



# SERVSAFE<sup>®</sup> ESSENTIALS

FIFTH EDITION

National Restaurant Association  
EDUCATIONAL FOUNDATION 



# 4



## The Safe Foodhandler

### In the News

#### Desserts Outbreak

Fifteen members of a tour group got sick several hours after eating at a fine-dining restaurant. The tourists reported severe nausea, vomiting, and abdominal cramps. Health officials said that the symptoms and short onset pointed to the illness staphylococcal gastroenteritis.

The source of the illness was later identified as the Napoleon pastries that the group ate for dessert. Leftover pastries tested positive for *Staphylococcus aureus*. The restaurant's pastry chef also tested positive for the pathogen.

### You Can Prevent This

The pastry chef in the story above spread the pathogen on his skin to the pastries he made. His customers got sick because he did not practice good personal hygiene. A good personal hygiene program is critical for preventing contamination of food by foodhandlers. The program should include policies that address the following areas.

- Avoiding personal behaviors that can contaminate food
- Washing and caring for hands
- Dressing for work and handling work clothes
- Limiting where employees can eat, drink, smoke, and chew gum or tobacco
- Preventing employees who may be carrying pathogens from working with or around food, or from working in the operation

#### Concepts from Earlier Chapters

Before reading this chapter, remember these concepts and facts.

**Cross-contamination** Transfer of pathogens from one surface or food to another.

**Virus** The leading cause of foodborne illness. Best controlled by practicing personal hygiene.

**Bacteria** Pathogens that grow rapidly when conditions are right. Some produce toxins that make people sick.

**Ready-to-eat food** Food that can be eaten without further prep, washing, or cooking.



## How Foodhandlers Can Contaminate Food

At every step in the flow of food, foodhandlers can contaminate food. They might not even realize it when they do it. Something as simple as rubbing an ear while prepping a salad could make a customer sick. Even a foodhandler who appears to be healthy may spread foodborne pathogens. As a manager, you need to know the many ways foodhandlers can contaminate food.

### Situations That Can Lead to Contaminating Food

Foodhandlers can contaminate food in any of the following situations.



- When they have a foodborne illness.
- When they have wounds that contain a pathogen.
- When they have contact with a person who is ill.
- When they touch anything that may contaminate their hands and then don't wash them. The buser in the photo at left may have contaminated his hands and could spread pathogens if he fails to wash them.
- When they have symptoms such as diarrhea, vomiting, or jaundice—a yellowing of the eyes or skin.



With some illnesses, a person may infect others before showing any symptoms. For example, a person could spread hepatitis A for weeks before having any symptoms. With other illnesses, a person may infect others for days or even months after symptoms are gone. Norovirus can be spread for days after symptoms have ended.

Some people carry pathogens and infect others without ever getting sick themselves. These people are called carriers. The bacteria *Staphylococcus aureus* is carried in the nose of 30 to 50 percent of healthy adults. About 20 to 35 percent of healthy adults carry it on their skin. If it is transferred from the nose or skin to food, which could happen in the photo at left, people can get sick.

✗



### Actions That Can Contaminate Food

People often do things that can spread pathogens without knowing it. To keep from causing a foodborne illness, pay close attention to what you do with your hands and avoid the following actions.

- A Scratching the scalp
- B Running fingers through the hair
- C Wiping or touching the nose
- D Rubbing an ear
- E Touching a pimple or an infected wound
- F Wearing a dirty uniform
- G Coughing or sneezing into the hand
- H Spitting in the operation

### Apply Your Knowledge

#### Who Is at Risk?

Write an ✗ next to the foodhandler's name if there is a risk the foodhandler could spread pathogens.

- ① \_\_\_\_\_ Jamie, a prep cook, has a habit of rubbing his chin. Even though people tease him about this, he doesn't even notice when he touches it.
- ② \_\_\_\_\_ Rita, a pizza maker, has a bad headache but no fever. She gets a lot of headaches, but she always comes to work anyway.
- ③ \_\_\_\_\_ Lee, a sous chef, didn't have time to do laundry. He has to wear the same chef coat he wore yesterday.
- ④ \_\_\_\_\_ Phillip, a grill operator, has a small cut on his cheek. It's not bleeding, but he has a bandage on it.
- ⑤ \_\_\_\_\_ Gary, a dishwasher, has allergies. Sometimes he needs to spit, so he spits in the garbage can next to the sink.
- ⑥ \_\_\_\_\_ Helen's children have had diarrhea. Her mother has been caring for them so Helen, a line cook, can go to work.
- ⑦ \_\_\_\_\_ Victor, an ice cream server, likes outdoor activities. Last weekend, he went camping in an area where there were no indoor toilets.
- ⑧ \_\_\_\_\_ Sabrina, a pastry chef, has dandruff, which itches. She tries not to scratch her head, but sometimes she just has to do it.

