

Epi Update for Friday, June 24, 2016
Center for Acute Disease Epidemiology (CADE)
Iowa Department of Public Health (IDPH)

Items for this week's Epi Update include:

- **Recommendation against using live nasal spray flu vaccine**
- **Mosquito surveillance begins**
- **The human microbiome**
- **Microcystin poisoning a reportable disease**
- **Iowa Acute Disease Monthly Update**
- **Make a Healthy Splash infographic**
- **Meeting announcements and training opportunities**

Recommendation against using live nasal spray flu vaccine

The Advisory Committee on Immunization Practices (ACIP) recommends that live attenuated influenza vaccine NOT be used during the 2016-2017 flu season. This live attenuated influenza vaccine (LAIV) is also known as the 'nasal spray' flu vaccine. This follows data showing poor or relatively lower effectiveness of LAIV from 2013 through 2016. The final annual recommendations on the prevention and control of influenza with vaccines will be published in the Morbidity and Mortality Weekly Report (MMWR) expected in late summer or early fall.

The recent ACIP vote to not recommend that LAIV be used may have implications for health care providers who have already placed flu vaccine orders for the 2016-2017 season. Vaccine manufacturers have projected that as many as 171 million to 176 million doses of flu vaccine will be made available for the 2016-2017 season. LAIV accounts for up to 14 million of those doses (about 8 percent of the total supply of flu vaccine). Based on manufacturer projections, health officials expect that supply for the 2016-2017 season should be sufficient to meet any increase in demand resulting from this ACIP recommendation.

For more information regarding this recommendation, visit www.cdc.gov/media/releases/2016/s0622-laiv-flu.html. If you have questions, please contact the Immunization Program at 1-800-831-6293, ext. 2.

Mosquito surveillance begins

Iowa has begun conducting mosquito surveillance for 2016. Results from this surveillance will be posted weekly on the IDPH West Nile virus page. This is a cooperative effort that involves State Hygienic Laboratory, Iowa State University's Medical Entomology Department, and state and local public health and environmental health partners.

For educational purposes, brochures for vector-borne disease (tick-borne disease, mosquito-borne disease and West Nile virus) brochures and posters can be ordered at no cost by calling CADE. For more information on mosquito surveillance, visit idph.iowa.gov/cade/disease-information/west-nile-virus.

The human microbiome

The human microbiome is the collection of all the microorganisms, including many species of bacteria, viruses, and fungi, living in association with the human body in nasal passages, the oral cavity, gastrointestinal tract, and urogenital tract. Over the past several years, research efforts have focused on describing this unique microbiota and how it influences human health and disease.

In 2008, The National Institutes of Health (NIH) enrolled 300 healthy individuals into a study called The Human Microbiome Project by sampling their microbiomes. The study found that microbes contribute nearly 10 times more genetic material for human health and survival than humans' own genes and that in its entirety, an individual's microbiome can weigh between two and six pounds!

Research found that the human microbiome has several functions:

- Fermentation of otherwise indigestible dietary fibers
- Synthesis of vitamins and amino acids (including Vitamin K)
- Prevention of pathogen colonization (like *Clostridium difficile*)
- Maturation and regulation of the immune system (microbes 'tutor' the immune system)
- Modulation of gastrointestinal hormones (including ghrelin, which stimulates appetite)
- Regulation of mental health (microbes stimulate enterochromaffin cells in the intestine to release serotonin thereby improving mood)

The microbiome has become an potential area for human health improvement, but much research is needed to determine how to use it for maximum health. Best advice at this point to improve the diversity, stability, and function of the microbiome:

- Eating high fiber foods: fruits, vegetables, legumes, nuts, seeds, and whole grains
- Avoiding antibiotics (which kill the microbiome) unless medically necessary - a single course of Ciprofloxacin reduces the microbiome by a third, and some important microbes may never return

For more information on The NIH Human Microbiome Project, visit hmpdacc.org/.

Microcystin poisoning a reportable disease

Microcystin Toxin Poisoning - the exposure to toxins associated with cyanobacteria or blue-green algae - is now a reportable disease.

Symptoms of microcystin exposure/poisoning include:

- Rash, hives, or skin blisters (especially on the lips and under swimsuits)
- Gastrointestinal symptoms such as stomach pain, nausea, vomiting, diarrhea, severe headaches, and fever
- Runny eyes and nose, cough, and sore throat, pleuritic pain, asthma-like symptoms, or allergic reactions

- Exposure to large amount of microcystin can cause liver damage (elevated gamma glutamyl transpeptidase)

Algal blooms will likely form on water bodies throughout the state during the summer months and with a greater potential of exposure to higher levels of microcystin toxin occurring in people who recreate in natural water bodies. The Iowa Department of Natural Resources conducts routine monitoring of state park beach waters for elevated levels of microcystin toxin throughout the summer months. Results of this monitoring can be found at www.iowadnr.gov/Environmental-Protection/Water-Quality/Water-Monitoring/Beaches.

Suspected cases of microcystin toxin poisoning can be reported to Stu Schmitz, State Toxicologist, at (515) 281-8707 or Randy Lane, Program Planner, at (515) 281-5894.

Iowa Acute Disease Monthly Update

The new issue of the Iowa Acute Disease Monthly Update is available by visiting idph.iowa.gov/cade and scrolling down to 'Reports'. It can also be accessed directly at idph.iowa.gov/Portals/1/userfiles/79/Reports/Misc/Monthly%20Report/IADMU%20June%202016.pdf.

Make a healthy splash infographic

This week's infographic shows the risks of swallowing water from interactive fountains, splash pads and spray parks. To directly access the infographic, visit www.cdc.gov/healthywater/swimming/materials/infographic-make-a-healthy-splash.html.

MAKE A HEALTHY

SPLASH!

Swallowing water in interactive fountains, splash pads, and spray parks might make you sick.



Germs can get into the water through poop coming out or washing off our bodies.



Swallowing water containing germs can make you sick with diarrhea.

Water in interactive fountains is typically recycled and might contain germs.

- Water treatments like chlorine don't kill germs instantly.
- Pee in water weakens the germ-killing power of chlorine.

Keep pee and poop OUT of the water.

DO:

- Stay out of the water if you have diarrhea.
- Take bathroom breaks every 60 minutes.
- Check diapers every 30-60 minutes and change diapers away from the water.

DON'T:

- DON'T** drink the water.
- DON'T** sit on the water jets.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

SPLASH HEALTHY!
www.cdc.gov/healthyswimming

Meeting announcements and training opportunities

None

Have a healthy and happy week!

Center for Acute Disease Epidemiology

Iowa Department of Public Health

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