

Multnomah County Environmental Health Inspections News

January 2011
Volume 2, Issue 1

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Newsletter Content By
Elizabeth Sandberg, REHST
Elizabeth.sandberg@multco.us

Happy New Year!

The beginning of each new year tends to set the stage for changes and movement in our lives. We usually make some grand decisions for ourselves like, working out more, and eating less, walking more and driving less, spending more time with family and less time at work. It is a time when we remember our potential, our incredible abilities, and our original vision when opening our shops. It is a time to remember our passion with food, and why we got in this crazy business to begin with. 2011 holds the promise to be a fun and successful year with our economy strengthening, a new food code being adopted, a Royal Wedding and the release of Spielberg's Cowboys and Aliens. Hang on, here we go!

Integrated Pest Management

When in the throes of a pest infestation it is not likely we will be thinking of an Integrated Pest Management (IPM) approach to solving our pest issue but more likely determining the strongest chemical to eradicate them. In understanding the commonly referred to 'butterfly effect', we know that for each action there is a reaction and we are working towards a more balanced outcome rather than the annihilation of the Norwegian Rat or German Cockroach.

Continued on p. 10



Name That Bug!

Pathogens, or “bugs” such as bacteria, viruses, parasites and fungi can contaminate our food. Pathogens can make us sick when we eat them or can produce toxins that will make us sick. See if you can identify this bug; answer on page 9

- I am an anaerobic spore-forming rod
- I produce a deadly neurotoxin
- The [spores](#) are heat-resistant and can survive in foods that are incorrectly or minimally processed
- The spore state is a period of no growth, similar to hibernation
- There are seven types of me, of which 4 cause illness
- My spores and I are widely distributed in nature; forest, soil and sea
- Symptoms begin usually 18 to 36 hours after ingestion of the food containing the toxin
- Symptoms include: nausea, vomiting, fatigue, dizziness, headache, skin dryness, dryness of the mouth and throat, constipation, paralysis of muscles, double vision and difficulty in breathing
- My toxin causes flaccid paralysis by blocking motor nerve terminals, starting with the eyes and face, to the throat, chest and extremities.
- I cause death, if gone untreated
- I am usually associated with eating home canned products
- I was responsible for an outbreak that was associated with garlic in oil that was not properly refrigerated¹
- I am the most poisonous substance known

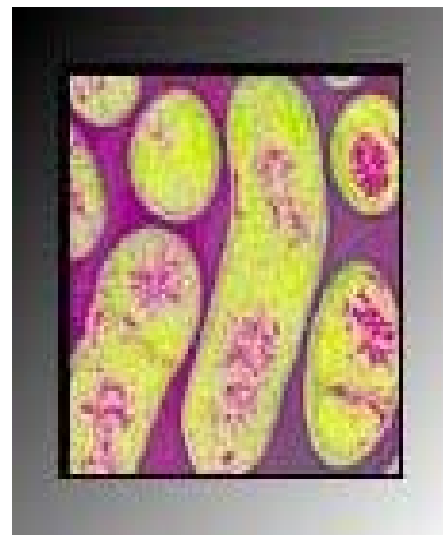


Figure 1 Courtesy of the [World Health Organization](#)

Who Am I? See page 6 for answer

[Email](#) a complaint or concern

To subscribe to this newsletter, [click here](#) or contact us by Phone: 503-988-3400 or [Email](#)



¹ Solomon, H.M. and Kautter, D. A. 1988. Outbreak and toxin production by *Clostridium botulinum* in bottled chopped garlic. *J. Food Protection* 51(11):862-865.

Chef's Seasoned Bowl



Figure 2 Photo Courtesy of Linda Reid

This column is an exchange of information for chefs who are willing to share their proven solutions for keeping food safe and operations running smoothly. Please send in any ideas you think might benefit other kitchens. Thank you! [E-mail us](#)

I appreciated last month's ideas with the holiday recipes. At my place, people seem to request a lot of low calorie meals in January. I have a feeling it is in response to the New Year's resolutions of losing weight. So to reduce headaches in the kitchen I add 3 or 4 'New Year's Resolution Specials' to the menu that are 'heart healthy' or low calorie. It works out great.