*For answers, please turn to page 4.19.*



## A Good Personal Hygiene Program

To keep foodhandlers from contaminating food, your operation needs a good personal hygiene program. As a manager, you must make sure this program succeeds. You must create and support policies that address the following areas.

- A** Hand practices
  - Handwashing
  - Hand care
  - Glove use
  - Bare-hand contact with ready-to-eat food
- B** Personal cleanliness
- C** Clothing—including hair restraints and jewelry

Employees must also avoid certain habits and actions, maintain good health, cover wounds, and report illnesses.

## Managing a Personal Hygiene Program

Don't underestimate your role in a personal hygiene program. You have many responsibilities to help make the program work.



- Creating personal hygiene policies.
- Training foodhandlers on those policies and retraining them when necessary.
- Modeling the right behavior at all times. The manager in the photo at left is modeling good personal hygiene practices. He is wearing clean clothes and a hair restraint. He is also using gloves.
- Supervising food safety practices at all times.
- Revising personal hygiene policies when laws or science change.

## Handwashing

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Handwashing is the most important part of personal hygiene. It may seem like an obvious thing to do. Even so, many foodhandlers do not wash their hands the right way or as often as they should. You must train your foodhandlers to wash their hands and then you must monitor them.

### How to Wash Hands

To wash hands the right way, follow the steps shown below. The whole process should take about 20 seconds.

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**1 Wet hands and arms.**

Use running water as hot as you can comfortably stand. It should be at least 100°F (38°C).



**2 Apply soap.**

Apply enough to build up a good lather.



**3 Scrub hands and arms vigorously.**

Scrub them for 10 to 15 seconds. Clean under fingernails and between fingers.



**4 Rinse hands and arms thoroughly.**

Use running water.



**5 Dry hands and arms.**

Use a single-use paper towel or a warm-air hand dryer.

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If you are not careful, you can contaminate your hands after washing them. Consider using a paper towel to turn off the faucet and to open the door when leaving the restroom.

**PATHOGEN  
PREVENTION**


### When to Wash Hands

Foodhandlers must wash their hands before they start work. They must also do it **after** the following activities.

- Using the restroom. Foodhandlers with foodborne illnesses such as Norovirus gastroenteritis can transfer the pathogen to food if they don't wash their hands after using the restroom.
- Handling raw meat, poultry, and fish (before *and* after).
- Touching the hair, face, or body.
- Sneezing, coughing, or using a tissue.
- Eating, drinking, smoking, or chewing gum or tobacco.
- Handling chemicals that might affect food safety.
- Taking out garbage.
- Clearing tables or busing dirty dishes.
- Touching clothing or aprons.
- Handling money.
- Touching anything else that may contaminate hands, such as dirty equipment, work surfaces, or towels. The foodhandler in the photo at left should wash his hands after using the towel to wipe the prep counter.

### Hand Antiseptics

Hand antiseptics are liquids or gels that are used to lower the number of pathogens on skin. If used, they must comply with Food and Drug Administration (FDA) standards.

Only use hand antiseptics **after** handwashing. **NEVER** use them in place of it. Wait for a hand antiseptic to dry before you touch food or equipment.

**Check your local regulatory requirements.**

#### How This Relates to Me

Are hand antiseptics allowed by your local regulatory authority?

\_\_\_\_\_ Yes      \_\_\_\_\_ No

If allowed, what are the regulatory requirements?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Hand Care

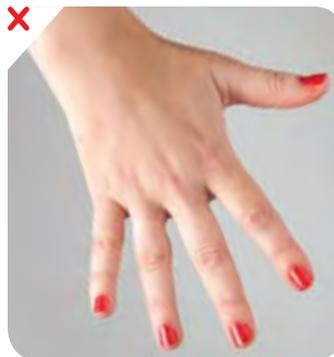
In addition to washing, hands need other care to prevent spreading pathogens. Make sure foodhandlers follow these guidelines.



