**Microbe Monthly**

**Communicable Disease Trend Report**

**May 2014**

**El Paso County Public Health**

**Communicable Disease/TB Program**

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### Tick-Borne Relapsing Fever (TBRF)

Tick-Borne Relapsing Fever (TBRF) occurs in the western United States and is usually linked to sleeping in rustic, rodent infested cabins in mountainous areas. TBRF is primary found in the following states: Arizona, California, Colorado, Idaho, Kansas, Montana, Nevada, New Mexico, Oklahoma, Oregon, Texas, Utah, Washington, and Wyoming. Although, not a nationally reportable disease, in Colorado it is a 7 day reportable condition. *Ornithodoros hermsi*, pictured on the left, is the most common tick that transmits this bacterial infection in the United States. This type of tick is referred as a “soft tick” and differs in two important ways from the more familiar “hard ticks” (e.g., the dog and deer tick). First, the bite of soft ticks is brief, usually lasting less then half an hour and painless. Secondly, they live within rodent burrows, feeding as needed on the rodent as it sleeps. Humans sleeping in rodent infested cabins may become incidental/opportunistic hosts.

*Below feeding*  
*After feeding*

Tick-Borne Relapsing Fever is a bacterial infection caused by certain species of *Borrelia*, a gram negative spirochete. Three species cause TBRF in the United States: *Borrelia hermsii*, *B. parkeri*, and *B. turicatae*. The most common cause is *B. hermsii*. Spirochetes can be visualized with light microscopy and have a screw-shed shape. The picture to the right shows a peripheral blood smear. The TBRF bacteria are long and spiral shaped, the circular objects are red blood cells, and irregular purple object on the top right corner is a white blood cell.

Relapsing fever is characterized by episodes of fever lasting several days, followed by an interval without fever, followed by another episode of fever. This process can recur from 1 to 4 times. Along with fever, patient may experience generalized body aches, muscle pain, joint pain, headache, nausea, vomiting, anorexia, dry cough, light sensitivity, rash, neck pain, eye pain, confusion, and dizziness. TBRF spirochetes are susceptible to penicillin and other beta-lactam antimicrobials, as well as tetracyclines, macrolides, and possibly fluoroquinolones. CDC has not developed specific treatment guidelines for TBRF. If you suspect a patient has TBRF, please contact the Communicable Disease Program at 719-578-3220. Find further information at: [http://www.cdc.gov/relapsing-fever/index.html](http://www.cdc.gov/relapsing-fever/index.html)

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### El Paso County Communicable Disease Trends — Reports Received in April

- 36 infectious disease cases were reported and investigated: campylobacter (3), cryptosporidiosis (3), giardia (5), chronic hepatitis B (7), influenza, hospitalized (4), pertussis (1), relapsing fever (1), Salmonella (4), shigellosis (1), Shiga-toxin Producing e coli (STECC) (1), varicella (3), and viral meningitis (3).
- 3 possible foodborne illness complaints
- 7 outbreaks (5 GI/norovirus outbreaks in long-term care facilities; 1 norovirus outbreak in a college level facility dorm; 1 chemical exposure outbreak in an elementary school
- 10 calls regarding human or pet exposures to potentially rabid animals, or other rabies-related concerns
- 1 animal (skunk) was tested for rabies and was negative
- 1 new active TB case

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### Hot Topics: State, National and International

- **Tick Identification Surveillance**: Currently the Medical Entomology and Zoonoses Epidemiologist, Leah Colton, at Colorado Department of Public Health and Environment (CDPHE) is performing tick identification surveillance for the state and is asking for samples. If you capture any little vectors please place them in a prescription pill bottle with cotton balls and contact the Communicable Disease Program at 719-578-3220.
- **Recreational water illness (RWI) and Injury Prevention Week is May 19-25, 2014**: RWIs are caused by germs spread by swallowing, breathing in mists or aerosols of, or having contact with contaminated water in swimming pools, hot tubs, water parks, water play areas, interactive fountains, lakes, rivers, or oceans. Diarrheal illnesses are caused by germs such as Crypto (short for *Cryptosporidium*), Giardia, Shigella, norovirus and *E. coli O157:H7*. With RWI outbreaks on the rise, swimmers need to take an active role in helping to protect themselves and prevent the spread of germs. Please remind those suffering from diarrheal illness not to swim or go in water for two weeks after diarrhea has resolved. Find more information on the CDC website at: [http://www.cdc.gov/healthywater/swimming/](http://www.cdc.gov/healthywater/swimming/).

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### Contact Information

**El Paso County Public Health CD/TB Program**

- Weekday Hours (M-F) 719-578-3220
- After-Hours Emergency 719-235-2278

**Public Health’s regular hours are**

- **Monday—Friday**
  - 7:30 a.m. to 4:30 p.m.
  - [www.elpasocountyhealth.org](http://www.elpasocountyhealth.org)

**Colorado Department of Public Health and Environment**

- Weekdays 303-692-2700
- After hours 303-370-9395