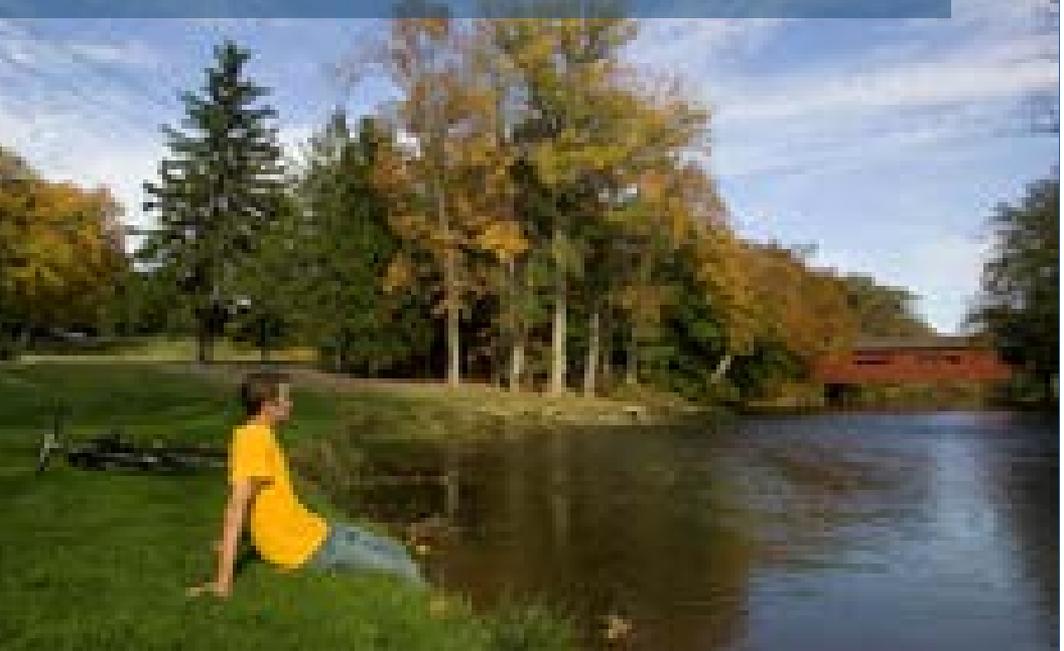




MESSIAH
COLLEGE®

2019

Outdoor Work & Play



This information is required for employees in the Grounds Department who work outside; however, it is recommended for anyone who spends time outdoors.

Spring 2019

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For additional information on the contents of this pamphlet, contact the compliance coordinator.

PREVENTING HEAT ILLNESS



Heat exposure can cause illness and death. **The most serious heat illness is heat stroke.** Other heat illnesses, such as heat exhaustion, heat cramps and heat rash, should also be avoided. If you notice yourself experiencing any of the symptoms mentioned below, take immediate action to cool down and seek help.

RISK FACTORS FOR HEAT ILLNESS

- High temperature and humidity, direct sun exposure, no breeze or wind
- Low liquid intake can cause dehydration
- Heavy physical labor (the more active, the more heat generated and increased sweat production)
- Waterproof clothing
- No recent exposure to hot workplaces (not acclimatized)
- Age (our ability to sweat decreases with age)
- Gender (men begin sweating at a lower temperature than women)
- BMI (more fat insulates the body's core which increases sweat production)

SYMPTOMS OF HEAT EXHAUSTION

- Headache, dizziness, or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea or vomiting

SYMPTOMS OF HEAT STROKE

There are actually two types of heat stroke with very different symptoms:

Classic Heatstroke:

- May be confused, unable to think clearly, pass out, collapse, or have seizures (fits), very high body temperature
- **May stop sweating**

Exertional Heatstroke – caused by a combination of heat exposure and heavy physical exertion:

- May cause muscle pain and cramping, swelling, weakness, decreased range of motion, fatigue, abdominal pain, back pain, nausea or vomiting, confusion, very high body temperature
- May cause compartment syndrome: development may be delayed up to several hours; swelling in a specific type of muscle (usually in the lower extremities) which can lead to permanent loss of function of affected limb; extremely severe pain; must go to hospital immediately as quick surgical intervention &/or intravenous fluids may be required
- **Profuse sweating**

TO PREVENT HEAT ILLNESSES

- Know the signs/symptoms of heat illnesses; monitor yourself; use a buddy system.
- Block out direct sun and other heat sources.

