



Cowlitz County Health Department

1952 9th Avenue
Longview, WA 98632
TEL (360) 414-5599
FAX (360) 425-7531

Board of County Commissioners

Kathleen A. Johnson	District 1
George Raiter	District 2
Axel Swanson	District 3

THE EPIPHANY

Volume 3

Cowlitz County Health Department Newsletter

Spring 2010

ALGAE TOXINS

In June 2009, Cowlitz County Health Department received reports of human and pet illness suggestive of exposure to toxic algae on Silver Lake. Although these illnesses were never confirmed as toxin-induced, the Health Department posted Caution signs around the lake that were left in place as long as the algae bloom was visible, usually as a thick green layer or clusters of suspended clumps in the water. The Washington State Department of Health and Department of Ecology facilitated testing of the water for algae species and toxin levels over the period of several weeks. Lab results verified the presence of toxin-producing species but results of periodic toxin level testing were never found to be above accepted safety thresholds. Because algal blooms are dynamic with highly variable toxin production, water sampling and testing have limited value in predicting risk of toxin exposure. The Cowlitz County Health Department is participating in public workshops with residents and business owners around the lake to provide information to residents and visitors about avoiding recreational use of the lake in areas that have an obvious algal bloom.

Cyanobacteria: what is it?

Cyanobacteria, formerly called blue green algae are complex life forms closely related to bacteria. They have the unique ability to perform photosynthesis at different wavelengths. They can occur as single cells, filaments or massive colonies in any water body. High concentrations of algae species in a water body form the blooms or scum. These blooms can pose a human health and animal concern because they produce toxins that are released into the water and upon contact may cause adverse effects like: gastroenteritis, nausea, vomiting, flu like symptoms, sore throat, blistered mouth, ear and eye irritation, rashes, myalgia, abdominal pain including hepatomegaly, pulmonary consolidation, visual disturbances, kidney and liver damage.

Cyanobacterial toxins are grouped according to the physiological system, organs, tissues or cells which are primarily affected. They include:

- *Neurotoxins* - The typical examples are anatoxins and saxitoxins. They are postsynaptic, cholinergic neuromuscular blocking agents that inhibit acetylcholinesterase and agents blocking the sodium channels.
- *Hepatotoxins* - The most common is Microcystin. Known for causing inhibition of phosphatases that lead to changes in the integrity of the membrane and conductance. They are also reported as tumor promoters and may cause liver damage.
- *Cytotoxins* - The most representative is Cylindrospermopsin. It is a protein synthesis inhibitor which causes necrotic injury in mammals (liver, kidneys, lungs, spleen, and intestine).

- *Irritants and Gastrointestinal toxins* - The most representative is Aplysiatoxin. They cause skin irritation and are a known tumor promoter. Also lipopolysaccharide endotoxins may contribute to inflammatory and gastrointestinal incidents.

The investigated cases of human illness and deaths after exposure to algae cells and toxins vary widely in depth. Data on the concentrations of cells and toxins to which the subjects were exposed and on the doses actually received are almost always lacking. The routes of exposure of animals and humans are: oral, pulmonary and dermal. In addition to potable and recreational waters, further exposure might be suspected in edible blue mussels and catfish (microcystin); furthermore, microcystin and *Microcystis* cells have occurred in sprayed-irrigated salad lettuce which fortunately was detected on time.

HEALTHY HOMES YEAR 1 UPDATE

Small changes at home = better health for Cowlitz residents

The Healthy Homes Program recently celebrated its first year. Healthy Homes volunteers conduct free in-home assessments to help residents identify asthma and allergy triggers in their home and suggest easy, no- or low-cost ways to reduce or eliminate the triggers and improve indoor air quality.

With the resident's approval, their health care provider is given feedback on the results of the in-home assessment. These results, along with the patient's medical information, give the provider a more comprehensive picture of the patient so a complete treatment plan can be developed.

Volunteers conducted 57 in-home assessments to date. Residents request assessments due to health concerns for themselves or their family members. Residents reported hearing about the program from various sources, including schools (30%), friends and relatives (25%), speaker series (17%), and health care providers (13%).

Residents' primary concerns were mold (68%), followed by dust/dust mites/pet dander (23%), ventilation (13%), household chemicals (10%), and tobacco smoke (3%).

To address mold, Healthy Homes volunteers may suggest ways to reduce humidity, such as:

- Increase ventilation by opening doors and windows when possible.
- Use exhaust fans when there is excessive moisture in a room, such as when showering, cooking or using the dishwasher.
- Dry damp or wet items immediately to avoid mold growth.

