



epiConnections

A BIMONTHLY NEWSLETTER OF THE COMMUNICABLE DISEASE AND
EMERGENCY MANAGEMENT DIVISION OF BOULDER COUNTY PUBLIC HEALTH

Public Health Looks Out for Animal-Borne Disease

During warmer months, people and domestic pets are more at risk for coming into contact with wild animals that carry diseases like rabies, tularemia, or plague. Boulder County Public Health partners with health care providers, veterinarians, animal control, police, and state laboratories to assess human and pet exposure and provide recommendations for human post-exposure prophylaxis (PEP) or pet quarantine.

Animal control units respond to reports weekly and, when deemed necessary, submit specimens for testing. If there has been human or pet exposure and the wild animal (e.g., bat, raccoon, or skunk) is available, it is tested for rabies before disease control recommendations are made.

As of September 12, 100 animals found in Boulder County have been submitted for rabies testing. So far in 2016, seven bats, two skunks, and one raccoon have tested positive for the disease. Twenty-six Boulder County residents were recommended to receive PEP after being exposed to animals that may have been infected with rabies.

After a record year of 16 human cases of tularemia in 2015, only 1 person in Boulder County tested positive for the disease in 2016. One animal was submitted for testing but was negative for the disease. No reports of plague have been identified in humans or animals this year.

From May through September, wet weather creates pools of standing water, which are excellent breeding environments for mosquitoes. Culex mosquitoes (the type of mosquito that carries West Nile virus) increase in number as temperatures rise. So far this season, 18 mosquito pools in Boulder County have tested positive for West Nile virus, and as of September 12, 16 people in Boulder County have been diagnosed with the virus. Statewide, there have been 76 cases and 3 deaths this year.

Weekly updates of animal disease activity are available at BoulderCountyVector.org throughout the season. Additional information about hantavirus, plague, rabies, tularemia, and West Nile virus are also available on the website.

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epiEye

A Look Outside Our Community
and Around the World

Small Zika Case Cluster in Florida

Locally acquired Zika virus infection is currently being reported in two areas of Miami, Florida, as well as the U.S. territories of the Virgin Islands, Puerto Rico, and American Samoa. To date, 43 locally acquired cases have been reported in the southern region of Florida. The small case cluster is not considered widespread transmission since infection is confined to a one-square-mile area in the Wynwood area of Miami and a small section of Miami Beach. Due to the 2-week incubation period, many who are infected may not show symptoms, delaying diagnosis for up to several weeks. The Centers for Disease Control and Prevention (CDC) advises anyone travelling to this area to take precautions to avoid mosquito bites. Testing is available at the Colorado Department of Public Health & Environment (CDPHE) for those who may have been exposed to Zika virus, either through mosquito bites or sexual transmission. For further information regarding testing recommendations, please visit www.colorado.gov/pacific/cdphe/Zika-specimen-testing.

In Colorado, the risk of Zika virus transmission remains limited to those with a travel history to areas with active transmission or a sexual partner with a travel history to those areas. To date, 27 travel-associated cases have been identified in Colorado.

The CDC continues to investigate sexually transmitted infection of Zika virus; studies are underway to determine how long the virus remains in semen and vaginal fluids. The CDC recommends that pregnant women avoid travelling to areas with active Zika transmission. Women infected with the virus should wait at least six weeks before attempting to conceive, and men should wait six months after symptom onset, due to the risk of sexual transmission between partners.

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Sources: Retrieved September 12, 2016, from www.cdc.gov/zika/index.html; and www.emergency.cdc.gov/han/han00394.asp

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HIV Prevention Program
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Climate Changes Projected to Impact Health

Climate change refers to a broad range of changes happening to our planet and includes rising sea levels; shrinking mountain glaciers; accelerating ice melt in areas such as Greenland, Antarctica, and the Arctic; and shifts in flower/plant blooming times. As seen in the table below, providers and public health professionals can expect to see increasing health impacts from extreme temperatures, weather events such as floods and fires, poor air quality including ozone exposures, contamination of food and water, and an increase in infectious diseases. A good example is the impact on health related to migrating mosquito species carrying the Zika virus.

