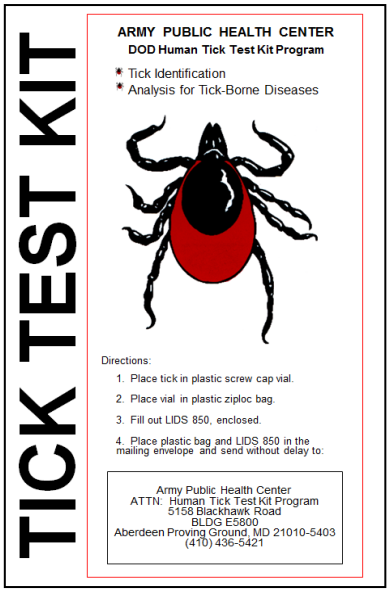
The Department of Defense Human Tick Test Kit Program

FACT SHEET 18-077-0317



What is the Department of Defense Human Tick Test Kit Program?
The Department of Defense (DOD) Human Tick Test Kit Program (HTTKP) is a free tick identification and testing service for military health clinics and health care providers. The HTTKP is provided by the Tick-borne Disease Laboratory (TBDL) at the Army Public Health Center (APHC) located at Aberdeen Proving Ground, MD. The HTTKP helps combat the threat of tick-borne diseases to DOD personnel and serves as a 'first alert' for tick-bite patients and their health care providers.

What populations does the HTTKP serve?
The HTTKP serves all DOD personnel, including Soldiers and other Active Duty personnel from all Services, as well as DOD civilians, Reservists, retirees, and the families of all of the above. If you are a member of any of the aforementioned groups and are bitten by a tick, you are entitled to send the tick to the HTTKP via a military clinic for free identification and testing. The HTTKP only tests ticks removed from humans, and only accepts tick specimens from the continental US.

How do I submit my tick to the HTTKP for identification and testing?
The APHC provides military clinics and health care providers with 'Tick Test Kits' upon request. Health care providers can then use these Kits to submit ticks removed from tick-bite patients to the HTTKP for species identification and pathogen analysis. Each Kit consists of instructions, a non-breakable screw cap vial for the tick specimen, a USDA permit, an APHC LIDS 850 submission form, and a preaddressed envelope for mailing the specimen back to the APHC TBDL.

Where can I go to request Kits, or find more information about the HTTKP?
If you are a DOD health clinic serving military personnel, their dependents, retirees, civilian employees, reserve or National Guard components, and wish to participate in APHC's DOD HTTKP, or if you would like additional information on this service, contact the TBDL by phone (410) 436-5421 or by email usarmy.apg.medcom-aphc.mbx.tickcom@mail.mil. Or visit the TBDL website, at: https://phc.amedd.army.mil/topics/envirohealth/epm/Pages/HumanTickTestKitProgram.aspx

What testing is available?
The TBDL uses polymerase chain reaction (PCR) chemistries to analyze ticks for evidence of infection with the agents of several established and emerging tick-borne diseases: Lyme disease (*Borrelia burgdorferi*), Rocky Mountain spotted fever (*Rickettsia rickettsii*), Tidewater spotted fever (*Rickettsia parkeri*), human monocytic ehrlichiosis (*Ehrlichia chaffeensis*), human granulocytic anaplasmosis (*Anaplasma phagocytophilum*), ewingii ehrlichiosis (*Ehrlichia ewingii*), Panola Mountain ehrlichiosis (*Ehrlichia* spp. Panola Mountain), and human babesiosis (*Babesia microti*). Live and dead ticks are tested. In addition, relative tick engorgement level is also noted: the longer a tick is attached, the more engorged it becomes, and the greater the risk that transmission of disease will occur if the tick is infected. Therefore, potential disease risk increases with engorgement level.

What is reported back to the tick-bite victim, and how quickly are results reported?
Results of tick identification and engorgement level are telephonically reported back to the clinic within 1 day of receipt; results of 'infection status' analysis are likewise telephonically reported, usually within a week. During the busiest months in June and July, it may take up to 2 weeks for test results to be reported back to clinics. The original APHC Form LIDS 850 is then returned to the clinic with all of the laboratory results annotated on side two of the form. APHC Form LIDS 850 can serve as documentation of the tick-bite incident for the patient's medical record.

How do the results of the HTTKP help clinicians?
Since different tick species transmit different pathogens (or groups of pathogens), and since many tick-borne diseases exhibit virtually identical early symptoms, it may be difficult for the health care provider to confidently evaluate and monitor a tick-bite patient. In addition, there is increasing evidence that in some cases a single tick may be infected with, and simultaneously transmit, more than one kind of pathogen, further complicating the clinical picture. Knowledge of tick species and infection status can alert the physician to specific diseases, thereby facilitating expedient diagnostic and treatment determinations. In addition, the ability to better clarify the actual threat associated with a specific tick bite may reduce unnecessary prescription of prophylactic antibiotics.

