

Fight BAC! - CLEAN

Lesson In a Box

Updated 11/11/10



Cornell University
Cooperative Extension
New York City

Advancing New York City Through Research

Nutrition and Health Program

<http://nyc.cce.cornell.edu>

Cooperative Extension in New York City provides equal program and employment opportunities.

Fight BAC! - CLEAN

Lesson In a Box

Core Messages:

- Wash hands, fruits & vegetables, and cooking surfaces & utensils often.

Suggested Recipes:

- Fruity Cabbage Salad
- Easy Skillet

Suggested Incentives:

- Sponge
- Vegetable Brush
- Cutting board

Fight BAC! - CLEAN

Table Layout

MyPyramid Poster

LIB Title Sign
CUCE Nutrition and Health
Poster

Fight BAC! Poster

“20 Seconds”
Sign

<p>Optional for activity: Baby oil, cinnamon, and paper towels</p> <p>Bottle of hand soap</p> <p>Bottle of hand sanitizer</p> <p>Image of step by step hand washing instruction</p>	<table border="1"><thead><tr><th data-bbox="602 873 777 957">Foods</th><th data-bbox="794 873 1000 957">Cleaning Methods</th></tr></thead><tbody><tr><td data-bbox="602 1031 777 1493">5 images of foods that need washing</td><td data-bbox="794 1031 1000 1493">5 cleaning methods that correspond with the foods that need cleaning</td></tr></tbody></table>	Foods	Cleaning Methods	5 images of foods that need washing	5 cleaning methods that correspond with the foods that need cleaning	<p>Cutting board</p> <p>Sponge</p> <p>Rubber glove</p> <p>Fabric dish rag</p> <p>Paper towel</p> <p>Measuring spoon</p> <p>fork</p>
Foods	Cleaning Methods					
5 images of foods that need washing	5 cleaning methods that correspond with the foods that need cleaning					
<p>Activity 1:</p> <p>How do you keep your hands clean when you cook?</p>	<p>Activity 2:</p> <p>When do you wash your food?</p>	<p>Activity 3:</p> <p>How do you clean to prevent the spread of germs?</p>				

List of Supplies

Table Set-Up:

- Table Cloth
- MyPyramid Poster
- Fight BAC! Poster
- CUCE Nutrition & Health Sign
- Lesson In a Box Title Sign

Activity 1:

- Activity sign: “How do you keep your hands clean when you handle food?”
- “20 second” sign – signifies 20 seconds of hand washing with warm water and soap
- Image of step by step hand washing instructions
- Bottle of hand soap
- Bottle of hand sanitizer
- Baby oil (optional)
- Cinnamon (optional)

Activity 2:

- Activity sign: “How do you wash your food?”
- Vegetable brush
- Images of food (cantaloupe, potato, collard greens, etc.)
- Images of different cleaning methods

Activity 3:

- Activity sign: “How do you clean to prevent the spread of germs”
- Dish soap
- Sponge
- Image of wood cutting board
- Plastic cutting board
- 1 Fabric dish rag
- 1-2 paper towels
- Rubber glove(s)
- Plastic knife

Activity 1:

How do you keep your hands clean when you handle food?



Directions for Activity:

Option #1 : “Identifying how and when to properly wash hands while cooking”

- Set up soap, hand sanitizer, gloves, and laminated picture of hand washing instructions.
- Ask participants to take a pump of “soap” and wash their hands like they would normally (“soap” will be hand sanitizer)
- “Wash hands” for 20 seconds.
 - Note: 20 seconds is singing *Happy Birthday*, *abc’s*, or *twinkle twinkle little star* twice.
- Discuss proper hand washing (warm water and soap for at least 20 seconds, under fingernails, etc.).
- Note: Use caution when choosing a song for the demonstration. Be sensitive to culture and religion.

Option #2: “Now you see it, now you don’t...”

- If time and resources are available (namely a bathroom or other sink for hand washing), go around to each participant and place a squirt of baby oil and a shake of cinnamon into the palm of their hands.
- Have participants rub their hands together vigorously, spreading the baby oil and cinnamon to wrists, in between fingers, and all over the surface of the hands.
- Then invite participants to wash their hands **the way they normally do** at the sink, using soap and water, then drying with a **paper towel**.
- When everyone returns, walk around the room, examining each person’s paper towel to see how much cinnamon remained. Discuss how the cinnamon represents the bacteria that remain on our hands when we do not wash thoroughly & why it is so important to practice proper hand washing habits.

