Few things can hurt a food service business more than a customer who becomes sick from cross-contamination. Therefore, providing your customers with the best quality food service is critical to your business’ success.

Norovirus is one of the leading causes of food contamination in restaurants and food production plants. The virus, which causes severe stomach flu-like symptoms, is spread through contact by food handlers who are infected. Norovirus causes 58% of foodborne illnesses acquired in the United States. Each year, foodborne norovirus illness in the United States costs about $2 billion, mainly due to lost productivity and healthcare expenses.*

Symptoms, such as nausea, vomiting, diarrhea, headaches, fever, chills and muscle aches can take anywhere from 12 hours to two days to appear, and can last up to two days. The infected persons can pass on the virus for as long as two weeks after they feel better.

**HOW CONTAMINATION OCCURS**

People become infected with norovirus in a number of ways, according to Daniel Payne, epidemiologist at the Centers for Disease Control and Prevention (https://www.cdc.gov/norovirus/about/index.html). These include ingesting contaminated food or liquid and exposure to the infected person. Payne says food and drinks can very easily become contaminated with norovirus.

*“The virus is so small and it can take less than 100 norovirus particles to make a person sick,” said Payne.*
In addition to the virus being easily spread at restaurants, some foods can be contaminated even before being delivered. Outbreaks have been caused by eating raw oysters from contaminated waters. Produce such as salads and sliced fruit may also be contaminated at production plants. Other causes of infection include ingesting undercooked meat that has been infected.

The following are the three most common ways food can be cross-contaminated by viruses and bacteria:

**FOOD-TO-FOOD**

Food can become contaminated from other foods. This type of cross-contamination is especially dangerous if raw food comes into contact with cooked food. Examples of food-to-food cross-contamination include:

- Drippings from raw meat stored on the top shelf of a refrigerator fall onto raw or cooked vegetables stored on a lower shelf
- Raw fish or chicken on a grill can contaminate a steak that is also being cooked
- Storing uncooked poultry in the same container as cooked meat

**PEOPLE-TO-FOOD**

People can be a source of cross-contamination. Some examples are:

- Handling foods after using the bathroom without properly washing your hands or not using proper gloves during food preparation
- Handling raw meat, then preparing vegetables without washing hands between tasks
- Using an apron to wipe your hands when handling different foods

- Wiping a counter with a towel and then using it to dry your hands

**EQUIPMENT-TO-FOOD**

Contamination can be passed from kitchen equipment and utensils to food. This type of cross-contamination occurs when equipment or utensils are not properly washed and sanitized between each use. Some examples are:

- Unclean food slicers, can openers, knives, cutting boards
- Cutting boards and knives that are used to prepare different types of foods, such as raw chicken followed by salad preparation
- Cooked foods, such as sauce, stored in an uncovered, unwashed or unsanitized container that previously held raw poultry, fish or meat

**KEEPING CUSTOMERS SAFE**

In all cases, proper employee hygiene and cleaning of equipment and storage containers are essential to maintaining a restaurant’s reputation.

**PROPER HAND WASHING**

Food handlers should be trained to understand why the act of hand washing is vitally important and how to perform it correctly. It’s best to have a separate sink in the kitchen designated for hand washing only.

Employees should wash hands before the work shift and after any of the following:

- Handling raw foods
- Handling trash
- Touching one’s hair, face, body or working surfaces
- Sneezing or coughing
- Using kitchen cleaning chemicals
- Using the bathroom
- Busing dirty dishes
- Eating or smoking

**Instruct them to use the following best practices:**

- Use hot water from a hand-washing sink
- Use soap
- Scrub thoroughly
- Clean fingernails
- Rinse
- Dry hands with single-use paper towels or air-dryer
- Hand sanitizers should not be substituted for hand washing
- Use only products approved by the Food & Drug Administration
FOOD PREPARATION TIPS

Restaurant owners can take additional steps to ensure that their establishment is not the source of an outbreak. Follow these food preparation tips to help prevent crosscontamination and reduce the hazards of foodborne disease:

• Require the use of clean gloves
• Wash and sanitize food preparation equipment, cutting boards, and utensils after they have been in contact with raw meat, fish or poultry
• Avoid touching the face, eyes, skin and hair, or wiping hands on a cleaning cloth, while preparing food
• Store food properly by separating washed or prepared foods from unwashed or raw foods
• Prepare each type of food separately, making sure to clean and sanitize counters or other surfaces between each task
• Purchase color-coded kitchen equipment, such as containers, cutting boards and knives that are dedicated for specific foods (e.g., red for beef, yellow for chicken, white for fish, purple for pork)
• Wash raw vegetables thoroughly before serving
• Properly cook food and ensure meat is not undercooked
• Obtain oysters from a reputable source

In small home-based catering businesses, or family owned or operated restaurants, sick children and babies in diapers should be excluded from food preparation areas. Appropriate disposal of soiled diapers also helps to reduce the spread of norovirus.

KEEP SICK EMPLOYEES AWAY FROM FOOD

Many local and state health departments require food handlers afflicted with a stomach illness remain away from work for two to three days after they feel better. Assigning workers who have recently been sick to jobs where they will not be handling food, such as reception or the cash register, can also help prevent an outbreak. Throw out any items, such as linens, that may have been contaminated with norovirus.

If a customer does report an illness to the restaurant, contact your insurance agent as soon as possible.