**Fingernail length** Keep fingernails short and clean. Long fingernails may be hard to keep clean.



**False fingernails** Do **NOT** wear false fingernails. They can be hard to keep clean. False fingernails also can break off into food. Some local regulatory authorities allow false nails if single-use gloves are worn.



**Nail polish** Do **NOT** wear nail polish. It can disguise dirt under nails and may flake off into food. Some regulatory authorities allow polished nails if single-use gloves are worn.

**PATHOGEN  
PREVENTION**



**Hand wounds** Wear a bandage over wounds on hands and arms. Make sure it keeps the wound from leaking.

You must wear a single-use glove or finger cot (a finger cover) over bandages on hands or fingers. These will protect the bandage and keep it from falling off into food. It will also keep wounds that contain pathogens like *Staphylococcus aureus* from contaminating food and causing illnesses.

**Check your local regulatory requirements.**

### How This Relates to Me

Does your local regulatory authority allow foodhandlers to wear false nails or nail polish covered by single-use gloves?

\_\_\_\_\_ Yes      \_\_\_\_\_ No

If so, under what conditions?

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### Something to Think About...

#### More Than They Bargained For

At a restaurant on the East Coast, the salad bar was very popular. One afternoon while prepping the lettuce, an employee cut her finger. She bandaged it right away and returned to work. While she was tossing the salad, the bandage fell off into the lettuce.

A short time later, a customer reported that she had found a used bandage in her salad. The manager apologized and quickly comped her meal. Fortunately, the customer was easygoing, and the rest of the evening was uneventful.

## Single-Use Gloves

Single-use gloves can help keep food safe by creating a barrier between hands and food. But **NEVER** use gloves in place of handwashing. Hands must be washed before putting on gloves and when changing to a new pair.

### Buying Gloves

When buying gloves for handling food, follow these guidelines.

**Disposable gloves** Buy only single-use gloves for handling food. **NEVER** wash and reuse gloves.

**Multiple sizes** Make sure you provide different glove sizes. Gloves that are too big will not stay on. Those that are too small will tear or rip easily. The photo at left shows a correct fit.

**Latex alternatives** Some foodhandlers and customers may be sensitive to latex. Consider providing gloves made from other materials.



### When to Change Gloves

Foodhandlers must change gloves at all of these times.

- As soon as they become soiled or torn
- Before beginning a different task
- At least every four hours during continual use, and more often if necessary
- After handling raw meat and before handling ready-to-eat food

**Check your local regulatory requirements.**

#### How This Relates to Me

What are your local regulatory requirements for glove use?

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### Bare-Hand Contact with Ready-To-Eat Food

Your foodhandlers may be allowed to handle ready-to-eat food with bare hands, as the prep chef in the photo at left is doing. But it may increase the risk of contaminating the food. If your area allows bare-hand contact with ready-to-eat food, you must have policies for employee health and train employees in handwashing and personal hygiene practices.

**Check your local regulatory requirements.**

#### How This Relates to Me

Does your local regulatory authority allow bare-hand contact with ready-to-eat food?

Yes       No

If allowed, what are the regulatory requirements?

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### Personal Cleanliness

Pathogens can be found on hair and skin that are not kept clean. These pathogens can be transferred to food and food equipment. Make sure foodhandlers shower or bathe before work.

## Work Attire

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Foodhandlers in dirty clothes may give a bad impression of your operation. More important, dirty clothing may carry pathogens that can cause foodborne illnesses. Set up a dress code and make sure all employees follow it. The code should include the following guidelines.



**Hair restraints** Wear a clean hat or other hair restraint. Foodhandlers with facial hair should also wear a beard restraint.



**Clean clothing** Wear clean clothing daily. If possible, change into work clothes at work. Dirty clothing that is stored in the operation must be kept away from food and prep areas. This includes dirty aprons, chef coats, and uniforms.



**Aprons** Remove aprons when leaving prep areas. For example, aprons should be removed and stored properly before taking out garbage or using the restroom.



**Jewelry** Remove jewelry from hands and arms before prepping food or when working around prep areas. You cannot wear any of the following.