Activity 1

Fight Bac! - CLEAN

Open Ended Questions:

- How do you know when you need to wash your hands?
- When do you wash your hands?
- How do you wash your hands?
- Why is it so important to wash our hands before preparing food or eating?
- What can you tell a friend about the importance of hand washing?

Message:

- Before and after handling food, wash hands for 20 seconds with warm water and soap (Note: 20 seconds is about the length of *“Happy Birthday,” “Twinkle, Twinkle Little Star,”* and *“The Alphabet Song “sang twice.)*
- Remove rings, bracelets, and other jewelry that will interfere with proper hand washing.
- Use warm water to moisten hands, then apply soap and rub hands together for 20 seconds before rinsing thoroughly.
- Make sure to wash your whole hand, including your nails and in-between your fingers.
- Dry hands with a single-use towel.
- Use towel to turn off the water then place same towel in lined garbage container.
- Assist children with washing their hands.
- Wash hands after handling pets, smoking, changing diapers, coughing, sneezing, and using the bathroom.
- Make sure to wash hands before and after handling raw meat, poultry, eggs, and seafood.
- Be sure to wash underneath fingernails, as a lot of dirt and bacteria can be trapped here.

Additional Information:

- Keeping hands clean is one of the most important steps we can take to avoid getting sick and spreading germs to others. It is best to wash your hands with soap and clean running water for 20 seconds. However, if soap and clean water are not available, use an alcohol-based product to clean your hands. Alcohol-based hand rubs significantly reduce the number of germs on skin and are fast acting.
- When using an alcohol-based hand sanitizer:
 - Apply product to the palm of one hand
 - Rub hands together
 - Rub the product over all surfaces of hands and fingers until hands are dry.

[\(http://www.cdc.gov/cleanhands/\)](http://www.cdc.gov/cleanhands/)

Activity 2:

How do you wash your food?



Directions for Activity :

“Identifying when and how to properly clean your food”

- Select 5 foods matching a different cleaning methods and set up 2 columns of images/props. One side should contain images of foods and the other should contain images of methods of cleaning food.
- Have participants match each food item with the appropriate method for cleaning it.

NOTE: When doing this Lesson In a Box as a Learning Station for a group of participants who are mostly just “passing by,” have the food items already matched on the table with their correct method of washing.

Optional Activity:

- If time, space, and resources are available – demonstrate how to wash leafy greens in a bowl of water. Let participants see how much dirt settles at the bottom of the bowl (spinach, cilantro, lettuce, etc. – pick the dirtiest)

Column 1: Foods	Column 2: Cleaning Methods
Leafy Greens	Bowl of Cold Water
Spinach	Bowl of Cold Water
Tomato	Cold, Running Water & Colander
Cilantro	Bowl of Cold Water
Corn	Cold, Running Water & Colander
Beans	Cold, Running Water & Colander
Grapes	Cold, Running Water & Colander
Strawberries	Cold, Running Water & Colander
Cantaloupe + Watermelon	Cold, Running Water & Veggie Brush
Potatoes	Cold, Running Water & Veggie Brush
Carrots	Cold, Running Water & Veggie Brush
Canned food	Hot, Soapy Water and Paper Towel

Activity 2

Fight BAC! - CLEAN

Open Ended Questions:

- What types of foods do you wash?
- How do you wash your food?
- Why might different foods need to be cleaned in different ways before we can eat them?
- What is one example of a fruit or vegetable that needs to be scrubbed thoroughly before eating?
- When should you use cold, still water instead of cold running water to wash some foods?
- How do you decide how to clean your foods before cooking or eating?

Message:

- Use **cold** running water to wash fresh produce, including those with skins and rinds, like cantaloupe and watermelon. Rub skins to remove dirt & use a veggie brush if necessary. Wash only the produce that you will use right away.
- Leafy produce such as lettuce, collard greens, and fresh herbs are best washed by soaking completely in a pot or bowl filled with fresh, cold water. Repeat this several times until all the sand and dirt has separated from the leaves.
- Never use detergent or bleach to wash food. Detergent and bleach are not be consumed.
- It is always a good idea to wash produce **BEFORE** cutting the food.
- Dirt and bacteria often reside on the lids of cans and on can openers. Remember to wash cans with hot, soapy water before using. Wash can openers before and after each use.