For more information or to request a home assessment, you or your patient can contact us at 360-414-5581 or check our website at www.co.cowlitz.wa.us/health/ceha/MHE.htm.

OPPORTUNITIES TO GET INVOLVED:

Bike to Work Week

To promote a healthy and environmental mode of transportation, Cowlitz on the Move and Peace Health are promoting bike to work week from May 14th to May 21st. Registration and information regarding this event is can be found at: www.cowlitzonthemove.org. Events offers will include free safety bike checks at Bob's Bike Shop and Highlander Cycle, a class on how to handle the challenges of biking to work, and a drawing for prizes to those who register to participate.

Continuing Education: Northwest Center for Public Health Practice Online Courses

Interested in Public Health? Check out the NCPHP's list of online courses for some introductory courses covering topics such as epidemiology, data collection and analysis, and other public health topics.

See the course list at: <http://www.nwcphp.org/training/courses>

Providers of the Quarter: Brenda Strong of the Child and Adolescent Clinic and Sandy Keranen of the Pediatric clinic.

The recent outbreak of H1N1 required collaboration among primary care, emergency responders and public health. Brenda and Sandy were responsible for their H1N1 inventory and ordering during our recent H1N1 immunization efforts. Since vaccination was initially focused on children, both Brenda and Sandy were called upon early on to manage the vaccine and assure the vaccination of the children they serve. Together, their clinics provided over 5,000 doses of H1N1 vaccine. They did so with a dedication, thoroughness and professionalism that is commendable and appreciated.

SEXUALLY TRANSMITTED DISEASE PROGRAM

For the year 2009, Cowlitz County reported:

- Nine (9) positive gonorrhea cases, an 80% decrease from the previous year.
- 340 positive cases of CT, a 21% increase from 2008.
- 38 cases of herpes, a slight decrease from the previous year.
- 2 cases of syphilis, one more than we had in 2008.

The year 2004 marked the onset of unusually high incidence rates of gonorrhea for Cowlitz County. In 2003, the incidence of gonorrhea was 16/100,000. In 2006, the peak year, the rate reached 230/100,000. It has decreased every year since—current 2009 rate is 9/100,000.

The Cowlitz County Health Department responded to the outbreak in many ways that would reach teens and young adults, the population that was most affected. Efforts included expanded testing of GC and chlamydia, a focus on case investigations and partner treatment, encouraging Expedited Partner Treatment (EPT), developing a MySpace page and forming the Reproductive Health Coalition.

RESOURCES

STD Faxable Case Report:

<http://www.doh.wa.gov/cfh/STD/caserpt.htm>

For questions about the STD program or the Reproductive Health Program, contact Laura Ebinger 360-414-5587

DISEASE REPORTING

Numbers to Call

During business hours

(M, W, Th, F—8:30-12:00, 1:00-4:30 & T — 8:30-6:00)

STDs 360-414-5587

HIV/AIDS 360-414-5564

Other 360-414-5590

Non-business hours: 360-636-9595

To view the list of reportable diseases, visit:

http://www.mycowlitz.com/health/pdf/Notifiables_website.pdf

WEBSITE: <http://www.mycowlitz.com/health/>

INFORMATION ON REPORTABLE DISEASES:

http://www.mycowlitz.com/health/assessment/notifiable_conditions_form.htm

Reported cases of reported communicable diseases, Cowlitz County, 2009 & 2008 totals

Communicable Disease	2009	2008
Campylobacteriosis	19	16
Chlamydia trachomatis	340	285
Cryptosporidiosis	4	6
Giardiasis	1	4
Gonorrhea	9	38
Hepatitis B, Acute	5	5
Hepatitis B, Chronic	6	7
Hepatitis C, Chronic	225	197
Herpes Simplex	38	44
HIV/AIDS*	8	6
Lead (Child lead)	3	7
Lyme Disease	1	2
Pertussis	5	2
Rabies Post Exposure Prophylaxis	4	9
Salmonellosis	10	7
Syphilis	2	1

*includes only AIDS cases that are not known progressions from HIV.

OUR TEAM: THE EPI-LADIES

- Dr. Jennifer Vines, Deputy Health Officer •
- Laura Ebinger, STD Program Coordinator • Monica Monteon, Epidemiologist •
- LeAnne Gilmore, Communicable Disease Public Health Nurse

Contributing Authors

Antonio Trejo, Environmental Health Specialist & Sharon Weinhold, Healthy Homes