Following are some of my successes.

- Using good oils like walnut or hazelnut for an off-the-beaten-track flavor
- Choosing emulsified vinaigrettes (just add some mustard and whip) on grilled fish filets – it looks creamy and delicious
- Add roasted vegetables to a plate when replacing the starch. They are rich and full of flavor with no extra calories.
- Big salads with lean meats and ingredients with different textures
 - Cucumbers for that fresh pop, avocados for creaminess, seasoned and toasted nuts or seeds, fresh herbs add complexity, cooked beans are filling, and rich drier cheeses like parmesan or asiago gives the feeling that they still are getting some of the goodies
- Salsas are slam-dunk winners as all regions have their own variety. These are usually robust and made daily for freshness.

One of my favorite healthy and incredibly delicious crowd pleasing side dish is broccoli with lemon, anchovies and red pepper flakes. It may sound strange but people always have a smile on their face when they finish it. You can see the recipe by [clicking here](#). Remember that people go out to eat in the hopes of eating something really good and it's even better when it's good for them.

Bon Appetite!

Why did the boy eat his homework?
Because his teacher told him it was a piece of cake.



Please check out our new, informative and easily navigated website located at www.multco.us

Spotlight: Vector Control



The Multnomah County Vector Control (MCVC) is a diversified department that works with several types of environmental issues. These issues are broken down into several categories: vectors such as rodents and mosquitoes, domesticated livestock within the City of Portland, illegal dumping in the unincorporated section of Multnomah County and any situation capable of causing an unreasonable threat to public health, such as an abandoned well or discarded old tires. Last year they received over 1200 complaints.

The [Free Dictionary](#) defines vector as “any agent (animal or microorganism) that carries and transmits a disease; mosquitoes are vectors of West Nile Virus, Malaria and Yellow Fever; and fleas are vectors of the plague”. It should be noted that disease carrying fleas riding on the backs of rodents were responsible for the ["Black Death"](#) epidemic that killed millions of Europeans in the Middle Ages. When the MCVC is called out to investigate an active vector problem, they teach the complainant how to get rid of the vermin and how to prevent its return. Education is an important piece for success.

MCVC support and educate on Integrated Pest Management (IPM). IPM is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health and environmental risks. Please see this month's feature article for more on IPM.

Domesticated livestock is allowed within the city limits and is regulated by MCVC. Animals in this category include but are not limited to; ducks, chickens, burros, pigs, turkey and pigeons. Beehives require a permit as do predatory or wild animals such as peacocks and llamas. Visit the [Animal Code](#) web page for more information.

Illegal dumping can cause increased hazard and harm to communities and our rural land. It can also create environments that provide for and increase vector populations. The goal of MCVC is to protect public and private resources and maintain clean urban and rural areas by taking appropriate code enforcement measures.

A nuisance is any condition(s) or practice causing or capable of causing an unreasonable threat to public health, safety and welfare. A variety of



Vector Control continued...

situations fall under this: uncontrolled vegetation or noxious weeds, piles of garbage or junk stored outside, unsecured empty buildings, or an abandoned swimming pool. If you would like to report a nuisance or illegal dumping violation in unincorporated Multnomah County ([see map](#)) you may contact Multnomah County Code Enforcement at 503-988-3464 or vector.nuisance@multco.us.

The mission of Multnomah County Vector Control is “to promote community livability by managing vector-borne diseases through surveillance, suppression of vector populations and code enforcement to maintain and support those actions”. Their work is successfully done through observation of the current vector population, monitoring of our city-bound domesticated livestock, licensing our captive wild animals and keeping a watchful eye on our rural lands. MCVC works in cooperation with surrounding communities and other contracting entities to address emerging vector-borne disease issues. They are a friendly and knowledgeable staff that is available to assist you should you have a pest problem. They can be reached at (503) 988-3464.