Additional Information:

- Do not wash raw meat or poultry before cooking to prevent splatter cross-contamination of the sink/kitchen area. If cantaloupe is cut without being washed, the bacteria/contaminants on the outer skin will get on the knife and then onto the flesh of the cut cantaloupe pieces.
- It is not necessary to purchase special fruit and vegetable wash solutions. If you use a lot of produce at home, this can become very costly and has not been proven to be more effective than proper cleaning with cold, running water and a vegetable brush, if needed.
- Foods that grow on or below the ground or have very rough and scaly edible rinds/skins (melons, potatoes, carrots, etc.) need to be washed more thoroughly than foods that grow on trees or have rinds that we discard before eating (oranges, bananas, etc.)
- Fresh produce purchased at the farmers' market may contain more soil, bugs, etc. than produce found at the supermarket because it was picked less than 2 days before being sold. A little extra washing is a small price to pay for such fresh food!
- Cut away damaged or bruised areas on produce. Bacteria can thrive in these places.

Activity 3:

How do you clean to prevent the spread of germs?



Directions for Activity:

“Identifying ways to prevent the spread of germs”

- Display wood cutting board(image), plastic cutting board, sponge, dish rag, paper towels, rubber glove(s), etc as items often used to clean kitchen areas.
- Have participants discuss how they prevent “cross-contamination” in their kitchens.

Activity 3

Fight Bac! - CLEAN

Open Ended Questions:

- When do you clean surfaces, cutting boards and utensils?
- What is cross-contamination?
- How do you clean to prevent cross-contamination?
- How do you clean your surfaces and utensils?
- How can you prevent food borne illness when handling food items?

Message:

- Wash cutting boards, utensils and countertops with hot, soapy water immediately after use. Refrigerators also should be cleaned with hot soapy water, then rinsed thoroughly.
- Use plastic or other non-porous cutting boards to prevent bacteria growth. Run these items through the dishwasher or wash in hot, soapy water to clean.
- If you use a sponge to clean replace it often.
- Use paper towels to clean up. If you don't have paper towels, use cloth towels and frequently wash them in the hot cycle of the washing machine.

Additional information:

- Using a mixture of one teaspoon liquid chlorine bleach per quart (4cups) of water can provide some added protection against bacteria on surfaces.
- Flood the surface with the bleach solution and allow it to stand for several minutes, then rinse and air dry or pat dry with fresh paper towels.
- Never use bleach or detergent to clean food.
- Bleach and other cleaners are not intended for consumption.
- Never mix bleach and ammonia for cleaning purposes. This releases a toxic chlorine gas into the air that can harm you if breathed in.
- Best Ways to Clean Kitchen Sponges article from USDA :(<http://www.ars.usda.gov/is/pr/2007/070423.htm>)
 - “Microwave heating and dishwashing with a drying cycle proved to be the most effective methods for inactivating bacteria, yeasts and molds on sponges.”
 - “Microwaving sponges killed 99.99999 percent of bacteria present on them, while dishwashing killed 99.9998 percent of bacteria.”
 - “Between 6.7 and 63 percent of yeasts and molds survived on sponges soaked in bleach, lemon juice, deionized water or left untreated.”

Additional Information continued:

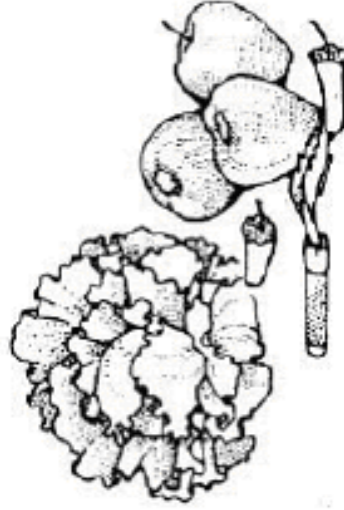
- If possible, use a different cutting board for raw meat products than for fresh produce. Replace cutting boards after they have become worn or have developed hard-to-clean grooves.
- Meat thermometers also carry bacteria if not cleaned and sanitized properly. Remember to wash your food thermometer thoroughly after each use.
- Anti-bacterial soaps do not kill more bacteria than soap and water but are a great alternative. If choosing a commercial hand sanitizer select one made with at least 60% alcohol.
- Paper and cloth towels are more sanitary options than sponges. Sponges collect bacteria over time. Consider using paper towels when cleaning and throw away towels when done.
- Keep dishrags and potholders clean. Launder often using the hot water cycle of the washing machine making sure to dry them promptly.
- Food particles get trapped in the drain and disposal, creating the perfect environment for bacteria growth. Clean your kitchen drain and disposal once or twice per week. Pour a solution of 1 teaspoon chlorine bleach and 1 quart (4 cups) of water down the drain.
- Wash out lunch boxes or bags every night.