- Rings, except for a plain band
- Bracelets, including medical bracelets
- Watches

Your company may also require you to remove other types of jewelry. This may include earrings, necklaces, and facial jewelry. Servers may wear jewelry if allowed by company policy.

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**Check your local regulatory requirements.**

### How This Relates to Me

What are your local regulatory requirements for hair restraints, clothing, jewelry, and aprons?

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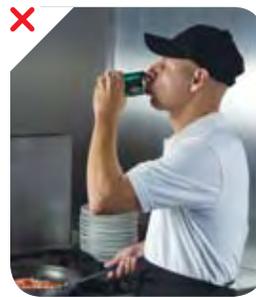
## Policies for Eating, Drinking, Smoking, and Chewing Gum or Tobacco

Small droplets of saliva can contain thousands of pathogens. In the process of eating, drinking, smoking, or chewing gum or tobacco, saliva can be transferred to hands or directly to food being handled.

Do **NOT** eat, drink, smoke, or chew gum or tobacco at any of these times.

- When prepping or serving food
- When working in prep areas
- When working in areas used to clean utensils and equipment

Only eat, drink, smoke, and chew gum or tobacco in designated areas.



Some regulatory authorities allow foodhandlers to drink from a covered container with a straw while in prep and dishwashing areas.

**Check your local regulatory requirements.**

### How This Relates to Me

Does your local regulatory authority allow employees to drink in prep and dishwashing areas?

\_\_\_\_\_ Yes      \_\_\_\_\_ No

If so, what are the regulatory requirements?

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## Policies for Reporting Health Issues

You must encourage your foodhandlers to report any health problems before they come to work. They should also let you know right away if they get sick while working, as the employee in the photo at left is doing.

When foodhandlers are ill, you may need to keep—or *restrict*—them from working with or around food. Sometimes, you may need to keep—or *exclude*—them from coming in to work. Use the following information to help you decide how to handle foodhandler illnesses.

### Handling Foodhandler Illnesses

If	Then
The foodhandler has a sore throat with a fever.	<p><b>Restrict</b> the foodhandler from working with or around food.</p> <p><b>Exclude</b> the foodhandler from the operation if you primarily serve a high-risk population.</p>
<p>The foodhandler has at least one of these symptoms.</p> <ul style="list-style-type: none"> <li>• Vomiting</li> <li>• Diarrhea</li> <li>• Jaundice</li> </ul>	<p><b>Exclude</b> the foodhandler from the operation.</p> <p>Before returning to work, foodhandlers who vomited or had diarrhea must meet one of these requirements.</p> <ul style="list-style-type: none"> <li>• Have had no symptoms for at least 24 hours</li> <li>• Have a written release from a medical practitioner</li> </ul> <p>Foodhandlers with jaundice must have a written release from a medical practitioner before they can go back to work.</p>
<p>The foodhandler has been diagnosed with a foodborne illness caused by one of these pathogens.</p> <ul style="list-style-type: none"> <li>• <i>Salmonella</i> Typhi</li> <li>• <i>Shigella</i> spp.</li> <li>• Shiga toxin-producing <i>E. coli</i></li> <li>• Hepatitis A</li> <li>• Norovirus</li> </ul>	<p><b>Exclude</b> the foodhandler from the operation. Notify the local regulatory authority.</p> <p>Work with the foodhandler's medical practitioner and/or the local regulatory authority to decide when the person can go back to work.</p>

**Check your local regulatory requirements.**

### How This Relates to Me

When does your regulatory authority require foodhandlers to be restricted from working with or around food?

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What other illnesses would require you to exclude a foodhandler from your operation?

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### Something to Think About...

#### A Shaky Situation

Sixteen people became sick and one was hospitalized after drinking milk shakes contaminated with shiga toxin-producing *E. coli* at a drive-in restaurant. The outbreak was started by an employee who came to work even though she was ill. The employee made a milk-shake mix that was served over a five-day period. She had diarrhea and severe abdominal cramps before making the shake mix. However, she continued to work and was later found to be ill with shiga toxin-producing *E. coli*.

Three of the sick customers were kept in the hospital for short periods. A fourth, a 15-year-old girl, required dialysis. The drive-in was temporarily closed but was cleaned and reopened a few days later.

### Apply Your Knowledge

#### Check Your Handwashing Savvy

Circle the letters of the right steps for handwashing from column A. Then put them in the right order in column B.