Name that Bug: Answer

I am Clostridium botulinum, also know at C. botulism.

I am a group of bacteria that preserves itself in hard casings called a spore. Spores are found in soil, water, and the environment. Any food that comes in contact with the soil can become contaminated with spores. This includes fish (which ingest mud), vegetables, potatoes, rice, flour, milk, eggs, meat, and poultry. The spores can survive in most environments and are very hard to kill. They can survive the temperature of boiling water at sea level. If the spores are not destroyed and given an environment in which they can grow and flourish they will produce a neurotoxin. *C. botulinum* is only able to produce the neurotoxin during sporulation, which can only happen in an anaerobic environment. The neurotoxins, when consumed, can cause paralysis and death if gone untreated.

C. botulinum has been implicated in improperly canned goods, fresh garlic in oil, and improperly handled foods left in the temperature danger zone with reduced or little oxygen. Since we know that the spores exist in the intestines of fish we would not want to place the raw fish in a low oxygen environment, such as Reduced Oxygen Packaging (ROP), which could allow it to form neurotoxins. *C. botulinum* spores are extremely heat resistant, so while cooking at proper



temperatures would destroy most foodborne pathogens, it does not destroy *C. botulinum*. Let's look at some real life stories. These incidents are examples of improper processing and/or storage of food products that allowed spores of *C. botulinum* to germinate and produce toxin in foods. Botulism resulted when these foods were consumed and fatalities occurred.

In October of 1983, 28 people were hospitalized in Illinois with neurological signs and symptoms of botulism. Twelve patients required ventilatory support, and 20 patients were treated with antitoxin. One patient died 6 months after the onset of the illness. Type A toxin and/or type A *C. botulinum* was identified from specimens of 18 patients. Case control studies implicated sautéed onions made from fresh raw onions, served on a patty melt sandwich in a local restaurant as the vehicle of transmission. Type A toxin was detected in washings from a wrapper in which a patty-melt sandwich was taken home by one of the ill persons. Type A *C. botulinum* was also cultured from 5 of 75 raw onions taken from the restaurant. Onions used to prepare the patty-melt sandwiches had been partially cooked in butter a day previous to making the sandwiches. They were placed in a pan, covered with a layer of melted butter, and were stored on a warm counter on the back of the grill for 12 to 24 hours before the sandwiches were prepared. These storage conditions were optimal for growth of *C. botulinum* and subsequent toxin production (MacDonald et al., 1985).

MacDonald, K.L., Spengler, R.F., Hatheway, C.L., Hargrett, N.T., and Cohen, M.L. 1985. Type A botulism from sautéed onions. *J. Am. Med. Assoc.* 283(9):1275-1278.

In November 1978, 7 cases of botulism occurred in persons who had eaten in a restaurant in Colorado (Seals et al., 1981). The outbreak was recognized when 2 persons who had eaten at the restaurant were hospitalized with botulism; 5 additional cases were reported. Potato salad made at the restaurant and served during an 11-day period was incriminated as the vehicle of transmission. The potato salad had been prepared from potatoes baked for service in aluminum foil. The potatoes were "left-over" and were allowed to remain in the foil-wrapping at room temperature before being used to prepare potato salad. Laboratory studies confirmed that *C. botulinum* spores on the surface of the potatoes could survive baking and that botulinum toxin could be produced in potatoes contaminated with *C. botulinum* spores in sealed aluminum foil wrappers if these products were held at ambient temperatures for 1 day or less (Sugiyama et al., 1981).

Sugiyama, H., Woodburn, M., and Yang, K.H. 1981. Production of botulinum toxin in inoculated pack studies of foil-wrapped baked potatoes. *J. Food Protect.* 44:896-898.