Fruity Cabbage Salad

Makes 6 servings

- 2 apples
- 2 teaspoons orange juice
- 3 cups cabbage, shredded
- $\frac{1}{2}$ cup raisins
- $\frac{1}{4}$ cup lowfat vanilla yogurt

1. Wash and core apples. Cut into small chunks and place in a large bowl.
2. Add orange juice and stir.
3. Add cabbage, raisins and yogurt.
4. Mix lightly and chill.



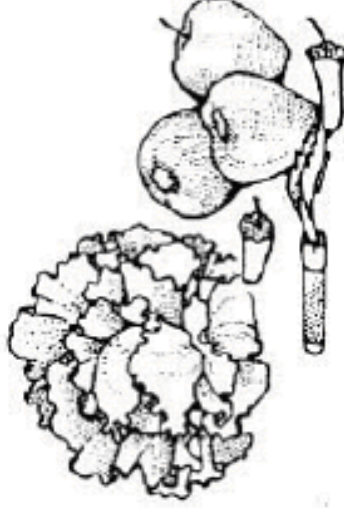
Nutrients per serving: 1 cup	
Calories	156
Fat	1 gm
Cholesterol	1 mg
Sodium	32 mg
Carbohydrates	40 gm
Protein	3 gm

Ensalada de Repollo con Frutas

Rinde 6 porciones

- 2 manzanas
- 2 cucharaditas de jugo de china (naranja)
- 3 tazas de repollo rallado
- $\frac{1}{2}$ taza de pasas
- $\frac{1}{4}$ taza de yogur de vainilla bajo en grasa

1. Lave las manzanas y remueva las semillas. Corte en pedazos pequeños y colóquelas en un recipiente grande.
2. Añada el jugo de china (naranja) y muevalo.
3. Añada el repollo, las pasas y el yogur.
4. Mezcle ligeramente y ponga en el refrigerador.



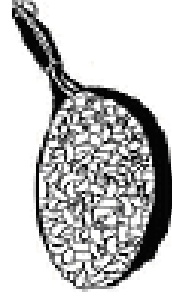
Nutrientes por porción: 1 taza	
Calorías	156
Grasa	1 gm
Coolesterol	1 mg
Sodio	32 mg
Carbohidratos	40 gm
Proteína	3 gm

Easy Skillet

Makes 6 servings

- ¾ pound lean ground beef or ground turkey
- 1 cup onion, chopped
- 1 cup green pepper, chopped
- ½ cup uncooked elbow macaroni
- 1 14-ounce can no-salt diced tomatoes
- ½ teaspoon salt, if desired
- 1 teaspoon chili powder
- ½ cup water

1. In a frying pan, brown meat and drain off fat.
2. Add onion and green pepper; cook until tender.
3. Once meat is cooked, stir in the macaroni and other ingredients. Cover and simmer until macaroni is tender.



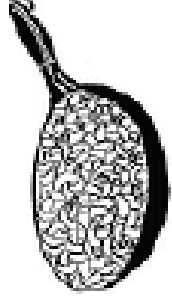
Nutrients per serving: ½ cup	
Calories	208
Fat	10.5 gm
Cholesterol	44 mg
Sodium	478 (67) mg
Carbohydrate	11 gm
Protein	15.5 gm

Comida Fácil al Sartén

Rinde 6 porciones

- ¾ libras de carne de res magra molida o pave molido
- 1 taza de cebolla picada
- 1 taza de pimiento verde picado
- ½ taza de pasta de coditos crudos (macarrones elbows)
- 1 lata de 14 onzas de tomates sin sal
- ½ cucharadita de sal si lo desea
- 1 cucharadita de polvo chile en polvo
- ½ taza de agua

1. En un sartén dore la carne bien y escurra la grasa.
2. Agregue las cebolla, el pimiento verde y cocine hasta que estén tiernos.
3. Una vez la carne esté cocida, agréguele los macarrones y los demás ingredientes. Tape y cocine a fuego lento hasta que se ablanden los macarrones.



