

Bearded Dragons and Salmonellosis

Our topics for this week are:

- **Common behaviors of Bearded Dragons**
- **Salmonellosis transmission to humans by Bearded Dragons**

The Bearded Dragon is one of the most popular pet reptiles. It was introduced into the U.S. from Australia as pets during the 1990s.

Bearded dragons are generally a solitary animal. Male bearded dragons are usually housed alone because they will fight with other males and breed with females. Adults are about 20 in from head to tail, weigh 16 oz and live for about 10 to 15 years.

Their name is based on the underside of the throat (or "beard") of the lizard, which can turn black and enlarge if they feel threatened. Their diet consists primarily of insects, vegetation, and occasionally small rodents.

Bearded Dragons are physically characterized by their broad, triangular heads, flattened bodies, and rows and clusters of spiny scales covering their entire bodies. When threatened, bearded dragons will puff up their bodies and beards to ward off predators. They will display a hand-waving gesture to show submission and a head-bobbing display to show dominance. Bearded Dragons are considered to be semi-arboreal and will climb to establish dominance.

Behavior

Adult bearded dragons are very territorial. As they grow, they establish territories by displays of aggression and appeasement. A dominant male will adopt a dominant stance and sometimes ready himself for a fight to attack a male aggressor to defend territory, food sources, or in competition for a female.

The beard itself is used for mating and aggression displays, as well as heat management. Both sexes have a beard, but males display more frequently, especially in courtship rituals. The beard darkens, sometimes turning jet black, and inflates during the display. The bearded dragon may also open its mouth and gape in addition to inflating its beard to appear more intimidating. Extreme behavior such as hissing can be observed when threatened with a predator, inflating the body and tilting towards the threat in defense.

Head bobbing is another behavior seen in both females and males; they quickly move their heads up and down, often darkening and flaring their beard. Changes in the pace of head bobbing are thought to be a form of communication. Smaller males will often respond to larger male's heads bobbing by arm-waving, which is a submissive sign. Females will also do an arm wave to avoid aggression.

Bearded Dragons can be fascinating pets, but they can also be a source of infectious disease in humans.

Salmonellosis

Salmonellosis is an infection with a bacteria called Salmonella, Salmonella live in the intestinal tracts of animals, including reptiles and birds. Salmonella are usually transmitted to humans by eating foods that are improperly cooked, especially poultry products, but some cases are acquired from healthy-appearing reptiles. Illness begins 12 to 72 hours after exposure. Symptoms include abdominal cramps, diarrhea, and fever. Children under 5 years old, adults over 65 years old, people with immunosuppressive diseases or on immunosuppressive drugs, and receiving some anticancer therapies are at highest risk for severe disease.

Outbreak of Salmonellosis from Bearded Dragons

In 2021 and 2022, 56 people in 26 states presented to medical services with Salmonellosis associated with Bearded Dragons. Nineteen required hospitalization, but there were no deaths. The actual number of cases and states involved are not known due to incomplete reporting. Many unreported cases are suspected. Those that were reported had bacteria DNA associated with the illness which was identified in a national database maintained by the CDC. All were the Uganda strain of Salmonella, which was also recovered from Bearded Dragons.

Prevention of Salmonellosis

To protect against acquiring salmonellosis from any reptile, you should:

- Wash your hands after handling a reptile or anything they have touched.
- Never kiss a reptile or eat or drink in the same room where a reptile is kept.
- Disinfect enclosures, toys, water and food bowls, and “furniture” in enclosures weekly, preferably outside the home. The sink used to clean enclosures and contents should also be disinfected after the cleaning procedure. Disinfection can be achieved with clorox bleach diluted 1 part with 9 parts water.

If you have comments or you're interested in particular animal handling subjects contact us at CBC@BetterAnimalHandling.com

Now let's recap the key points to remember from today's episode:

- 1. Bearded Dragons are interesting, popular, pet reptiles**
- 2. Precautions are needed against acquiring salmonellosis when keeping or handling any reptile, including Bearded Dragons.**

More information on animal handling can be found in my book, *Animal Handling and Physical Restraint*, published by CRC Press and available on Amazon and from many other fine book supply sources. My new spiral-bound handbook, *Concise Textbook of Small Animal Handling* was recently published and available from all major science book supply sources.

Additional information is provided at: www.betteranimalhandling.com . This website has more than 150 past podcasts with notes on handling of dogs, cats, other small mammals, birds, reptiles, horses, cattle, small ruminants, swine, and poultry.

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.