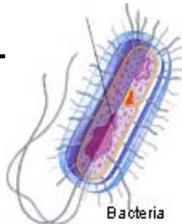


What is RMSF?

- Tickborne bacterium "*Rickettsia rickettsii*"
- **Brown Dog Tick** can bite and infect a dog or a person
- Fast-acting disease can cause death in a week
- Quickly attacks blood vessels
- Impacts multiple organ systems in a short time



Signs & Symptoms



⇒ Fever lasting more than 2 days



⇒ Headaches or muscle aches



⇒ Stomach problems: loss of appetite, diarrhea, nausea and vomiting

⇒ Spotted Rash, Red Bumps



⇒ If you have any of these signs/ symptoms: Go see a health care provider

The Arizona History of RMSF

- Since 2003, there are over 250 human cases and 19 deaths
- Impacts many tribes:
 - ◊ Fort Apache
 - ◊ San Carlos Apache
 - ◊ Tohono O'odham Nation
 - ◊ Gila River Indian Community
 - ◊ Hopi Nation



Responsible Dog Owner

- ◆ Provide food, water and shelter daily
- ◆ **Monitor** dog health with regularly scheduled veterinary checkups, vaccines and deworming
- ◆ **Spay / Neuter** to prevent unwanted litters (stray dog overpopulation)
- ◆ Use Tick Collar / Spot-On treatment to protect the dog from ticks
- ◆ Purchase a NN dog license and collar
- ◆ **Report** dog attacks / roaming dogs to the NN Animal Control Office
- ◆ **Secure** dog on a leash when walking
- ◆ **Prevent** dog roaming by keeping dog inside a fence or on a run-line (leash)



Protect Your Home

- ◆ Do yardwork by cutting high grass and weeds
- ◆ **Put up a fence** to keep roaming dogs out and keep your dogs in
- ◆ **Remove mattresses and old furniture** from the yard because Ticks can live inside them
- ◆ **Keep wood pile and dog house** away from the house



CONTACT

- Navajo Nation Veterinary and Livestock Program (NNVLP) - (505) 371-5214
- Navajo Animal Control Program - (928) 871-6451
- Navajo EPA Pesticide - (928) 871-7183
- Navajo Health Education - (928) 871-7967
- Community Health Representatives - (928) 729-4027



Rocky Mountain Spotted Fever (RMSF) on the Navajo Nation



developed by:

