

Watch out for that boom

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Just as the site for the 2013 America's Cup has been announced, a study from Rhode Island Hospital highlights that the sport isn't always smooth sailing. The study was published recently in the journal *Wilderness and Environmental Medicine*.

Through an on-line survey completed by sailors, researchers at Rhode Island Hospital have pieced together a report of the injuries that occur on two types of boats -- dinghies (small boats with crews of one or two) and keel boats (larger boats like those used in the America's Cup races with a crew of up to 16).

With a total of 1860 respondents, there were a total of 1715 injuries reported, with 79 percent of the sailors reporting at least one injury in the prior 12 months. Of the injuries reported, a large majority (71 percent) occurred on keel boats. The most common types of injuries on both keel boats and dinghies were contusions, lacerations and sprains. On keel boats, the upper and lower extremities accounted for 78 percent of all injuries, with another 11 percent occurring on the trunk. For dinghies, the upper and lower extremities again were most commonly injured sites, while the head and neck also accounted for 12 percent of the injuries.

The study, led by emergency medicine physician Andrew Nathanson, MD, of Rhode Island Hospital, found the most common causes of the injuries were trips and falls, being hit by an object, or being caught in the lines. The "objects" most frequently cited were the boom, spinnaker pole, sail clew (bottom rear corner) and collisions with fellow crew

members. Tacking and jibing maneuvers also played a role in about a third of the injuries on both dinghies and keel boats. The most commonly cited activities that preceded the injury were crossing from one side of the boat to the other during a tack, changing the sails, operating a winch and steering.

Nathanson says, "It's important to note that nearly half of the injuries reported were minor and required no treatment. Only four percent of the injuries were considered serious, and resulted in evacuation from the vessel and/or hospitalization." Twenty-six percent of the injured sailors reported receiving first aid onboard while 33 percent sought medical care after the injury (although these groups are not mutually exclusive).

Of the 70 most serious injuries reported, 25 percent were fractures, 16 percent were torn tendons or cartilage, 14 percent were concussions and 8 percent were dislocations. The majority of severe injuries were to the head, knee, leg and arm. Three eye injuries were also reported that resulted in permanent loss of vision. Heavy weather was considered a contributing factor in 36 percent of the severe injuries.

Nathanson says, "What is most alarming about this survey is the fact that only 30 percent of the sailors who responded reported wearing a life jacket. According to the United States Coast Guard, two thirds of recreational boating deaths are caused by drowning. Lifejacket use rates can be increased not only by education but also by improving the aesthetics and comfort of jackets, and by enforcing use at regattas and sailing schools."

Also of note, seven percent of the injured sailors reported that they consumed alcohol within two hours of sustaining an [injury](#). Nathanson says, "While the effects of alcohol are dose-dependent, even low levels of alcohol use while boating is a potential problem."

Nathanson reports that the survey also indicates falls while on board boats can likely be reduced by improved footwear and better anti-skid deck surfaces, less cluttered and more ergonomic deck layouts and adherence to the sailing maxim "one hand for the boat, and one hand for yourself." The researchers also recommend protective head gear, padded spars and higher boom clearance as potential changes that can reduce sailing injuries.

Also of concern in the results of the survey is that 16 percent of the sailors reported having suffered a sunburn while sailing in the year prior. Nathanson says, "Sunscreen utilization was low, particularly in sailors less than 30 years old. Focused educational interventions should be developed aimed at sailors, particularly those in the younger age group, in order to reduce the risk of skin cancer. Participants in water sports have been shown to be at increased risk of skin cancer because of their prolonged exposure to solar radiation."

Provided by Lifespan

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