Between July 26 and September 5, 1985, 37 cases of type B botulism were caused by food served at a restaurant in Vancouver, British Columbia. Seven persons required mechanical ventilation. *C. botulinum* type B toxin was found in the serum of 3 patients, and type B spores were found in cultured feces of 1 patient a month after the outbreak. Commercially bottled chopped garlic in soybean oil was implicated by the Centers for Disease Control as the food vehicle in this outbreak. Although the product involved was labeled "Keep Refrigerated" in very small print, the garlic jar at the restaurant was kept at room temperature (Solomon and Kauter, 1988).

Solomon, H.M. and Kauter, D.A. 1988. Outgrowth and toxin production by *Clostridium botulinum* in bottles chopped garlic. *J. Food Protect.* 51(11):862-865.

C. Botulism continued...

Prevention

- Oils infused with fresh or roasted garlic must be refrigerated and have a 7 day shelf life
- Baked potatoes in foil need to be held at 140°F or unwrapped and refrigerated following the proper cooling procedures (140° F – 70°F in 2 hours, 70°F – 41°F in 4 hours)
- Do not vacuum pack or use Reduced Oxygen Packaging on any products without an approved variance from the State.
- Properly refrigerate all cooked foods
- Discard dented and bulging cans
- No canning of foods allowed without a variance

Food Defense: National Food Defense

Over the course of last year, we went over the [Food Defense Toolkit for Restaurants](#). We looked at all the components that make up a plan for protecting your facility and food from intentional contamination. We started with a facility assessment, developed a risk control plan, included employee training for better efficiency, and developed a protocol for handling an actual intentional food contamination in your facility.

Food Defense is a national endeavor. This month I wanted to share some large scale organizations that are working on Food Defense in a variety of ways. These agencies demonstrate the seriousness and dedication of thousands of people working to keep our food safe and economy strong in the event of an intentional act of terrorism on our food infrastructure.

The National Center for Food Protection and Defense ([NCFPD](#)) opened in 2004 and focuses on vulnerability in our food supply chain and processes of distribution. They use the farm to table model and follow the food on its route, anticipating areas of potential risk for intentional biological or chemical contamination.

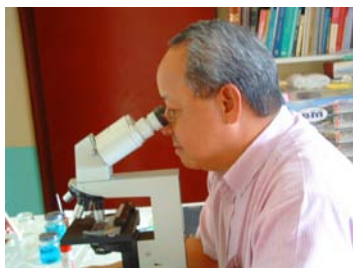
Kansas State University has established the National Agricultural Biosecurity Center ([NABC](#)) which coordinates interdisciplinary activities focused on protecting America's agricultural networks from biological threats. They have undergraduate and graduate programs with teachers from around the globe. Kansas State University is in the forefront of biological terrorism with regard to protecting our livestock, a primary food source from intentional biological attack. Do not skip over this website.



Figure 3 Cattle with Hoof and Mouth Disease Photo courtesy of KSU

The United States Department of Agriculture ([USDA](#)) offers food defense plans for small food processing plants. They focus on the industrial side of food production. They offer podcasts, and live video streaming on protecting the nation's supply of meat, poultry, and egg products from intentional contamination.

The Food and Drug Administration ([FDA](#)) has a list and many links to the different Food Defense Programs they have originated and are in partnership with. They are investigating all forms of poisonings such as the tainted dog food in 2008.



In exploring one or all of these sites, you will see that it is a national endeavor protecting our food sources until it arrives in your facility. Not only are we protecting the current farm-to-table network but we are putting our heads together and looking at new ways to deal with the potentially lethal consequences of intentional biological, chemical, physical and/or radiological threats now becoming imaginable on a national scale.