- Drink plenty of fluids. Drink often and BEFORE you are thirsty. Drink water every 15 minutes and at least one pint of water per hour.
- Avoid beverages containing alcohol or caffeine.
- Wear lightweight, light colored, loose-fitting clothes with loose weave to allow air flow and wickability (ability to absorb moisture from the skin and transfer it to the surface of the garment to allow quicker evaporation of sweat).
- Rest frequently with water breaks in a shaded or air-conditioned area.

WHAT TO DO WHEN SOMEONE IS ILL FROM THE HEAT

- If someone is not alert or seems confused, this may be a heat stroke. Call 911 immediately and apply ice as soon as possible. *On campus, call the department of safety (ext. 6005) for help.*
- Have someone stay with the individuals until help arrives.
- Move the person to a cooler/shaded area.
- Remove outer clothing.
- Fan and mist the individual with water; apply ice (ice bags or ice towels).
- Provide cool drinking water, if able to drink.

Information obtained from OSHA's website at www.osha.gov and NIOSH's "Occupational Exposure to Heat and Hot Environments."

SKIN CANCER

Information obtained from the CDC website.

Skin cancer is the most common cancer in the United States. Most cases of melanoma, the deadliest kind of skin cancer, are caused by exposure to ultraviolet (UV) light either from the sun or from artificial sources.

People with certain **risk factors** are more likely than others to develop skin cancer. Risk factors vary for different types of skin cancer, but some general risk factors are

- A lighter natural skin color.
- A family history of skin cancer.
- A personal history of skin cancer.
- Exposure to the sun through work and play.
- A history of sunburns, especially early in life.
- A history of indoor tanning.
- Skin that burns, freckles, reddens easily, or becomes painful in the sun.
- Blue or green eyes.
- Blond or red hair.
- Certain types and a large number of moles.

To lower your skin cancer risk, protect your skin from the sun and avoid indoor tanning. CDC recommends these easy options—

- **Stay in the shade**, especially during midday hours.
- **Wear clothing that covers your arms and legs.** Wet clothing offers less UV protection than dry clothing and darker colors may offer better protection than lighter colors. Some clothing is made to provide better UV protection and will be certified with its UV protection factor. **Wear hats** with brims or caps when in the sun to protect your scalp, face and ears. Avoid straw hats with holes. If you wear a baseball cap, remember to protect your ears and the back of your neck with sunscreen.
- **Wear sunglasses** that block both UVA and UVB rays to reduce the risk of cataracts and protect the skin around your eyes.
- **Use sunscreen** with SPF 15 or higher and both UVA and UVB protection even on slightly cloudy or cool days. Most sunscreen products work by absorbing, reflecting, or scattering sunlight. They contain chemicals that interact with the skin to protect it from UV rays. All products do not have the same ingredients; if your skin reacts badly to one product, try another one or call a doctor. Sunscreens are assigned a sun protection factor (SPF) number that rates their effectiveness in blocking UV rays. Higher numbers indicate more protection. Sunscreen wears off. Put it on again if you stay out in the sun for more than two hours and after swimming, sweating, or toweling off. Check the sunscreen's expiration date. Sunscreen without an expiration date has a shelf life of no more than three years, but its shelf life

is shorter if it has been exposed to high temperatures. Some makeup and lip balms contain some of the same chemicals used in sunscreens. If they do not have at least SPF 15, don't use them by themselves.

