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Study finds surfing safer than soccer

First study to determine injury rate of contest surfers finds ligament injuries, cuts most common

Providence, RI -- While public perception may frame surfing as a dangerous sport, new research begs to differ. In the first study of its kind, researchers have computed the rate of injury among competitive surfers and found they are less prone to harm than collegiate soccer or basketball players. Led by researchers at Rhode Island Hospital and Brown Medical School, the findings of the study are published in the January 2007 issue of the American Journal of Sports Medicine.

"We found that competitive surfing has a relatively low risk of injury - 6.6 significant injuries per 1,000 hours of surfing - compared to other sports for which comparable data is available," says lead author Andrew Nathanson, MD, an emergency medicine physician with Rhode Island Hospital's Injury Prevention Center. "However, the risk of injury more than doubled when surfing in large waves or over an area with a hard bottom."

The sport of surfing has rapidly grown in popularity since the 1960's, but little is known about surfing injuries - especially the relative frequency, mechanisms and risk factors. Nathanson and his research team collected injury data from 32 surfing contests worldwide, both professional and amateur. Documentation of every acute surfing injury sustained during competition was recorded, as well as wave size, mechanism of injury and treatment. "Significant" injuries were qualified as those that prevented the surfer from surfing for one or more days, resulted in a hospital visit, or required on-site suturing.

"Sprains and strains to the lower extremities, particularly the knees, were found to be the most common injuries reported. This is likely due to the aggressive turning and aerial maneuvers, which score highly in competitions, but also appear to place high stress on a surfer's knee," says Nathanson, who is also an emergency physician at The Miriam Hospital and an assistant professor at Brown Medical School, both in Providence, RI.

In contrast, previous studies conducted by Nathanson researching the injuries of recreational surfers found that lacerations and contusions were the most common reported injury ·these were the second most common injury among contest surfers. Most of these injuries were caused by direct contact between a surfer and a surfboard ·either their own or another surfer's.

"The fact that cuts were found to be less common among surfers during a competition makes sense since it's a more controlled environment compared to a recreational surfing-type atmosphere. In competitions, there are a limited number of surfers in the water during each heat and the skill level is very high. On the other hand, recreational surfers are often trying to catch waves in a dense crowd of surfers of varying abilities," says Nathanson.

The authors note that although age and gender had no bearing on the injury rate, wave size and bottom type, independently, were significantly associated with a great chance of injury.

"It would come as little surprise to most surfers that the injury rate more than doubles when surfing in larger surf (overhead) compared to smaller waves, as the energy of waves increases as it grows in height. In addition, a sea floor with a sandy bottom is much more forgiving upon impact than one covered with reefs or rocks," says Nathanson.

The paper cites that establishing an injury rate for surfing is not just of academic or general interest, but also has implications for the insurance industry and for schools that may want to start a surfing team.

"The information could also help to predict the needs of medical staff support at contests and aid in the design of safer surfboards and protective equipment such as helmets," Nathanson adds.

To reduce the risk of injury while surfing, Nathanson suggests good physical fitness, seeking local knowledge before paddling out to an unfamiliar break, and being realistic in terms of your ability level and the size of the waves.

Further research is needed to determine if an injury rate can be calculated for recreational surfers and to evaluate the effectiveness of modifications in surfing equipment on reducing the incidence of injury.

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Founded in 1863, Rhode Island Hospital (www.rhodeislandhospital.org) is a private, not-for-profit hospital and is the largest teaching hospital of Brown Medical School. A major trauma center for southeastern New England, the hospital is dedicated to being on the cutting edge of medicine and research. Rhode Island Hospital ranks 13th among independent hospitals who receive funding from the National Institutes of Health, with research awards of more than \$27 million annually. Many of its physicians are recognized as leaders in their respective fields of cancer, cardiology, diabetes, orthopedics and minimally invasive surgery. The hospital's pediatrics division, Hasbro Children's Hospital, has pioneered numerous procedures and is at the forefront of fetal surgery, orthopedics and pediatric neurosurgery. Rhode Island Hospital is a founding member of the Lifespan health system.