As providers, your awareness of the connection of climate change to health is vital for informing larger policy decisions that impact our local community. As local partners call for solutions regarding transportation, housing, and other solutions that foster clean energy and social justice, make sure your voice is at the table.

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References: *Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacity*. www.2degreesc.com/Files/CCandHealth.pdf

Health Impact Categories	Climate-related Causes	Projected/Possible Health Effects
Temperature extremes	<ul style="list-style-type: none"> • More frequent and severe heat waves • Overall warmer weather, with possible colder conditions in some locations 	<ul style="list-style-type: none"> • Heat related illnesses and deaths • Respiratory and cardiovascular disorders • Possible changed patterns of illness and death due to cold
Extreme weather events and natural hazards	<ul style="list-style-type: none"> • More frequent and violent thunderstorms, more severe hurricanes, and other types of severe weather • Heavy rains causing mudslides and floods • Increased drought in some areas, affecting water supplies and agricultural production and contributing to wild fires • Social and economic changes 	<ul style="list-style-type: none"> • Death, injury, and illness from violent storms, floods, etc. • Social and emotional injury and long-term mental harm from loss of loved ones, property, and livelihoods • Health impacts due to food or water shortages • Illnesses related to drinking water contamination • Effects of displacement of populations and crowding in emergency shelters • Indirect health impacts from ecological changes, infrastructure damages, and interruptions in health services • Psychological health effects, including mental health and stress-related illnesses
Air quality	<ul style="list-style-type: none"> • Increased air pollution: higher levels of ground-level ozone and airborne dust, including smoke and particulates from wild fires • Increased production of pollens and spores by plants 	<ul style="list-style-type: none"> • Eye, nose, and throat irritation and shortness of breath • Exacerbation of asthma symptoms • Chronic obstructive pulmonary disease and other respiratory conditions • Exacerbation of allergies • Heart attack, stroke, and other cardiovascular diseases • Increased risk of certain types of cancer • Premature death
Contamination of food and water	<ul style="list-style-type: none"> • Contamination of drinking and recreational water by run-off from heavy rainfall • Behavioral changes due to warmer temperatures resulting in an increased risk of food and water-borne infections (e.g. through longer BBQ and swimming seasons) 	<ul style="list-style-type: none"> • Outbreaks of strains of micro-organisms such as E. coli, Cryptosporidium, Giardia, S. typhi (typhoid), amoebas and other water-borne pathogens • Food-borne illnesses • Other diarrheal and intestinal diseases
Infectious diseases transmitted by insects, ticks, and rodents	<ul style="list-style-type: none"> • Changes in the biology and ecology of various disease-carrying insects, ticks, and rodents (including geographical distribution) • Faster maturation for pathogens within insect and tick vectors • Longer disease transmission season 	<ul style="list-style-type: none"> • Increased incidence of vector-borne infectious diseases native to Canada (e.g. eastern & western equine encephalitis, Rocky Mountain spotted fever) • Introduction of infectious diseases new to Canada • Possible emergence of new diseases, and of those previously eradicated in Canada
Stratospheric ozone depletion	<ul style="list-style-type: none"> • Depletion of stratospheric ozone by some of the same gases responsible for climate change (e.g. chloro and fluoro-carbons) • Temperature related changes to stratospheric ozone chemistry • Increased human exposure to UV radiation owing to behavioral changes resulting from a warmer climate 	<ul style="list-style-type: none"> • More cases of sunburns, skin cancers, cataracts, and eye damage • Various immune disorders

Source: *Human Health in a Changing Climate: A Canadian Assessment of Vulnerabilities and Adaptive Capacity*, Health Canada, 2005.