- **Avoid indoor tanning.**

And finally, **know the symptoms of skin cancer.** Signs of melanoma include changes in the looks of a mole or pigmented area such as:

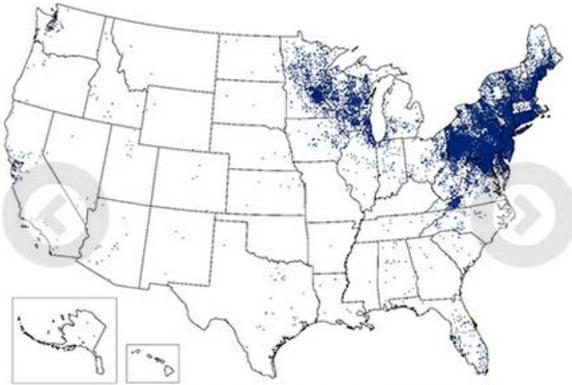
- Changes in size, shape or color
- Irregular edges or borders
- More than one color
- Asymmetrical
- Itching
- Oozing, bleeding or ulceration

If in doubt, check it out! Show your doctor any areas of concern on your skin; don't wait until it's too late.

LYME DISEASE – What You Should Know

Information taken from CDC website.

Each year, over 30,000 cases of Lyme disease are reported to the CDC; in 2017 (the most recent year for data) a total of 42,743 confirmed & probable cases were reported. However, researchers **estimate** that over 300,000 cases of Lyme disease occur annually in the U.S. The Mid-Atlantic region of the U.S. leads the country in Lyme disease and Pennsylvania led the country with 11,900 reported cases in 2017.



Blue shaded areas indicate confirmed cases in 2017.

Lyme disease bacterium is spread through the bite of an infected Blacklegged (Deer) tick. (Not all types of ticks cause Lyme disease.) Most humans are infected through bites of immature ticks called **nymphs**. They are **tiny** (less than 2 mm – the size of a poppy seed) and are **most active in the spring and summer**. **Adult ticks** are easier to see and are **active during the cooler months**.

Blacklegged Tick (*Ixodes scapularis*)



adult female



adult male



nymph



larva



SIGNS AND SYMPTOMS

Early localized stage (3-30 days post-tick bite)

- Red, expanding rash ("bull's eye") occurs in approximately 70-80% of infected people

- Fatigue, chills, fever, headache, muscle and joint aches, and swollen lymph nodes
- In some people these general symptoms may be the only evidence of infection.

Early disseminated stage (days to weeks post-tick bite)

- Additional lesions or rashes in other areas of the body
- Facial or Bell's palsy (loss of muscle tone on one or both sides of the face)
- Severe headaches and neck stiffness due to meningitis (inflammation of the spinal cord)
- Pain and swelling in the large joints (such as knees); arthritis
- Shooting pains that may interfere with sleep
- Heart palpitations and dizziness due to changes in heartbeat
- Inflammation of the brain or spinal cord; nerve pain
- Shooting pains, numbness or tingling in hands or feet
- Problems with short term memory
- Many of these symptoms will resolve over a period of weeks to months, even without treatment. However, lack of treatment can result in additional complications.

TESTING

A blood test can be done to check for Lyme disease; however, **it is possible to have Lyme disease and not test positive**. The test checks for antibodies and in the first few weeks of the disease, your body may not have built up enough antibodies to result in a positive test.

TREATMENT

Patients treated with appropriate antibiotics in the early stages of Lyme disease usually recover rapidly and completely. However, in a small percentage of individuals, symptoms such as fatigue, pain or joint and muscle ache may last for more than 6 months. This is now referred to as Post-Treatment Lyme Disease Syndrome (PTLDS). Continued use of antibiotics does not help PTLDS.

OTHER FACTS

Lyme disease acquired during pregnancy may lead to infection of the placenta and **possible stillbirth**; however, no negative effects on the fetus have been found when the mother receives appropriate antibiotic treatment. Additionally, there are no reports of disease transmission through breast milk.

There is no credible evidence that Lyme disease is transmitted through sexual contact.

Although no cases of Lyme disease have been linked to blood transfusion, scientists have found that the Lyme disease bacteria **can live in blood that is stored for donation**. Individuals being treated for Lyme disease with an antibiotic should not donate blood.

