading the nutrition label on food packages? If so, you may be in the same boat as many Americans. The current food label requires time to look where nutrients are located and the label requires some math skills to figure out how much of a certain nutrient you are consuming. To help Americans read the nutrition facts label better, the United States Food and Drug Administration (FDA) has proposed changes to the nutrition facts label found on food packages.

The proposed label reflects new science based research in public health taking into consideration obesity, chronic disease, and nutrition science. Based on this new research, the FDA proposed a few changes as of July 2015. The changes include: enlarging and bolding the font for serving size, number of servings per container and calories per serving; changing where the percent daily value (%DV) is placed substituting Vitamin D, and potassium for Vitamin A and Vitamin C in the vitamin and mineral section; removing the calories from fat; and changing the footnote at the bottom of the label. Perhaps one of the major additions to the label will be "added sugar" under total carbs and sugars.

Added sugar may be argued as one of the major changes on the proposed label, because research has shown that added sugar in the US food supply accounts toward the growing trend in chronic diseases and an increase in obesity. Sugary drinks in particular account for the increased risk of developing type2 diabetes and overweight. Inserting added sugars on the label will inform consumers just how much added sugar this food item will add to their diet. Some examples of added sugars include, but are not limited to, corn syrup, malt syrup, fructose sweeteners, fruit juice concentrate, honey, molasses, and maple sugar. The percent daily value (%DV) would recommend the daily intake of calories from added sugars not to exceed 10% of total calories per day.

Since the introduction of the current nutrition facts label 22 years ago, changes in how much people are consuming has changed. Serving sizes have doubled or even tripled over the past 20 years and current research shows that people will eat the food given in what is considered a serving size. If a small soda is 16oz, a medium is 21oz and a large is 30oz, then people will consume 140, 200, or 280 empty calories respectively, on top of a meal that is also supersized. For the proposed label, serving sizes will be more realistic to reflect how much people are typically consuming at one time. For example, if the package size affects how much people eat and drink, then a 12oz and 20 oz. bottle will equal 1 serving, since people typically drink both sizes in one sitting.

References:

<http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm385663.htm>
<http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm387533.htm>
<http://www.fda.gov/downloads/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/UCM387451.pdf>
<http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm20026097.htm>



Nutrition Facts	
Serving Size 2/3 cup (55g) Servings Per Container About 8	
Amount Per Serving	
Calories 230	Calories from Fat 72
% Daily Value*	
Total Fat 8g	12%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	12%
Dietary Fiber 4g	16%
Sugars 1g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

Nutrition Facts	
8 servings per container	
Serving size 2/3 cup (55g)	
Amount per 2/3 cup	
Calories 230	
% DV*	
12%	Total Fat 8g
5%	Saturated Fat 1g
	Trans Fat 0g
0%	Cholesterol 0mg
7%	Sodium 160mg
12%	Total Carbs 37g
14%	Dietary Fiber 4g
	Sugars 1g
	Added Sugars 0g
	Protein 3g
10%	Vitamin D 2mcg
20%	Calcium 260mg
45%	Iron 8mg
5%	Potassium 235mg
* Footnote on Daily Values (DV) and calories reference to be inserted here.	

Tips that will help you read the nutrition label:

- **Check the serving size.** There may be more than one serving in one package – so make sure you read the label carefully to know how many servings you are consuming.
- **Consider your calories!** Make sure you know how many calories you are consuming so you stay within the recommended guidelines.
- **Choose nutrients wisely.** Try to get more of the new required nutrients such as potassium, vitamin D, iron, and calcium. Also, nutrients such as, the type of fat, cholesterol, sodium, carbohydrates, added sugar, and protein are still very important to keep track of.