FAD Task Force

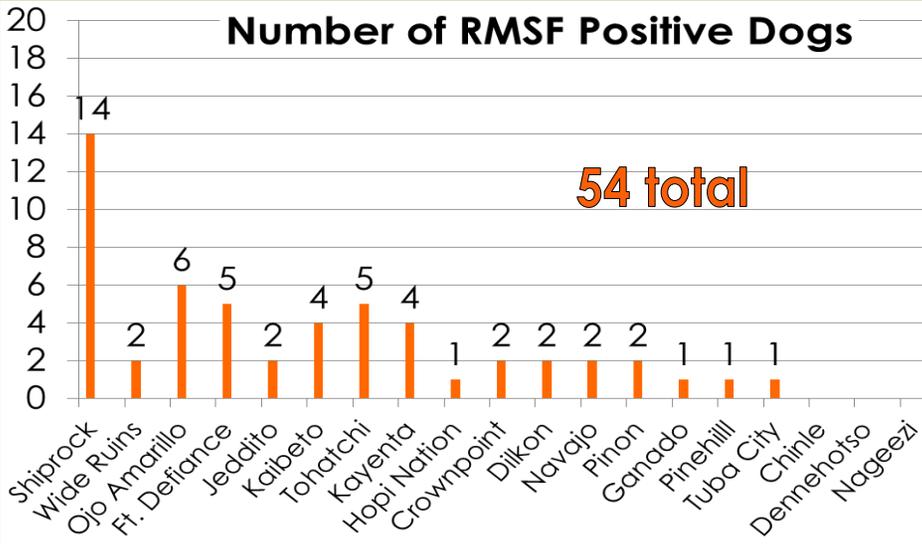
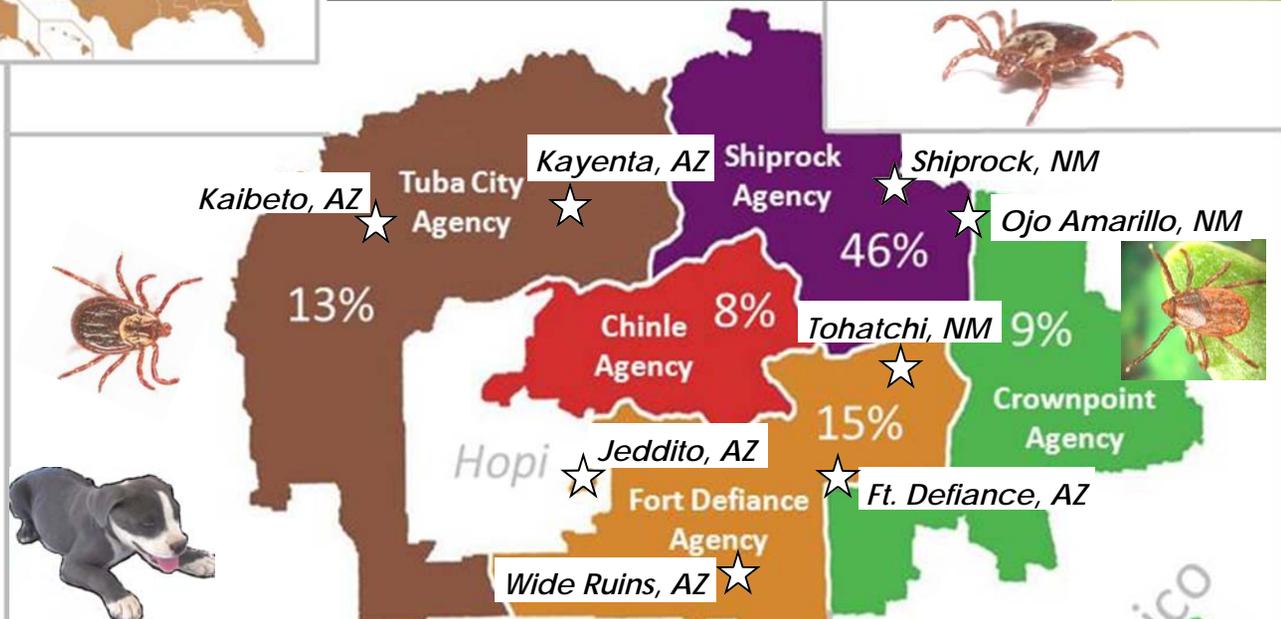


Foreign Animal Disease (FAD) Task Force was established by the Navajo Nation **Emergency Response Plan** to initiate **planning, preparedness and education** to protect families and communities from RMSF. Navajo Nation Departments, Programs and Partners work together to increase public health awareness on tick bite prevention and education.

2012 Dog Blood Testing for RMSF



- ◆ FAD Task Force went to 19 communities to provide dog & cat vaccination shots (deworming, distemper and rabies), dog dips, and dog blood draws
- ◆ Tested 337 dogs and found 54 were positive for RMSF



Recommendations

Identify priority populations from highest to lowest rate:

1. Shiprock, NM (14/20 = 70%)
2. Wide Ruins, AZ (2/6 = 33%)
3. Ojo Amarillo, NM (6/20 = 30%)
4. Ft Defiance, AZ (5/19 = 26%)
5. Jeddito, AZ (2/8 = 25%)
6. Kaibeto, AZ (4/16 = 25%)
7. Tohatchi, NM (5/20 = 25%)
8. Kayenta, AZ (4/20 = 20%)



Increase dog population control:

- Dog Surrender dates (NACP)
- Mobile Spay & Neuter Clinic dates (NNVLP)
- Follow Navajo Animal Control Laws

Remind patients who might have RMSF:

- Complete entire treatment process
- Return to the hospital for the 2nd blood draw, this confirms a positive case
- Community Health Representative (CHR) will provide follow up care

Public Health Issue

- Roaming dogs are a people problem, and help spread RMSF
- Ticks are the "vectors" that contain the disease
- Dogs are the "sentinels" that carry the vectors
- Contact CHR's, Health Educators and Public Health Nurses for RMSF education in your community



- ◆ Dog blood test shows if the dog has been exposed to the RMSF bacteria at sometime in the dog's life, which could be a day, a week, or a year before the dog's blood was tested
- ◆ The positive RMSF dogs healed from the bacteria and are healthy dogs, similar to how humans heal from a cold



What is Rocky Mountain Spotted Fever (RMSF)?

