



Twelve Eighty-Two

Winter Issue: Volume 5 Issue 4

*The Public Health Preparedness Community
Newsletter from the Bucks County
Department Of Health*



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Preparedness Program Highlights

Mapping of Legionnaires' Disease

The Preparedness Team would like to extend a special thank you to Dr. Reema Persad-Clem. As part of her Master of Public Health program, Reema has been working with our team to complete a special analysis of Legionnaires' disease in Bucks County. Using statistical and geographic mapping software, Dr. Persad-Clem has been looking for patterns in cases of Legionnaires' disease in the county that may indicate potential common sources of exposure to the Legionella Bacteria. Dr. Persad-Clem has completed her analysis of the 2018 cases through November and she will continue examining Legionnaires' disease in the county by looking at data from past years.

A few dozen cases of Legionnaires' disease occur in Bucks County each year. The majority of these cases are not tied to an outbreak and the source of these illnesses is unknown. The Legionella bacterium is common and natural in freshwater environments, like lakes and streams. It can become a health concern when it grows and spreads in human-made building water systems including: showerheads and sink faucets, cooling towers (structures that contain water and a fan as part of centralized air cooling systems for building or industrial processes), hot tubs that aren't drained after each use, decorative fountains and water features, hot water tanks and heaters, and large plumbing systems. Dr. Persad-Clem has done exemplary work and has offered a great community service that will help the Bucks County Department of Health

2017– 2018 Influenza Season Recap

Coming off a particularly high severity flu season (2017-2018) we were rather pleased to see an increase of 198 vaccinations at this year's flu clinics as compared to last year's clinics. A total of 1,991 flu shots were provided to Bucks County residents across three sites and days. At our Doylestown clinic 923 shots were provided and 367 shots were provided at our Quakertown clinic, both on Saturday, September 29th. At our Bensalem location, 379 shots were provided on Friday, October 12th and 322 shots were provided on Saturday, October 13th.

Just under a quarter of surveyed individuals indicated that this was the first year that they had received their flu shot from the Bucks County Department of Health. This represents an increase from last year's clinics, wherein ~13% of individuals indicated that it was the first time they had received a flu shot from the Bucks County Department of Health. This year's expanded outreach program may have played a role in this with individuals indicating how they found out about the clinics through a much broader scope of media relative to last year. This includes only 18% of individuals indicating they found out about the clinics from the newspaper this year as opposed to 45% of individuals who reported finding out from the newspaper last year.

In addition to providing flu vaccine, these clinics also allow us to test emergency procedures that would be used for a large public health emergency. The use of the Bensalem location afforded us an opportune forum through which we were able to test vaccine transportation and storage. Using this new location also challenged the knowledge and flexibility of our clinic staff, challenging them with setting up an efficiently functioning clinic in a constrained timeframe.

