Symptoms and Treatment

Besides pain, victims can experience falling blood pressure, vomiting, diarrhea, sweating, arrhythmia, and muscular paralysis. In extreme cases, death from heart damage or gangrene have been recorded. Stahl was still hyperventilating an hour after he was stung. His physician prescribed strong pain killers for several weeks.

The wound swells immediately. Although the wound area appears ash-colored at first, it changes to dark blue and then reddens. Healing is up to the victim's body; treatment is limited to dulling pain and preventing secondary infection. Stahl's physician cleaned but did not suture the wound so that it could drain. Although some stingray victims must have surgery to remove residue left from the barb, Stahl did not. This stingray victim stayed home and allowed the elevated leg to drain and begin to heal itself.

Prevention?

Leg coverings and the "shuffle" are the only known methods to prevent a ray's sting. Although some have suggested that snake leggings might provide better protection than the rubber waders, both Stahl and an official at the Louisiana Department of Wildlife and Fisheries disagreed. The hard plastic or fiberglass leggings are comparatively stiff and heavy. They would be difficult to use. "I'm afraid people might get a false sense of security (with the leggings)," Stahl said. "People have no idea how hard a ray can hit." "No one would use them," the LDWF official said.

Has Stahl again jigged for flounder since his leg healed? "I use a credit card now to catch my flounder."
STINGRAYS in the SHALLOWS

Bill Stahl got more than he'd expected one July evening when he went jigging for flounder on Grand Isle. Instead of an ice chest of flounder, the Gibsland, Louisiana, resident got a two-inch hole in his leg just above his ankle and an unexpected vacation — about four weeks of sick leave. In the dusk of early evening, Stahl had encountered the powerful barb of a stingray.

"You don't want to wish this on anyone," Stahl said, "even someone you don't like." Although Stahl is fairly hefty at six feet and about 200 pounds, the whip-like impact of the stingray's tail knocked him off his feet. "It felt like someone put a huge nail at the end of a two-by-four and let the biggest person you know swing hard and hit you," he said. Doctors say the pain, usually immediate, can radiate from the point of impact through the extremity within 90 minutes. Although the pain can continue for many hours, it gradually diminishes within 48 hours. "The pain flowed intensely through my whole leg, up to my waist, and involved muscle convulsions in my lower back," Stahl said.

Medical personnel at Our Lady of the Sea Hospital in Galliano had to strap down Stahl's leg during x-ray to counteract the involuntary movement from the convulsions.

Stahl and his friends were wading in a routine they'd practiced many times before. "I've jigged for flounder lots of times, and this never happened before," Stahl said. Each was wearing traditional rubber waders, and each was doing the "stingray shuffle." Although the shuffle is a well-known technique for sending rays scuttling in the opposite direction, this ray was feeding, and Stahl happened to be in its path.

"Rays move into shallow warm water during the summer months seeking food," explained Dr. Bruce Thompson, of LSU's Coastal Fisheries Institute. "They feed on mollusks and small benthic fish which are abundant in those shallows off Grand Isle." During most of the day, rays rest, partially buried in bottom sediment, moving primarily to feed. If a fisherman or wader steps on a ray, he will pin it down and cause the marine animal to defend itself with the tail. The "shuffle" disturbs the ray and makes it move away. Although no one actually saw the ray clearly to identify it, Thompson suggested that Stahl was probably stung by a Southern stingray, and the Grand Isle locals estimated the attacking animal at about 100 pounds.

Rays live and feed in a comparatively small territory. Between 1951 and 1958, 1,000 ray specimens were captured, tagged, and released by a research team from the University of California along southern California beaches. About 800 of those rays were recaptured within three miles of the point at which they had been released. None of the 1,000 tagged rays were found in over 15 fathoms deep or more than two miles from shore.

Cousin to a Shark

Stingrays are in the same biological class with sharks, skates, and chimaeras because they all have highly developed jaws and fins, their skeleton is cartilaginous, and the young are fertilized internally. They range in size from a few pounds to a few hundred pounds. These comparatively flat, disc-shaped marine animals live at the bottom of the sea and feed on smaller marine animals. Undulating pectoral fins propel them through the water while their tails function as hunting tools.

The barb is imbedded along the middle or final third of the ray's caudal appendage or tail. "The ray uses the tail as a whip, to stun or stop its prey," Thompson explained. Although insects leave stingers in the victim, the ray's barb, used like a knife to wound the prey, usually remains in the tail. But barbs are shed and replaced as the ray grows, Thompson explained. Often a barb imbedded in a victim is one that was being shed by the growing Chondrichthyes. The tail's whipping motion is so powerful that Thompson has found sharks with stingray barbs imbedded in their jaws. Each family of rays has a slightly different shaped barb, and, in each, the barb is located in slightly different position on the tail.

The polysaccharide that enters the wound with the barb is part of the reason for the spread of pain and convulsions. Some researchers have gathered data suggesting that certain families of Chondrichthyes' venom is toxic. Residue from the barb, if left in the wound, can cause infection. "Stahl was fortunate that no barb residue was left in his leg," Thompson said. "The barb, like a double-sided, serrated blade, cuts into tissue, creating a nasty wound." Unlike a clean, smooth knife blade, the grooved barb contains tissue and mucus from the stingray's body. A cut or wound contaminated by this foreign matter can be more difficult to heal.