

You May Not Have to Worry About Ticks and Lyme with This Critter Around

Researchers were stunned to discover how this mammal slays ticks by eating or removing up to 96% of them. And once shed, they don't go on to infect other mammals. With just the potential of one animal to wipe out an astonishing 4,000 ticks in a single week, this is a wild beast you may want around.

Reviewed by Dr. Becker

STORY AT-A-GLANCE

- Scientists have discovered yet another fascinating facet of opossums — they're an all-natural, very effective way to control ticks
- Opossums are able to wipe out over 95% of the ticks that land on them thanks to an aggressive grooming routine
- Opossums also don't typically harbor, and therefore don't transmit Lyme disease or other tick-borne infections to other animals or humans

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Now here's an all-natural way to get rid of ticks you've probably never heard of — the opossum!

As if we didn't already have enough reasons to love these little guys, now we learn that in addition to all their other unique charms, they're also very efficient tick zappers and a natural defense against Lyme disease!

Ticks Can't Survive Opossums' Extreme Grooming Skills

For several years, scientists have been investigating the role different mammals play in the spread of ticks and Lyme disease.

Ecologists at the Cary Institute for Ecosystem Studies in Millbrook, NY exposed six species — including catbirds, chipmunks, opossums, squirrels, veerys (a small thrush species) and white-footed mice — to 100 ticks each.

The researchers were quite surprised to learn how much more effective the opossums were at getting rid of ticks than the other mammals and birds. "I had no suspicion they'd be such efficient tick-killing animals," Richard Ostfeld, Ph.D., of the Cary Institute told NewsTimes.¹

The study results led the researchers to conclude that opossums can eat or remove up to 96% of the ticks that land on them. This is because opossums are such "extraordinarily good groomers," said Ostfeld.

On average, about half the ticks placed on the white-footed mice dropped off fully engorged and still alive, while less than 4% of ticks on the opossums dropped off alive.

The opossums kill the ticks as they lick, chew and scratch at their fur during grooming. Proof that they ate most of the ticks showed up in their poop.

"So these opossums are walking around the forest floor, hoovering up ticks right and left, killing over 90% of these things, and so they are really protecting our health," Ostfeld said.²

Opossums Don't Transmit Lyme or Other Tick-Borne Diseases

According to Ostfeld, opossums also seem to be very poor reservoirs for Lyme and other tick-borne infections (they are also very resistant to the rabies virus) because their immune system is fairly effective at fighting off disease.

Ticks that feed on opossums are unlikely to become infected and then go on to infect other mammals.

The researchers estimate that during late summer when tick counts are high, an opossum could be walking around with as many as 200 ticks on his body. This means that just one opossum could potentially wipe out an astonishing 4,000 ticks in a single week!

Ostfeld believes the opossums' incredible pest control skills not only protect them, but also us, because human risk for Lyme disease correlates with the amount of Lyme-infected ticks in the environment.

Opossums May Also Provide Snakebite Anti-Venom

Not long ago, a team of scientists from San Jose State University isolated a protein from the blood of opossums that shows promise as an anti-venom against snakebites.³

Poisonous snakebites are a significant problem worldwide, especially in developing countries. According to the World Health Organization (WHO), estimates suggest that over 420,000 venomous bites and 20,000 deaths from snakebite occur each year.

Snakebite treatment is costly and many people simply don't have access to it. Most anti-venoms are created by injecting dilute venom into a mammal, which results in an immune response. The animal's blood serum is then processed and made injectable for snakebite victims.

The injected serum scavenges toxic molecules in the bite victim's blood. These treatments typically run \$100 to \$150 per dose, making them out of reach for many people in developing countries.

In the San Jose State study, venom-exposed mice given the opossum peptide showed no ill effects from the poison, whereas untreated mice died within a matter of hours. The peptide completely neutralized the venom in the treated mice.

More research is needed to determine if the anti-venom will work in humans, and the process will have to be refined before the antidote becomes commercially available. But the researchers estimate each dose will cost \$1 or less, which is a significant savings over other anti-venoms.

Seven Fast Facts About Opossums

1. **Scientifically speaking, opossums are not "possums"** — While opossums are very commonly referred to as "possums," the possum is actually a separate creature. Possums include several species of nocturnal, arboreal (tree-dwelling) marsupials native to Australia and New Guinea.

The story goes that they were mistakenly named "possum" in the 18th century after their North American cousin, the opossum.

2. **There are over 60 species of opossum** — The most notable is the Virginia opossum or common opossum, which is the only marsupial found in the U.S. and Canada. The word opossum comes from the Virginia Algonquian (native American) word "apoum," which means "white face" or "white beast."

Opossums range in size from that of a small mouse to the size of a large housecat. Most opossums have long snouts full jaws, and an impressive 50 teeth.

They walk with their feet flat on the ground, and the rear feet have an opposable digit with no claw. They also have prehensile tails designed to grasp and hold things. Opossums age rapidly and have an unusually short lifespan for mammals of their size — typically only 2 to 4 years.

3. **Newborn opossums are as tiny as honeybees** — Female opossums have a pouch and give birth to large litters. As soon as they're born, the babies crawl into the mother's pouch, where they continue to grow and develop. As they get bigger, the youngsters venture in and out of the pouch and often ride on the mother's back as she looks for food. There can be up to 20 babies in a litter, but less than half typically survive.
4. **Opossums are omnivores and scavengers** — As omnivores, opossums are both plant and meat-eaters. Their scavenging nature is why they are often found hanging around homes and neighborhoods looking for discarded food in trashcans and dumpsters. They also eat carrion, typically in the form of roadkill, as well as grass, nuts and fruit. Opossums are also known to hunt birds, mice, worms, insects, snakes and even chickens.
5. **Opossums really do "play possum"** — When they feel threatened, adult opossums draw back their lips, bare their teeth, foam at the mouth, close their eyes or adopt a fixed stare and secrete a smelly fluid from their anal glands. They also fall over on their side, curl up in a ball and "play dead." In this position, an opossum can be turned over, and even picked up and carried away without responding.

This is actually an involuntary rather than a conscious physiological response, they faint in response to extreme stress and a "playing possum" opossum will typically regain consciousness in 40 minutes to four hours. The waking up process begins with a slight twitching of the ears.

When in danger, opossums will also growl, raising their pitch the more threatened they feel. Distressed baby opossums make a sneezing noise to alert their mother, and when threatened, youngsters will bare their teeth and hiss.

6. **Opossums are accomplished tree climbers** — Opossums are "arboreal," meaning they spend a lot of time off the ground in trees. They have very sharp claws that can dig into bark, and their prehensile tails can function as an extra leg or foot as needed. However, contrary to a popular myth, their tails are not strong enough to hold them hanging upside down. As for dwellings, opossums tend to nest in tree holes and also in dens made by other animals.
7. **Opossums are smart** — Opossums possess an uncanny ability to find food and to remember where they found it. In tests to evaluate their ability to remember where food is, opossums performed better than not

only rats and rabbits, but also dogs and cats. They are also able to make their way through mazes more quickly than both rats and cats.

Sources and References

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[National Wildlife Federation March 30, 2016](#)

¹ [newstimes, April 18, 2014](#)

² [Cary Institute July 23, 2012](#)

³ [MedicineNet.com, March 22, 2015](#)
