

Table 1. Individual characteristics of ocean lifeguard participants (*n* = 168)

Characteristic	<i>n</i>	Median, Range	(%)
Age (years)	168	24, 18–59	
Years lifeguarding	168	6, 1–30	
Rescues in the past week	164	2, 0–30	
Hours in ocean this past week	168	7, 0–60	
Lifeguards performing rescues in past week	113		67
With history of asthma	20		12
With history of anxiety	14		9
Ethnicity			
Caucasian (non-Latino)	155		92
Latino	13		8
Sex			
Men	121		72
Women	47		28
Geographic location			
West coast	103		61
East coast	46		27
Gulf coast	16		10
Hawaii	3		2

symptoms after exposure to a red tide may be related to a stress response associated with potent neurotoxins of harmful algal blooms. Future studies are needed to identify acute stress symptoms and adverse health effects associated with specific harmful algal bloom toxins and concomitant pathogenic bacteria and viruses. Further research is needed to determine what effect, if any, rescue circumstances, environmental conditions, lifeguard training, and physical fitness have on acute stress symptoms.

As with any pilot study, there are potential limitations. Self-reported data and self-selection bias are concerns of

Table 2. Acute stress symptoms experienced by lifeguards after ocean rescues (*n* = 167)^a

Symptom	<i>n</i>	(%)
None	86	52
Flashbacks of rescue	43	26
Sleep difficulties	30	18
Hypervigilance	26	16
Recurrent dreams of rescue	26	16
Recurrent recollections of rescue	18	11
Avoid thoughts or talking about rescue	17	10
Difficulty concentrating	14	8
Intrusive images	14	8
Exaggerated startle response	11	7
Irritability or outbursts of anger	4	2

^a Symptoms not mutually exclusive.

this study. The findings reported here may not be applicable to other lifeguard cohorts. Although our findings are limited to this rather modest interview population, they provide valuable baseline data on ocean lifeguards and generate hypotheses for future and larger studies.

In conclusion, ocean rescues performed by lifeguards in this cohort were associated with acute stress symptoms. Additional research is warranted to investigate what effect, if any, rescue circumstances, environmental conditions, lifeguard training, and physical fitness have on acute stress symptoms.

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An Attack by a Teiidae Lizard (Tegu) on a Human: Is There a Pattern of the Injuries?

To the Editor:

Tegus, or teiús, are South American large lizards that can reach up to 6.5 feet (2 m) in length. The tegus are part of the *Tupinambis* genus (Squamata order/Teiidae family), and the most distributed species is the *Tupinambis meriana* (Duméril and Bibron, 1839).^{1,2} The tegus are strong lizards that have a black body with yellow stripes, with strong jaws, and a long and muscular tail (Figure 1). They are animals that live in



Figure 1. *Tupinambis merriana*, the teiú, or tegu, lizard. This great reptile has teeth (inset) that can destroy soft tissue and bone of the victims.

cerrados (savannah-like environments), especially in Brazil. In nature, these lizards feed on fruits, eggs, larvae, worms, insects, and carrion. The tegus also can feed on domestic animals, invading fowl runs to eat eggs and chicks.^{1,2}

When threatened, the lizard usually tries to escape. If that is impossible, it can strike severe blows with the tail. It may also bite, causing significant lacerations. The teeth are not great, but have a solid base and are driven by the crushing force of the bite, which can destroy soft tissue and bone.³ Human injuries from Teiidae lizards are rare, however, and reliable descriptions of attacks are even rarer.⁴

A Teiidae lizard of the *Tupinambis merriana* species bit a 64-year-old urban resident who was visiting a rural area. He was at his farm located next to Botucatu town, in the Southeast region of Brazil. The man cornered the lizard when it was eating eggs in the chicken coop. The reptile was very aggressive because the victim's dog was barking and trying to attack it through the screen of the pen. The man was filming the lizard through an opening on the screen, and when the camera was placed at a height of about 2.6 feet (0.8 m) above the ground, he was bitten on the end of the middle finger of his right hand. The bite caused loss of soft tissue of the distal phalanx (Figure 2). After the bite, the patient had intense bleeding and persistent pain. He cleaned the wound with soap and water, pressed it, and went to the emergency care unit. The lizard was captured, and measured approximately 5 feet (1.5 m) in length.

At the hospital, the bite area was extensively irrigated, and antiseptics were performed with chlorhexidine and povidone-iodine solution. The nail was removed, and a compressive dressing was applied. The patient received analgesics and tetanus immunization. Fractures were not seen on radiograph (Figure 3). Amoxicillin/clavulanate 500 mg/125 mg orally three times a day was prescribed for 10 days (a first dose of amoxicillin/clavulanate 1000 mg/200 mg intravenous was administered in the hospital to aid the prevention of soft tissue infection and osteomyelitis), and dressings containing an ointment with collagenase (0.6 U/g) and chloramphenicol (0.01 g/g) were applied



Figure 2. (Left) The lizard bite on the end of the middle finger of the victim's right hand. (Right) Note the loss of soft tissue of the distal phalanx.

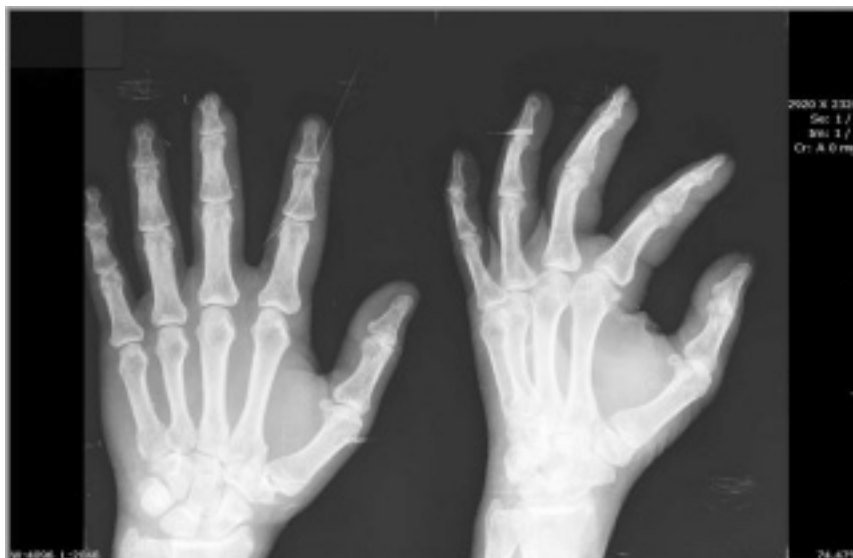


Figure 3. The radiologic examination shows important destruction of the soft tissues of the extremity of the right middle finger, but no bone lesions.

until the wound was completely healed. A skin graft was proposed for the site of the bite but the patient decided for second intention healing of the wound. The wound healed completely without infection after 2 months.

The description of this case is very similar to another reported by one of the authors in *Wilderness & Environmental Medicine*.⁴ It is especially interesting to emphasize the lizard fight with the dog. The injury also is very similar to the cited report (distal phalanx). We think that there is a pattern of Teiidae attacks on humans and their injuries. These seem to be related to common living areas, provoked attacks (the lizard defended itself in the two reported cases), pet intervention, and highly destructive bites on the hands of the victims who tried to get close to the reptile.

If the interface with humans is inevitable, animals like the tegus should be respected. Otherwise, serious injury may happen to people who do not understand them.

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