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The risky business of cheerleading

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Cheerleading can be a demanding sport, with its increasingly complex lifts, throws and gymnastics tricks. But it is not without risks, as this [L.A. Times story on cheerleading injuries](#) reports. The [Journal of Athletic Training](#) recently published studies on cheerleading that examined those risks and resulting injuries. One study looked at the epidemiology of fall-related injuries in U.S. cheerleading and found that over the course of a year, 79 fall-related injuries were reported among 412 cheer teams taking part in official practices, competitions or events. The vast majority of those injuries -- 85% -- took place during practice, and 51% of the injuries occurred among high schoolers. In 89% of the incidents, cheerleaders were trying to do a stunt or pyramid.

The most common injuries were strains and sprains, and most falls were from 1 foot to 11 feet above the ground. Only 6% of injuries were concussions or closed head injuries. No deaths were reported in the study, but risk of serious injury increased with fall height, with less-cushioned floors, or both.

Another study examined the surfaces on which cheerleaders practice and how they relate to potential head injuries. Researchers observed indoor gyms as well as outdoor locations. According to the study, higher grass and wetter soil provided more absorption, and the more absorption, the greater the critical height for grass surfaces. Critical height of a surface material is, according to the authors, "the approximation of the fall height below which a life-threatening head impact injury would not be expected to occur."

Only spring floors and landing mats 4 inches thick resting on foam floors had critical heights greater than 10.5 feet, which would have enough impact absorption for level 2 stunts, which include some tumbling moves and tosses.

Another epidemiological study examined overall injuries via type of cheerleading team and events over a year among 412 cheerleading teams. Over that year, 567 injuries were reported, with 83% happening during practice, 52% occurring during a stunt attempt, and 24% taking place while a cheerleader was basing or spotting one or more people. College-level cheerleaders were more apt to have a concussion, and all-star cheerleaders were more likely to suffer a fracture or dislocation than cheerleaders on other teams.

Researchers on all three studies were from the [Research Institute at Nationwide Children's Hospital](#) and the [Ohio State University College of Medicine](#), both in Columbus.

-- Jeannine Stein

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