Figure 4 Photo Courtesy of Mary B. Thorman

Tips for a Better Inspection: Vacuum Packing & Variances

We are finding that many facilities are vacuum packing products and are not aware this can be a dangerous practice that requires a variance from the State of Oregon. Other specialized processes that require a variance are meat curing, hot pickling and acidifying foods as described in [OAR 333-150-0000 Chapter 3-502.11](#). The vacuum packing or Reduced Oxygen Packaging (ROP) criteria can be found under [OAR 330-150-0000 Chapter 3-502.12](#).



Reduced Oxygen Packaging (ROP) involves placing a product into a specialized bag, from which a mechanical device removes some or all of the air and is then hermetically sealed. Facilities typically vacuum pack products with the intent of extending the shelf life and maintaining the integrity of the product. When the air is removed from the bag, the environment within the bag is changed. This change prevents the normal spoilage organisms and pathogens from growing.

The abnormal environment created with ROP, prevents growth of the spoilage bacteria that typically compete with [Clostridium botulinum](#) allowing them to flourish. The usual spoilage organisms are no longer present to notify us that the food is not fit for consumption.

There are different criteria required for the safe ROP packaging of different products. You will need to demonstrate you have a clear understanding of the hazards involved and how you will avoid them. For more information on what the State will require [click here](#).

What to Expect at Your Inspection

- We typically notice a machine or the specialized bags used for ROP in the facility
- Your inspector will take notice of the storage methods for raw and cooked products

A variance is an official permit to do something normally forbidden by regulations.

- If you do not have a variance, you will have to open and discard the ROP products

We find the majority of operators do not know that vacuum packing is considered a special process. It is possible to vacuum pack your products but there is a lot you must learn and understand to make sure the product remains safe. If you are currently vacuum packing anything you must stop immediately. You must have an approved variance before doing any ROP. If you are interested in ROP, speak with your inspector about it and request a variance package. We are also available to meet with you if you have more questions.



Q and A

Please send any questions you have about food safety to us and one of our specialists will answer it for you. [Click here.](#)

Is it legal to make our own crème fraiche in-house?

Let's look. This is a typical recipe for crème fraiche:

Combine 1 cup heavy cream and 2 tablespoons buttermilk in a glass container. Cover and let stand at room temperature (about 70°F) from 8 to 24 hours, or until very thick. Stir well before covering and refrigerate up to 10 days.

Now, is there anything you might see as unsafe in the recipe? Yes, you are holding the cream based product at room temperature (in the temperature danger zone) for 8 – 24 hours. You must hold potentially hazardous foods at or above 140°F or below 41°F at all times. Making crème fraiche without a variance is not acceptable according to the food code. Commercially made crème fraiche is available and is safe to use in restaurants.

Become a Member of the Food Service Advisory

Have you ever wanted to learn more about the Health Department functions in regards to restaurant inspections?

Have you wondered if restaurants have any input into how the Environmental Health Department works? The Multnomah County Food Service Advisory Committee gives input to the environmental health section of the health department on topics such as: restaurant license fees, provide information regarding Environmental Health needs from the restaurants perspective, and learn more about the food code and restaurant inspection process. The Food Service Advisory Committee is looking for new members from all sectors of the restaurant industry. Contact [Jon Kawaguchi](#) at 503-988-3663 x 28260 to learn more.

Enjoy the little things, for one day you may look back and realize they were the big things.

~Robert Brault

Integrated Pest Management (IPM) continued from page 1...

Integrated Pest Management, or IPM, is a method used to control pests in an environmentally responsible manner. An effective IPM program protects the environment and our health. IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools. A low impact approach to pest prevention is to deny them access, food, and shelter in your facility.

Beginning an Integrated Pest Management Program

This is a brief overview to get you thinking. Please see links below for a more detailed approach and information.

1. Observation

Whether you have an active infestation or want to keep them out of your operation, the first step is to observe. You will want to look for the pests and/or signs of activity, such as fecal droppings, egg cases, nesting materials, gnaw marks, dirty areas along the bottom of walls resembling paths and take notice of any unusual smells. Use a strong flashlight and a mirror for a thorough inspection.