You will **NOT** get Lyme disease **from eating** venison or other meat, but in keeping with general food safety principles meat should always be cooked thoroughly.

PREVENTION

On People

- **Avoid wooded and bushy areas** with high grass and leaf litter.
- Walk in the **center of trails**.
- **Use repellents** specifically noted for tick control on exposed skin and on clothing and gear (boots, pants, socks, tents, etc.).
- **Bathe or shower** as soon as possible after coming indoors.
- **Conduct a full-body tick check** using a hand-held or full-length mirror to view all parts of your body.
- **Examine gear and pets.** Tumble clothes in a dryer on high heat for an hour to kill remaining ticks.

On Pets

- Use a **tick preventive product**.
- **Check pets daily**, especially after they spend time outdoors.

In the Yard

- **Clear tall grasses and brush** around homes and at the edge of lawns.
- Place a **3-ft wide barrier** of wood chips or gravel between lawns and wooded areas and around patios and play equipment to restrict tick migration.
- **Mow** the lawn frequently and keep leaves **raked**.
- **Stack wood neatly and in a dry area** (discourages rodents that ticks feed on).
- Keep playground equipment, decks, and patios **away from yard edges** and trees and place them in a **sunny location**, if possible.
- **Remove trash and old items** from the yard that may give ticks a place to hide.

Deer Myth

Because the Blacklegged tick that spreads Lyme disease is referred to as a "deer" tick, many people assume that deer are the main carriers of these ticks. In fact, the biggest carrier of ticks is the common mouse, which means that ticks can be present anywhere that mice are found.

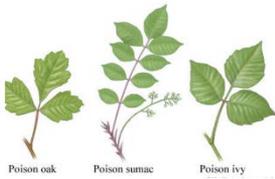
Vaccines

There are presently no vaccines for Lyme disease. If you were vaccinated in the past, the protection provided has probably diminished and you are no longer protected against Lyme disease.

The number of individuals infected with Lyme disease is growing every year. Take it seriously!

POISON IVY, POISON OAK, POISON SUMAC

While this time of year tempts us to spend time outside in nature (hiking, walking, camping, fishing, gardening, etc.), there are some disadvantages to outdoor play. One of them is the painful rash that can develop from exposure to poison ivy, poison oak and poison sumac, all prevalent in this area of the country.



Poison ivy usually has three leaves per stem and may grow as a climbing vine, a low, spreading vine or as a shrub. The leaves are reddish when they emerge in the spring, turn green during the summer, and become various shades of yellow, orange or red in the autumn. The plant also produces a berry-like fruit with a grayish white color that is eaten by birds and other animals

Poison oak leaves look very similar to oak tree leaves, but grow in groups of three per stem attached to a vine or shrub. Leaves are typically bronze when first unfolding, then turn to bright green in the spring, yellow-green to reddish in the summer, and bright red or pink from late summer to fall. White flowers develop into greenish-white or tan berries.

Poison sumac has 7 to 13 leaves per stem and grows as a shrub or small tree. The stems are usually reddish brown in color and the edges of the leaves are smooth. Poison sumac berries grow in a creamy white cluster. Poison sumac is more toxic than poison ivy and poison oak.

The painful rash comes from an allergic reaction to urushiol, a clear oily liquid found in the leaves, stems, roots and berries of these three plants. If washed off within minutes of exposure, it is unlikely you will develop the rash. However, if it isn't washed from your skin within a short time, most people will experience red, itchy blotches and blisters. The rash can appear up to two weeks after exposure and the oil can stay potent on objects (such as gardening gloves, rakes, shovels, etc.) for several years. Even the smoke from burning plants can result in severe lung and breathing problems. And don't assume you have no exposure if you remain indoors; pets can carry the oil on their fur and transfer it to you or items in your home.

If you develop a rash and blisters, the oozing blisters are not contagious. And as long as the oil is no longer present, scratching does not make the rash spread. However, scratching can increase the itching and lead to infections.