Continued on page 2

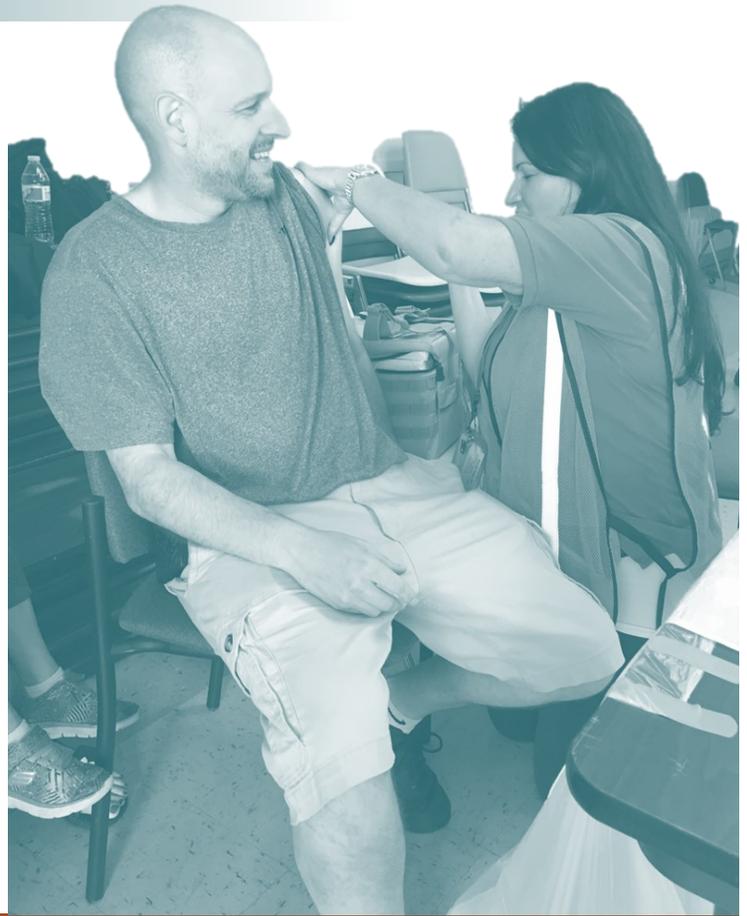


Last Year By The Numbers

The Centers for Disease Control and Prevention estimated that 48.8 million people fell ill with influenza, 22.7 million individuals sought treatment from a health care provider, 959,000 were hospitalized, and 79,400 individuals passed away as a result of the 2017-2018 influenza season. Over 4,148 cases of flu were confirmed in Bucks County. A total of 185 pediatric deaths nationwide were reported to the CDC during the 2017-2018 season. This number exceeds the previous highest number of flu-associated deaths in children reported during a regular flu season (171 during the 2012-2013 season). Approximately 80% of these deaths occurred in children who had not received a flu vaccination during the 2012-2013 flu season.

How Effective Was Last Year's Vaccine

The overall vaccine effectiveness of the 2017-2018 flu vaccine against both influenza A and B viruses is estimated to be 40%. This might not seem that great, but imagine a classroom with 10 children in it. One day the teacher came in sick with the flu and exposed all of the children. If none of the children had received their flu shot that year we could potentially expect all of the students to fall ill to the extent that their parents decide that they need medical care. But, if they all had their flu shot that year, we would expect that no more than six of them would need to seek care. When this is applied to the whole country instead of one classroom, the vaccine last year was estimated to have prevented 5.3 million illnesses, 2.6 million medical visits, and 85,000 hospitalizations.



Out Loud: Public Health Podcasts to Stimulate Your Day



Essential Oils: Science or Snake Oil?

From Science vs., Essential Oils - and their claims - are huge right now. But is it all hype, or is there something special about these little brown bottles? To get to the bottom of it, we dig through the studies and speak to cognitive neuroscientist Dr. Rachel Herz and psychologist Prof. Mark Moss.

<https://www.gimletmedia.com/science-vs/essential-oils-science-or-snake-oil#episode-player>



This Headline Might Kill You

In this Undiscovered Cares Report, Annie and Elah dig into a scary science headline and help Elah's friend, David, figure out how scared he should be that his B12 vitamins will give him lung cancer. And we find out how—even with top-notch scientists, journalists, and readers—science communication can go very wrong.

<https://www.wnycstudios.org/story/headline-might-kill-you>



Exercising to Lose Weight a Myth?

Usain Bolt can scarf down 47,000 calories worth of chicken nuggets and look great, while some dieters work out 4 hours a day and never shed a pound. So is exercising to lose weight a big scam? And what does Calvin Coolidge's exercise horse have to do with it? Featuring Dr. Herman Pontzer.

<https://www.parttimegenius.show/podcasts/is-exercising-lose-weight-myth.htm>



Bad Medicine, Part 1: The Story of 98.6

We tend to think of medicine as a science, but for most of human history it has been scientific-ish at best. In the first episode of a three-part series, we look at the grotesque mistakes produced by centuries of trial-and-error, and ask whether the new era of evidence-based medicine is the solution.

<http://freakonomics.com/podcast/how-to-make-people-quit-smoking-a-new-freakonomics-radio-podcast/>

Upcoming Training Offerings

2/11/19	6:30 pm to 8:30 pm	Introduction to Disaster Preparedness	At: Bucks County Department of Health
3/02/19	9:00 am to 12:30 pm	CPR/AED & First Aid & First Aid: The Volunteer Role*	At: Bucks County Department of Health
3/20/19	6:30 pm to 8:30 pm	Medical Reserve Corps Orientation	At: Bucks County Department of Health
4/06/19	6:30 pm to 8:30 pm	Reaching Across Barriers	At: Bucks County Department of Health

Bucks County Department of Health

1282 Almshouse Road
Doylestown, PA 18901

*Training open only to Bucks County MRC Volunteers

These trainings are presented as part of the Medical Reserve Corps' ongoing training series. To learn more about the Medical Reserve Corps or to join the MRC follow this link:

<http://www.buckscounty.org/medicalreservecorps> or contact the MRC at hdbcmrc@buckscounty.org

Bucks County is Now Part of the Smart911 System!