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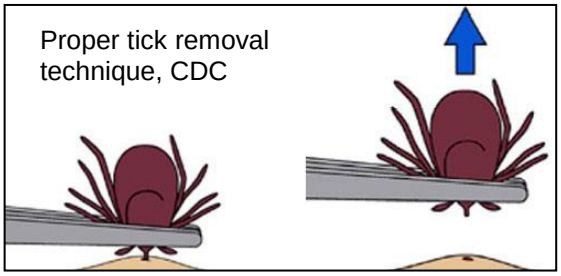
How do the results of the HTTKP help prevent tick-borne disease?
The DOD HTTKP has been in place and expanding since 1989, and the TBDL has amassed large, long-term datasets from many of the installations that submit ticks to the program. This enables the TBDL to provide up-to-date surveillance data and recommendations targeted to the specific risks present at each installation. The TBDL also offers information and educational materials regarding ticks, tick-borne diseases, tick removal, and personal protective techniques.

Why is tick-borne disease awareness important to the Army?
Lyme and other diseases transmitted by ticks represent an occupational health risk, adversely impacting military readiness and the health of military dependents and surrounding communities. Readiness of the Force is the Army's number one priority.


Proper tick removal technique, CDC

What can I expect after a tick bite?
Tick bites often produce a mild allergic reaction (red, itchy lesion) within the first 48 hours of attachment. This reaction may last several weeks, however this is not an indication of disease transmission. It is important to note that not all ticks are infected with a disease-causing pathogen – only about 9% of the ticks submitted to the HTTKP are infected with one or more human pathogens. Likelihood of disease transmission is related to the geographic region where the tick bite occurred, tick species, and the length of time the tick is attached. Prompt removal of any tick found biting is paramount.

How can tick-borne disease be prevented?
AVOID TICK BITES! Use the DOD Insect Repellent System to protect yourself from ticks and mosquitoes. The system includes using permethrin repellent on the uniform; applying DEET, picaridin, or IR3535 repellent to exposed skin; wearing uniforms properly; and sleeping inside a permethrin-treated bed net in tick habitat. Routinely check your skin and clothing for ticks while in tick habitat, and carefully check your whole body once you come indoors. Use the buddy system to help check areas you cannot see. Remove attached ticks as soon as they are found; use sharp tweezers to grasp the tick as close to your skin as possible, apply steady upward pressure. Kill ticks by drying clothes in a dryer on high heat for 10 minutes.

What can I use to treat my clothing with permethrin?
Army Combat Uniforms (ACUs) that are factory-treated with permethrin (ACU Permethrin) are now available to all Soldiers. The ACU Permethrin will have a sewn-in label on both the trouser and the blouse indicating the uniform has been factory-treated with permethrin. If not factory-treated, apply permethrin to uniforms in the field before wearing using either the IDA Kit (NSN 6840-01-345-0237), which can last up to 50 washings, or aerosol can (NSN 6840-01-278-1336), which should be reapplied after the sixth washing. Other aerosol products containing 0.5% permethrin, and permethrin-impregnated garments are also commercially available for civilian use.

What are the standard military insect repellent products available for use on exposed skin?
Approved military insect repellents for use on exposed skin come in a variety of formulations. Always refer to the label to determine frequency of repellent application based on activity. **Do not apply repellent to eyes, lips, or to sensitive or damaged skin.** Available military repellents are:

- Ultrathon™ (NSN 6840-01-284-3982) 33% controlled-release DEET lotion; one application protects for 12 hours.
- Ultra 30 Insect Repellent Lotion (NSN 6840-01-584-8393) contains 30% Lipo DEET; one application protects for up to 12 hours.
- Cutter® pump spray (NSN 6840-01-584-8598) contains 23% DEET; one application protects for up to 8 hours.
- Natrapel® pump spray (NSN 6840-01-619-4795) contains 20% picaridin; improved protection against Anopheles mosquitoes (carriers of malaria), one application protects for up to 8 hours.
- Bullseye™ Bug Repellent pump spray (NSN 6840-01-656-7707) contains 25% IR3535®; provides protection for up to 8 hours.

All standard approved skin repellents contain the active ingredient DEET, IR3535 or picaridin, and are registered by the U.S. Environmental Protection Agency (USEPA). These products are safe to use and effectively repel the ticks that carry ehrlichiosis. Photo: VID, APHC

What is considered a "properly worn uniform"?
Worn properly, your uniform acts as a physical barrier against ticks and insects. Wear the sleeves rolled down. Close all openings in your clothing that might provide access to insects: tuck your pants into your boots and your undershirt into your pants.