- Back of house
 - Look under shelving, behind boxes, around garbage cans, and in storage areas for food and chemicals.
 - Look at you outdoor garbage and storage areas.
- Front of house
 - Check areas that are cleaned less frequently, such as the waitress station, cupboards where 'to-go' items are kept, and shelving for infrequently used equipment.
 - Go into the eating/dining area and look along the walls, in crevices, and under the tables.



2. Deny access

Pests can enter your facility through damage to your physical structure or 'take a ride' in

- Deliveries
 - Check boxes of food and supplies for pests or rodents.
- Physical structure
 - Fill in any cracks or crevices in walls and floors.
 - Cover all gaps around holes created by pipes or wiring entering your building.
 - Correct any gaps under doors and around windows.
 - Keep drive-thru windows closed when not in use.
 - Keep doors closed and screen all windows to keep out flies.

3. Deny food and shelter

You may be supplying food for pests without knowing it. A strong cleaning program is an important component of any successful food service operation.

- In the facility

- Keep the floor in the kitchen/dining area clean. Do not wipe the debris from cutting boards and tables on to the floor.
 - Thoroughly clean the floors each night, moving garbage cans and equipment when possible.
 - When storing food, keep products six inches off the ground and not directly against the wall.
 - Once a bag of dry goods is open, put it into a container with tight fitting lid and appropriate label.
 - Check the housing around the compressors of your refrigerators, freezers and ice machines. This is a tropical paradise for cockroaches to live and breed.
- Outside
 - Keep your recycling bins out of the facility and in the garbage area.
 - Do not store unused equipment or building supplies against the building.
 - Your garbage cans or dumpster should have tight fitting lids that are kept closed. The garbage area needs to be clean.

Not only will you suffer financial loss when pests contaminate your food, but they also carry and transmit bacteria that can cause foodborne illnesses. According to the Centers for Disease Control, rodent-associated diseases affecting humans include plague and rat-bite fever. It has been demonstrated that cockroaches carry *Salmonella typhimurium*, Each housefly can easily carry more than 1 million bacteria on its body. Some of the disease-causing agents transmitted by houseflies to humans are *Shigella*, *Escherichia coli*, and *Vibrio cholera*. Sometimes these organisms are carried on the fly's tarsi or body hairs, and frequently they are regurgitated onto food when the fly attempts to liquefy it for ingestion.

An IPM program is commonplace in many facilities that keep their eye on the prize. Portland is known for its reverence for nature and the environment. A 'green' approach such as IPM can also be less expensive as well. Pests are unsightly and can damage your reputation, employees and customers can get sick, and there can be a financial loss in product and property damage. Even if you do not think you have pests, it is best to schedule yourself for routine informal monthly inspections of your facility to catch any activity before it becomes an infestation. Talk with your employees and have them be active in the daily surveillance within the facility. Talk with your delivery drivers or sales reps about the sanitation program they have in place in the warehouses. If you make it a partnership, the task can be less daunting. In my experience, people enjoy helping out.

[Reference and More Information](#)

DON'T BE CRUEL
Get Your Food Handler Card Online!

You can visit the Multnomah County website to learn about food safety, take your Food Handler test, and print your card!

2881478
Food Handler's Certificate of Completion
Elvis Presley
Employee ID: 10000
Expires: 10/31/12

EMPLOYEE'S COPY

www.foodhandleroregon.com

Visit our website or come by our office 3653 SE 34th Ave., Portland (near SE Powell Blvd.) • 503-988-5257

**MULTNOMAH COUNTY
ENVIRONMENTAL HEALTH
FOOD SAFETY HOTLINE**

(503) 988-3663 ext. 24662

Disponible en Español

*Local information and emergency info or
Food Safety Links and related sites:*

[Click here](#)