Retirement Planning Across the Generations

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The words “retirement planning” have a different meaning to people of different generations. As described in a presentation by Professor William Klinger of Raritan Valley (NJ) Community College to the New Jersey Coalition for Financial Education, these generational reactions can be summarized as follows:



- **Age 20-35** - What, me, worry? I've got plenty of time.
- **Age 35-55** - Too many expenses. I'll save later versus now
- **Age 55-70** - Yikes! I have no savings. It's catch-up time
- **Age 70+** - How can I make my retirement savings last?

This article describes steps that people from each age group can take to prepare for a secure future.

At **ages 20-35**, the key thing to remember is that time is on your side. For example, college students graduating at age 22 have 45 years of compound interest on their savings before they're eligible for full Social Security benefits at age 67. In addition to saving early, it is also important to keep spending in check so that savings can get an early start. Some young adults, unfortunately, procrastinate by thinking “I'll start saving later when I pay off student loans” or “I'll save when I make more money.” This can lead to a “\$1 million mistake.”

What is a \$1 million mistake? Let's say someone invests for retirement at age 32 and accumulates \$1 million at age 67 after 35 years of saving. An enviable achievement, undoubtedly, but this person could have saved \$2 million if they began their retirement savings nine years earlier at age 23 and had another decade of compound interest. This calculation is based on the Rule of 72, where an 8% average return on a sum of money would double it in nine years. Spending decisions also contribute to \$1 million mistakes, such as buying a series of expensive cars or trucks and other property over the decades versus less expensive alternatives.

The best way to save money, beginning in early adulthood, is to “pay yourself first” before money can be spent. Klinger advised not spending like a millionaire until you are one. Fancy cars and expensive clothes are not necessarily signs that people have money. Rather, they often indicate that people had money and spent it.

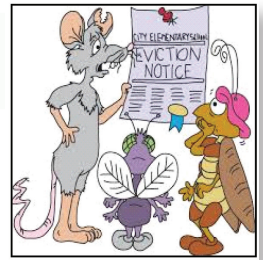
In the “middle years,” **ages 35 to 55**, emphasis should be on continued savings, especially in tax-deferred retirement savings accounts such as 401(k) and 403(b) plans. Be sure to take full advantage of the maximum available employer matching, such as 6% of your pay if you invest 6%, and track your annual progress by preparing a net worth statement (<http://njaes.rutgers.edu/money/pdfs/networthcalcworksheet.pdf>).

In later adulthood, **age 55 to 70**, people are (hopefully!) empty nesters and can accelerate their savings even further. According to research by Fidelity investments, people should have 5 times their salary saved at age 55, 6 times at age 60, 7 times at age 65, and 8 times at age 67 to be considered “on track” for a comfortable retirement. Unfortunately, research by the Employee Benefit Research Institute indicates that only 22% of workers age 55 and over have more than \$250,000 saved for retirement and 31% have less than \$10,000.

The primary retirement planning concern of people **age 70+** is making their savings last throughout their lifetime. The high costs of health care and long-term care in later life are also major concerns. A body of research suggests that initially withdrawing 4% of savings (whatever the dollar amount) and increasing it annually for inflation has about an 85% success rate (i.e., chance of not running out of money) over a 30-year period based on past investment performance data. New research findings with “floor and ceiling” withdrawal strategies and “decision rules” (e.g., freezing income during periods of negative investment returns) have been shown to increase the success rate even further.

