

CAMPYLOBACTER JEJUNI: MOST COMMON CAUSE OF DIARRHEAL ILLNESS

Campylobacteriosis is an infectious disease caused by the bacteria *Campylobacter jejuni*. It may be difficult to pronounce but, it's definitely one of the most common causes of diarrheal illness in the United States. The Centers for Disease Control report that about

13 cases are diagnosed each year for each 100,000 persons in the population.

A very small number of *Campylobacter* organisms can cause illness in humans, so the infection should be taken very seriously. Symptoms of *Campylobacterio-*

sis include diarrhea, cramping, abdominal pain, and fever within two to five days after exposure to the organism. The diarrhea is sometimes bloody, and can be accompanied by nausea and vomiting. For individuals with compromised immune systems, *Campylobacter* may spread to the

Continued page 2

BECOMING A FOOD MANUFACTURING ENTREPRENEUR

All your customers rave about the homemade barbecue sauce you use on your restaurant's signature dishes – barbecue ribs and chicken. Many customers have asked if they could buy bottles of your sauce to use at home. With the downturn in business due to the recession,

bottling and selling your barbecue sauce may be a way to bolster the bottom line.

Before you begin your new food venture, review what you need to know or do before you start bottling and selling your barbecue sauce.



Continued page 3

TRAINING YOUR WORKERS FOR OPTIMUM PERFORMANCE

If you are identified as the chief food safety employee at your establishment, it may be your responsibility to train new staff. Employees need to receive training when they first start their job and then continue to receive ongoing training as needed.

Teaching by example is an important first step in training your employees. If your employees see you checking temperatures, washing your hands, and cleaning and sanitizing work areas, they will understand that food safety is

important. To determine how much knowledge a new or experienced worker has about food safety, observe them while they are working. You can ask how they do certain procedures, i.e. calibrate a thermometer, test for doneness in a meat product,

Continued page 4



bloodstream and cause a serious life-threatening infection.

Almost all persons with Campylobacter will recover with no treatment or medication within two to five days, though it can take up to ten days. Rarely are there long-term consequences. A small number of people may develop arthritis or a rare disease called Guillain-Barré syndrome, in which the nerves of the body are attacked by the body's own immune system. This results in paralysis that can last for several weeks and requires intensive care. Approximately one in every 1,000 cases of reported Campylobacter illnesses result in Guillain-Barré syndrome.

Outbreaks of Campylobacter are usually associated with unpasteurized milk, contaminated water, or eating raw or undercooked poultry meat or from cross-contamination of other foods by these items. Cross contamination is the transfer of harmful substances or disease-causing microorganisms from one food product to another through direct contact, or contact with utensils, equipment, work

surfaces or employee's hands or clothing. Infants and small children may become infected by contact with poultry packages in shopping carts.

Although the infection is not generally spread from one individual to another, it is possible if an infected person is producing a large volume of diarrhea. Certainly special care should be taken when caring for infants or small children who are ill. Cleaning a diaper-changing or clothes changing area is especially important, as is proper hand washing with hot water and antibacterial soap.

Resources:

Centers for Disease Control
<http://www.cdc.gov>

US Food and Drug Administration Center for Food Safety and Applied Nutrition
<http://www.fda.gov>

Iowa State Extension
<http://www.extension.iastate.edu>

The incidence of Campylobacteriosis can be dramatically reduced by following basic food safety practices .

- Be sure to cook all poultry products to a minimum internal temperature of 165° F.
- Wash hands with soap and hot water before preparing food, and after handling raw foods of animal origin, and before touching any other surface or food.
- Special effort should be made to Prevent cross-contamination in the kitchen by using separate cutting boards for foods of animal origin. Chicken products, such as sausage, should also receive special care.
- Clean and Sanitize Cutting boards, countertops, and utensils after preparing food of animal origin.
- Avoid consuming unpasteurized milk and untreated surface water.
- Only use potable sources of water when preparing foods.
- Be sure that persons with diarrhea, especially children, wash their hands carefully and often, using hot water and soap.
- Always be sure to wash hands with soap and hot water after contact with pet feces.
- Hands should be washed before preparing food, after preparing a food, when taking a break during food preparation, after using the restroom, and after sneezing, coughing, or using a tissue, after touching any part of the body, and before putting on single-use gloves.

BECOMING A FOOD MANUFACTURING ENTREPRENEUR*Continued from page 1*

- Contact your health inspector. Tell him/her about your plan. Ask what regulations apply and what you'll need to do to obtain the needed license to manufacture food in your restaurant kitchen. Review the details of how you plan to manufacture your product with your health inspector.
- Review regulations and make changes suggested by your health inspector. For example, you may need to make structural modifications to your kitchen or buy new processing equipment.
- Continue to develop your product. Making barbecue sauce in small batches for your restaurant is different from producing larger batches you will bottle and sell. You may encounter problems with your recipe or processing methods that need to be addressed before production can begin. Your health inspector may require a process review for your product which can be obtained from one of the recognized processing authorities listed in the NH regulations. You will also need to develop a label for your barbecue sauce.
- Develop a business plan for your product. Think of the business plan as your feasibility study to determine whether or not selling your barbecue sauce will actually bolster your bottom line. While your barbecue sauce may be delicious, you may not be able to sell enough to cover your costs and make a reasonable profit.
- Network with other food entrepreneurs. Take advantage of any opportunity to network with other food entrepreneurs by going to trade shows or talking with other restaurant-based food entrepreneurs. They can give insight into the business and help you identify resources. Check out the New England Food Entrepreneurs website <http://www.umass.edu/nefe/>.



or determine if a sanitizer is at the right concentration. Some employers have a written manual for new employees that includes food safety information. You may give each employee a written test to determine how much information they have read and understood. Don't assume that since an employee has a food safety certificate or even a ServSafe® certificate that they actually handle food safely.

Effective teachers use written materials, posters, videos, on-line training, and discussions to provide training. Your suppliers may have educational materials that you can use. Training programs and information are also available on the internet. Type "food safety training" into your

search engine. Identify employees that can help you train new employees. To provide a different perspective, bring in trainers outside of your organization so that you are not the only one promoting safe food handling.

Once you have determined the training needs of an employee, you should put together a training program. Lessons are best learned if they are short and apply to the specific skills that an employee needs. Also realize that each of us learns in our own way. As you develop your training strategy keep this in mind: we remember 10% of what we read, 20% of what we hear, 30% of what we see and 50% of what we see and hear.

Food Safety Training

UNH Cooperative Extension's SAFE program is a FREE fast-paced, two-hour food safety and sanitation update for food workers. To schedule a SAFE program in your foodservice facility, contact your county UNH Cooperative Extension Office through our website: <http://extension.unh.edu/Counties/Counties.htm>

The **ServSafe®** program is a national food safety certification program sponsored by the National Restaurant Association Educational Foundation. This one or two day training provides participants with the latest science-based information on food safety and best practices in the industry. At the end of the program, participants take the ServSafe® Food Protection Manager Certification Examination. With a passing grade of 75% or greater, participants receive a 5 year certificate verifying completion of the program. The cost is \$135. Check our ServSafe® calendar: http://extension.unh.edu/events/index.cfm?e=app.home&calendar_id=1071 or contact your county UNH Cooperative Extension office to set up a training for your staff: <http://extension.unh.edu/Counties/Counties.htm>

UNH Cooperative Extension Offices

Belknap County 527-5475	Hillsborough County 641-6060
Carroll County 447-3834	Merrimack County 796-2151
Cheshire County 352-4550	Rockingham County 679-5616
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