Protecting your skin from exposure to the oily sap (either by wearing long sleeves, long pants, high shoes and gloves or by coating your skin with over-the-counter barrier creams such as "Ivy Block") will help reduce the risk of an allergic skin reaction. But perhaps the best prevention is recognizing the poisonous plants and avoiding exposure to them.

WEST NILE VIRUS

The following information was obtained from the CDC website.



According to the CDC, more than 2,000 cases of West Nile virus (WNV) disease are reported in the U.S. every year and it is estimated that thousands more go unreported. The disease is carried by birds and mosquitoes and transmitted to people by mosquitoes. West Nile Virus was found in a total of 40 states and the District of Columbia in the preliminary data for 2018. Pennsylvania was 7th in the number of WNV cases reported.

In most cases, people infected with West Nile virus either show no symptoms or have very mild flu-like symptoms such as headache, body aches, joint pains, vomiting, diarrhea or rash. These mild cases of West Nile virus normally last only a few days and do not cause any long-term health problems. About 1% of people infected will develop a much more serious illness, including inflammation of the brain or the tissues surrounding the brain (encephalitis and meningitis). About 10% of people who develop these neurological infections will die (a total of 137 in the preliminary data for 2018 in the U.S.; Pennsylvania ranked 4th in the number of deaths from WNV).

There are no medications to treat or vaccines to prevent WNV infection. Protect yourself against West Nile virus infection by:

- **Using insect repellent.** Lightly apply insect repellents that contain DEET, picaridin, IR3535, 2-undecanone or some oil of lemon eucalyptus and para-menthane-diol which provide longer lasting protection to exposed skin, avoiding broken or irritated skin. Do not apply to eyes or mouth; do not spray directly on your face – spray on hands first and then apply to face. Be careful when applying to hands that you don't then touch your eyes or mouth. If you are using sunscreen, apply sunscreen first and then insect repellent. After returning indoors, wash treated skin with soap and water or bathe. Always follow recommendations appearing on the product label. If you are also using sunscreen, apply sunscreen before applying insect repellent.
- **For babies and children** – always follow the manufacturer's instructions for insect repellents. Do not use on babies younger than 2 months – instead dress baby in clothing that covers the arms and legs; cover strollers and carriers with mosquito netting. Do not apply insect repellent to a child's hands, eyes, mouth, cuts or irritated skin. (Spray repellent on your hands and then apply to a child's face.)
- **Dressing appropriately.** When weather permits, wear long sleeves, long pants, and socks when outdoors. Mosquitoes may bite through thin clothing, so spraying clothes with repellent containing permethrin or another EPA-registered repellent will give extra protection. Don't apply repellents containing permethrin directly to skin. Do not spray repellent on the skin under your clothing.

- ***Eliminating breeding grounds.*** Mosquitoes breed in standing water, so eliminate all sources of standing water, including small sources like trash can lids or irrigation control boxes. Items that might collect and hold water, such as wheelbarrows and buckets, should be stored upside down or covered. Other items, such as outdoor planters, should be drilled with drain holes. Standing water, like animal drinking troughs, can be kept fresh by aerating or changing the water frequently. Another option is to use mosquito dunks, which contain a pesticide that is toxic to mosquito larvae but harmless to animals and fish.
- ***Knowing when mosquitos are most active.*** Mosquito season starts in the summer and continues through fall. Not all mosquitoes are the same; mosquitoes that spread WNV bite from dusk to dawn so wear protective clothing and repellent if outside during these times.
- ***Mosquito-Proofing Your Home.*** Install or repair screens on windows and doors to keep mosquitoes outside. Use your air conditioning, if you have it.