##### Column A

- Ⓐ Scrub hands and arms for 3 to 5 seconds.
- Ⓑ Scrub hands and arms for 10 to 15 seconds.
- Ⓒ Rinse hands and arms in running water.
- Ⓓ Rinse hands and arms in warm, standing water.
- Ⓔ Wet hands and arms with water at least 100°F (38°C).
- Ⓕ Wet hands and arms with water at least 115°F (46°C).
- Ⓖ Apply enough soap to build up a good lather.
- Ⓗ Apply enough soap to cover the palm of your hand.
- Ⓘ Dry hands and arms on a shared towel.
- ⓵ Dry hands and arms with a single-use paper towel or warm-air hand dryer.

##### Column B

- ① \_\_\_\_\_
- ② \_\_\_\_\_
- ③ \_\_\_\_\_
- ④ \_\_\_\_\_
- ⑤ \_\_\_\_\_

**For answers, please turn to page 4.19.**

## Apply Your Knowledge

### When to Wash Hands?

Paul was just promoted from buser to prep-cook-in-training at the busy family restaurant where he has worked for nine months. Since his promotion last week, he has already learned some basic tasks. Today, Paul arrived promptly at work at 8:00 a.m. and punched in. In a preshift meeting, his manager, Miguel, told him his first task was to debone 20 pounds of raw chicken breasts. After that, Paul was to work with Linda, an experienced prep cook.

Eager to make a good impression, Paul got the raw chicken from the cooler. He put on single-use gloves and started removing the bones from the breasts. About halfway through, Miguel stopped by with someone in a suit, whom Miguel introduced as one of the new owners. Paul took off his gloves to shake the owner's hand. Afterwards, he put on a new pair of single-use gloves and got back to the chicken.

After Paul finished the chicken, he put it in the cooler. Then he noticed a pile of dirty dishes next to the dishwasher. He decided to help out and loaded the dishes into a dish rack. When it was full, he ran the load.

Linda came by and told him to prep vegetables for the salad bar. The salad bar needed to be set up in an hour, so Paul put on single-use gloves and got started right away. As he was chopping lettuce, Paul suddenly sneezed. Fortunately, he was able to turn away from the prep table in time. He also was able to catch the sneeze with his hand. He changed gloves and went back to chopping the lettuce. Then Paul needed a tissue. Not having one handy, he had to go to the bathroom to blow his nose on toilet paper. While he was there, he also used the toilet. Then he returned to the prep area, put on new gloves, and finished prepping vegetables. He placed the prepped vegetables in the cooler.

Linda asked Paul to let the salad bar attendant know the vegetables were ready. Then she asked him to work with her on the grill during the lunch hour. She started him off by showing him how to make a grilled chicken sandwich. When a second order for a grilled chicken sandwich came in, Paul got to make it. A bit nervous, he dropped the tongs for the raw chicken before he could get a piece onto the grill. Linda went to get a clean pair of tongs but got delayed by a conversation with Miguel.

Paul was sure he could make the sandwich without Linda's help. While she was talking with Miguel, he picked up a raw chicken breast with his hands and put it on the grill. Then he got out a fresh bun and put it in the toaster. Before he could finish the sandwich, Linda came back, and they finished it together. As they worked together on the orders, the lunch rush flew by.

When should Paul have washed his hands?

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### Exclusion or Restriction?

Write an **E** next to the statement if the foodhandler must be excluded from the operation. Write an **R** next to the statement if the person should be restricted from working with or around food.

- ① \_\_\_\_\_ Bill, a line cook at a family restaurant, has a sore throat with a fever.
- ② \_\_\_\_\_ Joe, a prep cook, has diarrhea.
- ③ \_\_\_\_\_ Mary, a sous chef, has been diagnosed with hepatitis A.

*For answers, please turn to page 4.19.*



## Chapter Summary

Foodhandlers can spread pathogens and contaminate food at every step in the flow of food. So good personal hygiene is critical in an operation. Hands must be washed the right way. This is especially important before starting work; after using the restroom; after sneezing, coughing, smoking, eating, or drinking; and before and after handling raw meat, poultry, and fish. Hands also need other care. Fingernails should be kept short and clean. Wounds on hands and arms should be covered with clean bandages. Hand cuts should be covered with gloves or finger cots.