continued on page 7

Beware of Kitchen Pests - continued from page 1



- ✓ **Open all paper and cardboard packages and inspect.** Even if the food appears insect free (there may be eggs in the packaging ready to hatch), discard the outer cardboard package keeping any needed directions and information. I cut off the directions and ingredient information, put it in a plastic bag and attached it to the container or put it in the container. Put the food in a glass or plastic food container, label and date the product. Insects can chew through plastic bags, even freezer weight ones. If you use bags, double bag.
- ✓ **One method to kill larvae and adults is to put the food in the freezer** for 3 or 4 days at 0°F. I did this with some of my food. Note, dead insect bodies will remain, so inspect after freezing.
- ✓ **Remove any shelf covering and discard.** After the pantry or cabinet is empty, vacuum everywhere (then immediately discard the bag in the outside trash), then wash everything. Let it dry. I skipped the shelf paper until I was sure all pests were gone. While sprays and traps are available, thorough cleaning is generally enough.
- ✓ **Discard all trash outside.**
- ✓ **Now you may return food to the shelves.** It is a great time to organize and group like items. An inventory is a good tool if you will keep it up. (It doesn't work for me.)
- ✓ **Inspect the food again prior to use.** Trust me; I learned the hard way not to pour pudding mix into the milk without prior inspection. Pasta deserves an extra look before cooking and as it starts boiling. Pests float.
- ✓ **It's possible that you won't get all the pests the first time.** I would continue to use glass or plastic containers for all grain and flour products for at least a few months before putting this food on the shelves in its original packaging. You may also use containers for ongoing prevention.

After you're done, admire your newly cleaned and organized space. Now pour your favorite beverage and sit down with your feet up, you deserve it!

Choosing food storage containers:

Use what you have such as glass or plastic jars, plastic containers, coffee cans or metal tins. If you purchase new containers, choose:

- **Sizes and shapes to match the foods you store.** Specialty containers for cereal and spaghetti are available.
- **Clear sides** to see the contents
- **Tight fitting,** easy to open lids
- **Stackable.** Beware different brands rarely stack well with the other.
- **Easy to clean**

Extension resources for more information:

- **Pantry Pests,** FS1149, Rutgers Cooperative Extension
- **Insects in Your Food and Pantry,** Nebraska Extension

Retirement Planning Across the Generations - continued from page 6



To summarize, retirement planning is important throughout adult life and can span a period lasting seven, or even eight, decades. Key messages for people of all generations are as follows:

- **Start saving for retirement as early in life as possible.** If it's too late for you to get an early start, save as much as you can today and encourage your (grand) children to start saving early.
- **Increase savings as income rises** and/or expenses (e.g., child care) and/or debts (e.g., student loans) are reduced or end.
- **Develop an adequate savings nest egg** and a strategy for sustainable retirement savings withdrawals in later life. To plan your retirement savings, use the **Ballpark Estimate;** <http://www.choosetosave.org/ballpark/>.
- **Enjoy the fruits of your labor in retirement** and the journey of life along the way.



GRILLING ESSENTIAL: FOOD THERMOMETERS

You cannot determine if food is fully cooked just by looking at it. The only way to make sure food has reached a safe minimum internal temperature is to use a food thermometer. Before using any food thermometer, read the manufacturer's instructions.

Tips for Using a Food Thermometer:

- 🔥 These thermometers are not designed to remain in food while it is cooking.
- 🔥 To ensure safety and prevent overcooking, check the internal temperature of the food toward the end of the cooking time, before the food is expected to finish cooking.
- 🔥 The food thermometer should be placed in the thickest part of the food and should not be touching bone, fat, or gristle. Check the temperature in several places to make sure the food is evenly heated.
- 🔥 Clean your food thermometer with hot water and soap before and after each use!

The best types of food thermometers for grilling:

Digital Instant-Read (Thermistor)

- Reads in 10 seconds
- Place at least 1/2" deep
- Can measure in thin and thick foods

Thermometer-Fork Combination

- Reads in 2-10 seconds
- Place at least 1/4" deep in thickest part of food
- Sensor in tine of fork must be fully inserted
- Can be used in most foods, convenient for grilling

Be sure to include safe food handling in your cookout plans!

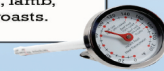
CLEAN – Wash hands and surfaces often.

SEPARATE – Don't cross-contaminate!

COOK – Cook to proper temperature.

CHILL – Refrigerate promptly!

Safe Minimum Internal Temps	
160 °F	Ground Beef
165 °F	Poultry, including ground poultry.
145 °F Plus 3 min stand time for safety.	Beef, veal, lamb, steaks & roasts.



The Partnership for Food Safety Education | fightbac.org