With Smart911, you can provide 9-1-1 call takers and first responders critical information you want them to know in any kind of emergency. When you call 9-1-1, your Smart911 Safety Profile displays on the 9-1-1 screen and the 9-1-1 call takers can view your addresses, medical information, home information, description of pets and vehicles, and emergency contacts. You can provide as much or as little information as you like and the information is only viewable by dispatchers and other emergency personnel when a 9-1-1 call is placed, otherwise it remains safe and secure in the safety profile. Smart911 is a national service, meaning your Smart911 Safety Profile travels with you and is visible to any participating 9-1-1 center nationwide.



People living in your household



Phone numbers associated with your family



Pets, service animals, and livestock



Medical conditions and allergies



Medications and medical equipment



Property details, layout, and utility information



Vehicle descriptions



Emergency contacts

For more information about this great emergency response service visit:

<https://www.smart911.com/>

or

<http://www.buckscounty.org/sitefinitypfxn/newreader/2018/08/29/Smart911>

Health Myths

You can catch a cold from the cold

The common cold occurs globally in both cold and warm continents, and it's possible to catch a cold at any time of the year. There is not anything directly related to the temperature that causes the cold. The only way to catch a cold is by being exposed, via an infected person, to one of the more than 200 different viruses that cause the illness. These viruses can exist outside of the human body for up to several hours, so it is possible to pick up one of these viruses by touching your nose, eyes, or mouth after touching an object contaminated by the virus. Most individuals, however, are infected from close contact with an infected individual after they cough, sneeze, or blow their nose near you.



Even though temperature does not directly cause the cold, the common cold is most prevalent (in temperate climates) in the early fall, particularly September, with a smaller uptick occurring again in the spring. This is due in large part to the behavior of humans. As it gets colder outside humans spend more time inside in close contact with other people. September also happens to be the month that many kids around the world return to school after summer break. Households are most commonly infected through children frequently infected at school.

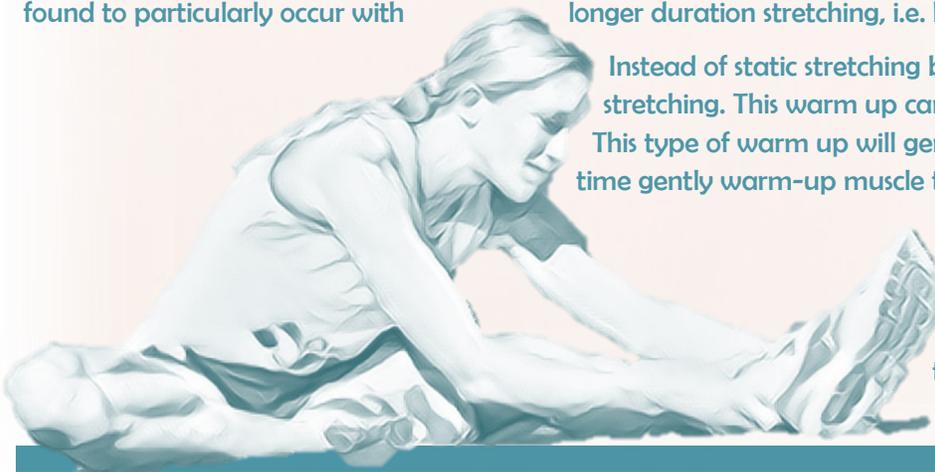
The myth, however, does have a very slight basis in reality. Humans' and the virus's biology also both play a role, and both are indirectly affected by temperature. The viruses that are most frequently responsible for the cold, the rhinoviruses, thrive best in low humidity and slightly below the normal body temperature 98.6 degrees Fahrenheit. The cold, dry winter air thus gives these viruses a slight boost in the nasal passage. At the same time a decrease in the human body's core temperature corresponds to suppressed immunity, making the body more vulnerable to infection. These factors make a person slightly more susceptible to the virus, but they must first be directly exposed to it.