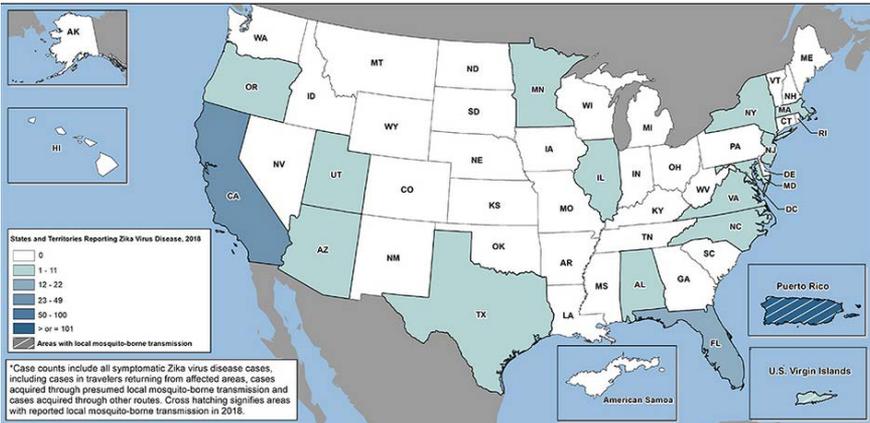
For more information on the West Nile Virus, prevention and control, go to the CDC webpage at www.cdc.gov.

ZIKA VIRUS

Information obtained from CDC website.

The Zika virus spreads to people primarily through the bite of an infected *Aedes* species mosquito. These mosquitoes bite during the day and night. People can also get Zika through sexual intercourse. It can be spread from a pregnant woman to her fetus. It is also suspected (but not confirmed) that it can be spread through blood transfusions.

The Zika virus has been found in the continental United States. The following map shows the number of confirmed and probable Zika virus disease cases, by state of residence, in provisional data for 2018.



PREVENTION

There is no vaccine to prevent Zika. The best way to prevent diseases spread by mosquitoes is to protect yourself and your family from mosquito bites. In addition to controlling the presence of mosquitoes (see information under West Nile Virus), follow these tips:

Clothing

- Wear long-sleeved shirts and long pants.
- Treat your clothing and gear with permethrin or buy pre-treated items.

Insect repellent

- Use Environmental Protection Agency (EPA)-registered insect repellents with one of the following active ingredients: DEET, picaridin, IR3535, oil of lemon eucalyptus or para-menthane-diol, or 2-undecanone. Always follow the product label instructions. When used as directed, these insect repellents are proven safe and effective even for pregnant and breastfeeding women.
- Do not use insect repellents on babies younger than 2 months old. Read additional information under West Nile Virus on the use of insect repellents with infants and children.

- Do not use products containing oil of lemon eucalyptus or para-menthane-diol on children younger than 3 years old.

Sexual transmission

Prevent sexual transmission of Zika by using condoms or not having sex.

SYMPTOMS

Many people infected with the Zika virus won't have symptoms or will only have mild symptoms. The most common symptoms of Zika are

- Fever
- Rash
- Headache
- Joint pain
- Red eyes
- Muscle pain

Symptoms can last for several days to a week. People usually don't get sick enough to go to the hospital, and they very rarely die of Zika. Once a person has been infected with Zika, they are likely to be protected from future infections.

Zika infection during pregnancy can cause a birth defect of the brain called microcephaly and other severe brain defects. It is also linked to other problems, such as miscarriage, stillbirth, and other birth defects. There have been increased reports of Guillain-Barré syndrome, an uncommon sickness of the nervous system, in areas affected by Zika.

HOW ZIKA IS DIAGNOSED

- Diagnosis of Zika is based on a person's recent travel history, symptoms, and test results.
- A blood or urine test can confirm a Zika infection.
- Symptoms of Zika are similar to other illnesses spread through mosquito bites, like dengue and chikungunya.
- Your doctor or other healthcare provider may order tests to look for several types of infections.

WHAT TO DO IF YOU HAVE ZIKA

There is no specific medicine or vaccine for Zika virus. Treat the symptoms:

- Get plenty of rest.
- Drink fluids to prevent dehydration.
- Take medicine such as acetaminophen to reduce fever and pain.
- Do not take aspirin or other non-steroidal anti-inflammatory drugs (NSAIDs).
- If you are taking medicine for another medical condition, talk to your healthcare provider before taking additional medication.