- Rocky Mountain Spotted Fever is a disease caused by the bacteria (germ) *Rickettsia, rickettsii*.

How is RMSF spread?

- RMSF is usually spread through the bite of an infected brown dog tick by the bacteria (*Rickettsia*).
- Because ticks on dogs can be infected with *rickettsii*, dog and people can get RMSF from the same ticks.
- Dogs that roam free can become “tick buses” that spread infected ticks all over the community.

Can Animals get RMSF?

- Yes. Dogs can develop RMSF just like humans. Cat, Horses and species do not get RMSF.
- Dogs get the diseases because the most common ticks vector on Arizona is the “Brown Dog Tick” and this tick prefers to live and feed on Dogs.

Can animals transmit RMSF to me?

- Yes, but not directly. People get this disease when they are bitten by a tick that is carrying the bacterium *R. Rickettsia*. Because ticks on dogs can be infected with *R. rickettsii*, dogs and people can get RMSF from the same ticks. These ticks can also bite other animals and pass RMSF to them.

What are the symptoms of RMSF?

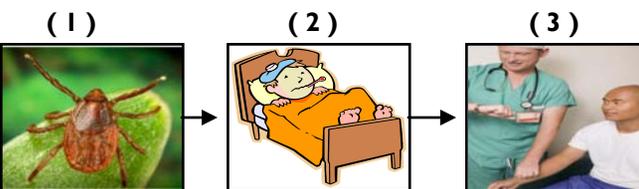
- The first symptoms of disease occur 2—14 days after the tick bite.
- Symptoms begin with sudden fever, severe headache, may also include deep muscle pain, nausea and vomiting.
- Many people develop a rash on their arms and legs about 3 to 5 days after the fever starts.

Is there treatment for RMSF?

- RMSF can be treated with a common antibiotic called doxycycline.
- Serious complications, including death, can occur if the disease is not recognized and treated early.

Biology of RMSF—Timeline

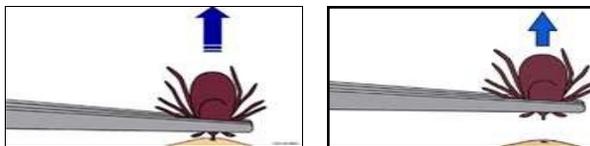
- First there is a tick bite.
- First symptoms of disease occur 2-14 days after the tick bite.
- Most people with RMSF in AZ go to the Doctor in the first 2 days of symptoms.



Tick Removal

Because ticks do not transmit disease until they have been attached to the host for several hours to several days, it is very important to remove ticks as soon as they are found. The following is the best way to remove a tick.

Grasp it with tweezers as close to the skin as possible and gently, but firmly, pull it straight out. Avoid any twisting or jerking motion that may break off the mouth parts in the skin. Mouth parts left in the wound will not transmit the disease, but may cause a minor irritation or infection, similar to a reaction to a splinter.



If tweezers are not available, protect your fingers with gloves, tissue, or a paper towel. Do not touch the tick with bare fingers. The disease causing organism can enter the body through a break in the skin on your fingers and cause disease.

After the tick has been removed, wash hands with soap and water.

Dispose of the tick by drowning it in rubbing alcohol or flushing it down a drain or toilet.

Tick removal using nail polish, petroleum jelly, alcohol or a hot match is not safe.

If you get sick, and you have been exposed to ticks, be sure to tell your Doctor about your tick exposure.