Before handling food or working in prep areas, foodhandlers must put on clean clothing and a clean hair restraint. They must remove jewelry from hands and arms. Aprons should be removed and stored when foodhandlers leave prep areas. They also should report health problems to you before working with food. Foodhandlers must not work if they have been diagnosed with a foodborne illness caused by *Salmonella* Typhi; *Shigella* spp.; shiga toxin-producing *E. coli*; hepatitis A; or Norovirus. Foodhandlers also must not come to work if they have symptoms that include diarrhea, vomiting, or jaundice. Staff should not work with or around food if they have a sore throat and a fever.

To keep foodhandlers from contaminating food, your operation needs a good personal hygiene program. You can minimize the risk of foodborne illnesses by establishing a program, training, and enforcing it. Most important, you must set an example yourself by practicing good personal hygiene.

## Chapter Review Case Study

Now take what you have learned in this chapter and apply it to the following case study.

Randall is a foodhandler at a deli. It is 7:47 a.m., and he has just woken up. He is scheduled to be at work and ready to go by 8:00 a.m. When he gets out of bed, his stomach feels queasy. He blames that on the beer he had the night before. Fortunately, Randall lives only five minutes from work. Despite this, he doesn't have enough time to take a shower. He grabs the same uniform he wore the day before when prepping chicken. He also puts on his watch and several rings.

Randall does not have luck on his side today. On the way to the restaurant, his oil light comes on. He is forced to pull off the road and add oil to his car. When he gets to work, he realizes he has left his hat at home. Randall is greeted by an angry manager. The manager puts Randall to work right away, loading the rotisserie with raw chicken. Randall then moves to serving a customer who orders a freshly made salad. Randall is known for his salads and makes the salad to the customer's approval.

The manager asks Randall to take out the garbage and then make potato salad for the lunch-hour rush. On the way back from the garbage run, Randall tells the manager that his stomach is bothering him. The manager, thinking of his staff shortage, asks Randall to stick it out as long as he can. Randall agrees and gets out the ingredients for the potato salad. Then he heads to the restroom in hope of relieving his symptoms. After quickly rinsing his hands in the restroom, he finds that the paper towels have run out. Short of time, he wipes his hands on his apron.

Later, Randall cuts his finger while making the potato salad. He bandages the cut and continues his prep work. The manager then tells Randall to clean the few tables in the deli that are available for customers. He puts on a pair of single-use gloves and cleans and sanitizes the tables. When finished, Randall grabs a piece of chicken from the rotisserie for a snack. He takes the chicken with him to the prep area, so he can get back to making the potato salad.

Randall and his manager made many errors. Identify as many as you can on a separate sheet of paper.

- If you can identify only 8 to 12 errors, you may need to reread this chapter.
- If you can identify 13 to 16 errors, you have a good understanding of this chapter.
- If you can identify 16 or more errors, you are on your way to becoming a food safety expert.

**For answers, please turn to page 4.20.**

## Study Questions

Circle the best answer to each question below.

- ① **What must foodhandlers do after touching their hair, face, or body?**
  - A Wash their hands
  - B Rinse their gloves
  - C Change their aprons
  - D Use a hand antiseptic
  
- ② **What should foodhandlers do after prepping food and before using the restroom?**
  - A Wash their hands
  - B Take off their hats
  - C Change their gloves
  - D Take off their aprons
  
- ③ **Which piece of jewelry can be worn by a foodhandler?**
  - A Diamond ring
  - B Medical bracelet
  - C Plain band ring
  - D Watch
  
- ④ **When should hand antiseptics be used?**
  - A Before washing hands
  - B After washing hands
  - C In place of washing hands
  - D In place of wearing gloves
  
- ⑤ **When should foodhandlers who wear gloves wash their hands?**
  - A After putting on the gloves
  - B Before taking off the gloves
  - C After applying a hand antiseptic
  - D Before putting on the gloves
  
- ⑥ **Foodhandlers should keep their fingernails**
  - A short and unpolished.
  - B long and unpolished.
  - C long and painted with nail polish.
  - D short and painted with nail polish.