Stretching Before Exercise

With the start of the New Year gyms will be full with people seeking to fulfill resolutions of maintaining a healthier life, and many individuals will begin their new gym ritual with a few minutes of static stretching. This type of stretching, a historical favorite of coaches and gym teachers for decades, involves stretching a specific muscle or tendon to the point of mild discomfort and holding that pose for thirty seconds or more. Think touching your toes. Evidence now strongly suggests that this type of stretching imparts very little benefit and may actually have a negative overall impact.

It's likely that a gym teacher or coach at some point stressed static stretching as critical in preventing injuries. Studies have shown that pre-exercise stretching has very little or no beneficial effect on injury risk reduction. This type of stretching will also not reduce the soreness and pain that occurs a day or two after exercising. Depending on the activity, stretching may actually impede performance. Stretching slightly weakens the muscles and makes them slightly slower. This effect was found to particularly occur with longer duration stretching, i.e. holding the pose for longer than 60 seconds.

Instead of static stretching before exercising use dynamic (or moving) stretching. This warm up can include things like high knees or lightly biking. This type of warm up will gently elevate the heart rate and at the same time gently warm-up muscle temperature. Static stretching does help improve flexibility and should be done just after exercising, when the muscles are already warm and pliable, or at non-exercise times such as when you are sitting at your desk in the middle of the work day.



Disease Spotlight: E. Coli

E. coli made headlines in 2018 following two separate national outbreaks associated with romaine lettuce. Together these two outbreaks accounted for 119 hospitalizations and 5 deaths. This was by no means an unusual year with a few major outbreaks of E. coli commonly occurring each year.

What is E. coli?

Escherichia coli (abbreviated as E. coli) are not a single organism but rather a large and diverse group of bacteria. These bacteria are commonly found in the environment, food, and animals, including humans. Most E. coli bacteria are harmless and some play an important role in maintaining a healthy intestinal tract. However, a few of the E. coli bacteria can cause illnesses in humans, including most notably diarrheal illnesses, but may also cause a number of other illnesses including urinary tract infections, respiratory illness, and pneumonia. When you hear of an E. coli outbreak in the United States, there is a good chance it is the result of E. coli bacteria that cause illness by producing a toxin known as Shiga toxin. E. coli bacteria of this type are known as “Shiga toxin-producing” E. coli, often shortened to STEC (STEC infection). The STEC bacteria are found in the guts of ruminant animals, including cattle, goats, sheep, deer, and elk. These bacteria normally do not cause illness in these animals, but often find their ways into humans, causing an illness that for some cases can be very dangerous.

How do you get a STEC (E. coli) infection?

STEC infections occur through the ingestion of tiny amounts of fecal material containing the bacteria, often while eating contaminated foods. Individuals are also infected through touching the environment at petting zoos and animal exhibits as well as by swallowing lake water while swimming. STEC infections are not typically associated with swimming pools.

What is the illness?

The symptoms of STEC infections vary but often include stomach cramps, diarrhea (sometimes bloody), and vomiting. Fevers may occur but are typically mild (less than 101°F). These symptoms will most likely begin 3-4 days after exposure but may be as soon as 1 day or as long as 10 days after exposure. Around 5–10% of those who are diagnosed with STEC infection develop a potentially life-threatening complication known as hemolytic uremic syndrome (HUS). Clues that a person is developing HUS include decreased frequency of urination, feeling very tired, and losing pink color in cheeks and inside the lower eyelids. Persons with HUS should be hospitalized because their kidneys may stop working and they may develop other serious problems. Most persons with HUS recover within a few weeks, but some suffer permanent damage or die.

How is it treated?

STEC infections will resolve on their own, and treatment is typically limited to supportive therapy. Antibiotics have not been shown to be effective in treating STEC infection and may increase the risk of HUS and therefore should not be used. You should contact your healthcare provider if you have diarrhea that lasts for more than 3 days or is accompanied by high fever, blood in the stool, or vomiting to the extent that you can not keep liquids down and you pass very little urine.

What is the Health Department’s Response?

The Bucks County Department of Health investigates all reported cases of E. coli in the county. The goal of these investigations is to identify a possible source, however, only about 20% of cases (nationwide) are able to be linked to a recognized outbreak. In order to limit the spread, we exclude from work infected individuals in high-risk professions such as food handlers and daycare providers until they no longer pose a risk of transmitting the illness to others through their work.



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