For more information:

<http://www.cdc.gov/ticks/diseases/>

Navajo Division of Health
Health Education Program
928-871-6562

Home Risk Assessment

Rocky Mountain Spotted Fever



**Home Risk Assessment
Tick Habitat and Rocky Mountain Spotted Fever Prevention**

Determine if your family and home are at risk for ticks to establish in and around home:

1	Have ticks been seen around the outside of the home?	Y	N	N/A
2	Have ticks been seen inside the home?	Y	N	N/A
3	Have ticks been seen on dog(s)?	Y	N	N/A
4	Have ticks been seen where the dog sleeps?	Y	N	N/A
5	Does the dog(s) have a tick collar?	Y	N	N/A
6	Are pets allowed in the house?	Y	N	N/A
7	Has anyone in the family or visitors had a tick bite recently?	Y	N	N/A
8	Has there been any illness in the Family or visitor resulting in a fever or rash?	Y	N	N/A
9	Was pesticide applied to the outside of home? If yes, what type of pesticide is being used? How often is pesticide applied?	Y	N	N/A
10	Was pesticide applied to the inside of the home? If yes, what type of pesticide is being used? How often is pesticide applied?	Y	N	N/A
11	Are dog(s) treated with a tick medicine? If yes, what type?	Y	N	N/A
12	Was a Doctor seen as a result of illness or a tick bite?	Y	N	N/A

Check if your home has the following risk - Please take action to protect yourself:

- | | |
|--|---|
| <input type="checkbox"/> Routine presence of stray dog(s) outdoors | <input type="checkbox"/> Mattress of upholstered furniture kept outside |
| <input type="checkbox"/> Pets kept inside | <input type="checkbox"/> Firewood or other items stored near the house |
| <input type="checkbox"/> Yard not fenced | <input type="checkbox"/> Materials stored directly on the ground |
| <input type="checkbox"/> Dog house located next to the house | <input type="checkbox"/> Untrimmed tree in the yard |
| <input type="checkbox"/> Trash / debris around the house | <input type="checkbox"/> Inoperative vehicle near the house |
| <input type="checkbox"/> Area under house is open to dog(s) | <input type="checkbox"/> Water leak or standing water near the house |
| <input type="checkbox"/> Area under porch is open to dog(s) | <input type="checkbox"/> Over grown weeds around the house |

(Follow recommendation to protect your family vs. ticks)

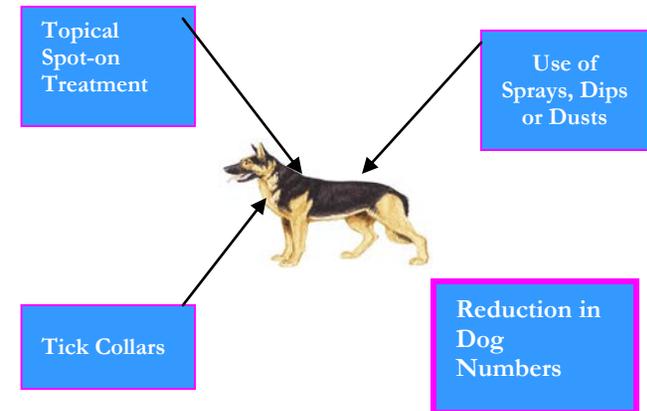
- 1 Fence in your pets while fencing out stray dogs.
- 2 Treat with tick products, flea collars for dogs "Read the Label"
- 3 Inspect crack & crevices for ticks
- 4 Move dog house a distance from home
- 5 Remove debris where tick may hide
- 6 Remove or trim over grown vegetation near house
- 7 Eliminate moisture / water leak around the house

Other concerns or recommendations: _____

Prevention

Ticks do not jump or fly onto people or animals. They wait on low vegetation, attaching to hosts as they pass by and crawl upward. The following steps can protect you against ticks and diseases they carry:

- Ticks find their hosts by detecting the breath and body odors of animals , or by sensing body heat, moisture and vibrations.
- Avoid tick-infested areas such as tall grass and vegetation.
- Keep grass and over grown weeds cut in yards. Ticks wait for a host, resting on the tips of grasses and shrubs. Follow directions carefully if chemicals are used for ticks or hire a professional.
- Conduct tick checks on yourself, your children and your pets every day.
- Apply tick repellent to areas of the body and clothing that may come in contact with grass and brush. Repellents include those containing up to 50% DEET for adults or less than 30% for children. Follow directions carefully and do not overuse. Some tick repellents can cause toxic or allergic reactions.