Nutrientes por Porción: ½ taza	
Calorías	208
Grasa	10.5gm
Coolesterol	44 mg
Sodio	478 (67) mg
Carbohidratos	11 gm
Proteína	15.5 gm

References

The following links were last accessed in October 2009:

- <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm092815.htm>
- <http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm077331.htm>
- <http://www.holidayfoodsafety.org>
- <http://www.mypyramid.gov/holiday-foodsafety.html>
- www.fsis.usda.gov
- www.homefoodsafety.org
- www.snap.nal.usda.gov
- <http://www.cdc.gov/cleanhands/>

Recipes:

- Easy Skillet. Nutrition and Health Program Recipe Collection. Cornell University Cooperative Extension New York City
- Fruity Cabbage Salad. Nutrition and Health Program Recipe Collection. Cornell University Cooperative Extension New

Table Sign Image:

- Fight BAC! Clean Image from FightBac_FactSheet_bw_clean.PDF [Online Image]. Image retrieved on June 29, 2010 from, www.fightbac.org

Activity 1 Images:

- Fight Germs By Washing Your Hands! [Online Image] Image retrieved on June 22, 2010 from www.rvis.edu.bh/page.cfm?p=389

Activity 2 Images:

- Bunch of Collard greens [Online Image]. (n.d.). Retrieved June 18, 2010, from <http://www.seriousseats.com/recipes/images/20080711-collardgreens.jpg>
- Bunch of Spinach [Online Image]. (n.d.). Retrieved June 18, 2010, from <http://www.naturally-healthy-eating.com/images/spinach-bunch.jpg>
- Tomatoes, grapes, strawberries. Images provided by Microsoft Office Clip Art 2007
- Cilantro [Online Image]. (n.d.). Retrieved June 22, 2010, from <http://teluguabhiruchulu.files.wordpress.com/2009/06/cilantro-de.jpg>
- Cantaloupe [Online Image]. (n.d.). Retrieved June 18, 2010, from http://www.salmonellablog.com/12_cantaloupe.jpg
- Dirty potatoes [Online Image]. (n.d.). Retrieved June 18, 2010, from <http://static.guim.co.uk/sysimages/Guardian/About/General/2010/3/31/1270033616692/Dirty-potatoes--001.jpg>
- Kitchen Faucet Running Water [Online Image]. (n.d.). Retrieved June 18, 2010, from <http://www.alpharubicon.com/altenergy/images/liftingwater3readyset06.jpg>
- Paper Towel [Online Image]. (n.d.). Retrieved June 17, 2010, from google.com/images, http://www.google.com/imgres?imgurl=http://www.sellesmedical.co.uk/product_images/0000/8880/VAL10T.jpg&imgrefurl=http://www.sellesmedical.co.uk/store/product/855-Couch-Paper-Roll-White-10-&usq=__R7RGR0wXXzDCLU1OvAhPf80JPj4=&h=500&w=600&sz=45&hl=en&start=7&itbs=1&tbnid=cuvbovPwOeTYM:&tbnh=113&tbnw=135&prev=/images%3Fq%3Dpaper%2Btowel%2Broll%26hl%3Den%26sa%3DX%26gbv%3D2%26ndsp%3D20%26tbs%3Disch:1,isz:m
- Canned corn [Online Image]. (n.d.). Retrieved November 11, 2010, from <http://www.asia.ru/en/ProductInfo/530623.html>
- Canned black beans [Online Image]. (n.d.). Retrieved November 11, 2010, from <http://gimmesomeoven.com/black-bean-hummus/>

Activity 3 Images:

- Wooden Cutting board and knife [Online Image]. (n.d.). Retrieved November 11, 2010, from <http://www.evolvegappetites.com/html/jan2009.html>