- 7 **A cook wore single-use gloves while forming raw ground beef into patties. The cook continued to wear them while slicing hamburger buns. What mistake was made?**
- A The cook did not wear reusable gloves while handling the raw ground beef and hamburger buns.
  - B The cook did not clean and sanitize the gloves before handling the hamburger buns.
  - C The cook did not wash hands before putting on the same gloves to slice the hamburger buns.
  - D The cook did not wash hands and put on new gloves before slicing the hamburger buns.
- 8 **When a foodhandler has been diagnosed with shigellosis, what steps must be taken?**
- A The foodhandler must be told to not come in to work.
  - B The foodhandler must be given a nonfoodhandling position.
  - C The foodhandler can work, but must wear gloves when handling food.
  - D The foodhandler can work, but must wash hands every 15 minutes.
- 9 **Foodhandlers can't work in their operation if they have an illness caused by which pathogen?**
- A *Vibrio vulnificus*
  - B *Salmonella Typhi*
  - C *Clostridium botulinum*
  - D *Clostridium perfringens*
- 10 **Foodhandlers who work in a nursing home can't work in the operation if they have which symptom?**
- A Thirst with itching
  - B Sore throat with fever
  - C Soreness with fatigue
  - D Headache with soreness
- 11 **Foodhandlers should not eat, drink, smoke, or chew gum or tobacco while**
- A bare handed.
  - B on their break.
  - C prepping food.
  - D counting money.

Continued on the next page ►

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- ⑫ **What should foodhandlers do if they cut their fingers while prepping food?**
- A Cover the wound with a bandage.
  - B Stay away from food and prep areas.
  - C Cover the hand with a glove or a finger cot.
  - D Cover the wound with a bandage and a glove or a finger cot.
- ⑬ **What should a manager at a nursing home do if a cook calls in with a headache, nausea, and diarrhea?**
- A Tell the cook to stay away from work and see a doctor.
  - B Tell the cook to rest for a couple of hours and then come to work.
  - C Tell the cook to come in for a couple of hours and then go home.
  - D Tell the cook to go to the doctor and then immediately come to work.

*For answers, please turn to page 4.20.*

**Answers****4.3 Who Is at Risk?**

1, 3, 5, 6, and 8 should be marked.

**4.13 Check Your Handwashing Savvy**

- ① E
- ② G
- ③ B
- ④ C
- ⑤ J

**4.14 When to Wash Hands?**

Paul should have washed his hands at the following times.

- Before getting the chicken from the cooler
- Before putting on the first pair of gloves to debone the chicken
- After shaking hands with the owner and before putting on the second pair of gloves
- After finishing deboning chicken
- After loading the dishes into the dishwasher
- Before putting on gloves and handling the vegetables for the salad bar
- After sneezing and before putting on the third pair of gloves
- After using the restroom
- Before putting on the fourth pair of gloves and continuing to prep vegetables
- Before working on the grill
- Before touching the raw chicken breast
- After placing the raw chicken breast on the grill and before handling the fresh bun

**4.14 Exclusion or Restriction?**

- ① R
- ② E
- ③ E

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#### 4.15 Chapter Review Case Study

Randall made 17 errors.

- Randall did not take a bath or shower before work.
- Randall wore a dirty uniform to work.
- Randall should have removed his watch and rings (with the exception of a plain band) before prepping and serving food.
- Randall did not wear a hair restraint.
- Randall did not report his illness to the manager before coming to work.
- Randall did not wash his hands before handling the raw chicken.
- Randall did not wash his hands after handling the raw chicken.
- The manager did not ask about Randall's symptoms. If Randall were to report that he had diarrhea, the manager should have sent him home.
- Randall did not wash his hands correctly after taking out the garbage.
- Randall did not wash his hands correctly after using the restroom.
- Randall did not dry his hands correctly after washing them. He got them dirty again when he wiped them on his apron.
- Randall wore his apron into the restroom.
- The manager did not make sure the restroom was stocked with paper towels.
- Randall did not wear a finger cot or a single-use glove over the bandaged finger.
- Randall did not wash his hands before putting on the single-use gloves.
- Randall touched the ready-to-eat chicken with his contaminated gloves.
- Randall was eating chicken while prepping food.

#### 4.16 Study Questions

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|-----|-----|
| ① A | ⑧ A |
| ② D | ⑨ B |
| ③ C | ⑩ B |
| ④ B | ⑪ C |
| ⑤ D | ⑫ D |
| ⑥ A | ⑬ A |
| ⑦ D |     |