Navajo Housing Authority

**Pest Control Program
Phone: Fort Def. 928-729-6359**

**Navajo Veterinary & Livestock Program
928-871-6615**

Dog Products

Dog Collar Treatment

The dog collar active ingredient should be Amitraz, Deltamethrin or Propoxur

It should be placed around the neck of the dog. Protection against ticks continues up to 5 months. **Do not use on puppies or cats unless directed by label.**

Top-spot droplet Treatment

The most effective top-spot treatments are made by Frontline/Advantage/Advantix.

Top spot is a liquid applied to dog's skin between the shoulder blades. It must be reapplied every 30 days. Each package provides a 3 or 4-month supply. Use 1 tube per application. Different doses available for different size of dog. Not intended to be use on puppies



Tick Powder Treatment

Powders provide long lasting control and kills ticks on contact. Can be used on puppies .

These treatments are available through your veterinarian and local stores.

IMPORTANT! Keep all pesticides out of reach of children. Follow the directions on the product label carefully and use personal protective equipment (i.e. gloves, safety glasses) as directed. Wash hands thoroughly after using these products. It is a violation of state and federal laws to apply pesticide in a manner not consistent with the package label.

NOTE: This information is not an endorsement of the products listed or the companies who sell these products. More effective products may be available from your veterinarian or local hardware stores garden section.

Questions? Please contact:

Navajo CHR	(928) 729-4027
Health Education	(928) 871-7967
Navajo OEH	(928) 871-1354
Navajo EPA	(928) 871-6790
NNVLP	(505) 371-5214
I.H.S. OEH	(928) 729 -8440

Navajo Nation Environmental Protection Agency



Pesticide Program
PO Box 339
Window Rock, AZ 86515

Phone: 928-871-6790
Fax: 928-871-6757

Rocky Mountain Spotted Fever (RMSF) Alert! Tick Control Product Brochure



A Homeowner's Guide to Killing, Controlling and Preventing Ticks...

Inside Homes

Ready-to-Use Sprays (RTU)

These products are sold ready to apply with no mixing required.

Products may be used for indoor or outdoor areas where ticks have been seen.

Products must be reapplied as directed by label.



Ortho Home Defense MAX Perimeter and Indoor Insect Killer Spray (24 oz)

www.scotts.com

Approx. cost - \$5.00.



Spectricide Bug Stop Indoor/Outdoor Insect Killer Spray (32 oz)

www.spectracide.com

Approx. cost - \$4.00.



Black Flag Extreme Home Insect Control Spray (32 oz)

www.blackflag.com

Approx. cost - \$4.00.

Outside Homes

Personal Protective Equipment (PPE)

It is important individuals use appropriate protective personal equipment as specified in the product label.

Ready-to-Spray (RTS)

These products must be attached to the end of a garden hose.

These products are premixed and ready to use.

For proper application refer to the direction on the product label.

Ortho MAX Lawn & Garden Insect Killer Hose End Sprayer (32 oz)

www.scotts.com

Approx. cost - \$11.00.



Sevin Ready-to-Spray Hose End Sprayer (32 oz)

www.farmandfleet.com

Approx. cost - \$16.00.



Outside Homes

Materials should have the active ingredients Permethrin, Bifenthrin, Cypermethrin, Deltamethrin, Cyfluthrin, or Lambda cyhalothrin in controlling brown dog ticks.

Granules

These products are intended for **outside use and as a barrier around the outside of the house**. The product is applied to soil, and is activated when the soil is moistened by rainfall or light spraying with a garden hose after application.



Ortho Bug-B-Gon MAX Insect Killer Granules (10 lb)

www.scotts.com

Approx. cost - \$9.00.



Ortho MAX Insect Killer Granules (2.5 lb)

www.scotts.com

Approx. cost - \$7.00.



Eliminator Ant, Flea & Tick Killer Granules (10 lb)

Approx. cost - \$9.00.