Is it true that volleyball players have more shoulder dislocations than anyone else?

Q: Do you think it's true that volleyball players have more shoulder dislocations than anyone else? What about second or third dislocations? Two girls on our team are out with their first shoulder dislocations and we are all worried.

A: Shoulder dislocation is a fairly common problem among many athletes. Athletes at greatest risk seem to be those involved in collision sports of any age whether involved in sports or not who has ligamentous laxity and/or who works with the arms above chest level. Anyone of any age whether involved in sports or not who has ligamentous laxity and/or who works with the arms above chest level may be at increased risk for an anterior (forward) shoulder dislocation.

Having one shoulder dislocation is scary enough. But knowing the shoulder could pop out of the socket again is very worrying, as your question suggests. Recurrent shoulder dislocations is the subject of a recent study that might help answer the question. In this study, orthopedic surgeons from the Netherlands add their efforts and expertise to many others looking for risk factors for recurrent shoulder dislocations.

Previous studies have pointed to young age, male sex, and long delay between injury and surgery as the main risk factors for recurrent shoulder dislocations. Other studies have suggested the number of preoperative dislocations as being another possible risk factor. As already mentioned, participation in contact sports is considered a risk factor as well.

In this study, the role of suture anchors in recurrent shoulder dislocations was explored. Suture anchors are the type of "stitches" that are used to reattach the torn tendon and capsule back to the shoulder socket. There has been some awareness that a low number (less than three) of suture anchors used might contribute to an increased risk of recurrent shoulder dislocations.

There were 67 patients (mostly professional or recreational athletes) in the study. They were all treated by the same orthopedic surgeon. Shoulder instability was caused by a traumatic event. Surgery to repair the damage was done for everyone arthroscopically using suture anchors. The suture anchors were absorbed by the body and therefore did not have to be removed.

After surgery, everyone was placed in a sling to immobilize the shoulder for six weeks. Then they all participated in a rehab program directed by a Physical Therapist. Return to sports activities was allowed when the athletes were deemed "ready" by the therapist (usually four months after surgery).

The reason this study might hold some information of interest to you is that the patients were followed-up for 10 years to give an idea of intermediate results. Ten years after the surgery, more than one-third (35 per cent) of the group had at least one redislocation. The redislocations were equally over time (an equal number occurred during the first two years, two to five years after surgery, more than five years after surgery).

Two factors showed as being possible risk factors but without statistical significance. These included using less than three suture anchors and the presence of damage to the labrum. The labrum is an extra layer of fibrous cartilage around the shoulder socket that helps keep the head of the humerus (upper arm bone) stable in the socket.

In the group who had a shoulder redislocation after surgery, two-thirds had been repaired with only two suture anchors. None of the other reported risk factors were found to be influential in this study. One other observation was noted: athletes involved in overhead sports actually had fewer (not more) shoulder redislocations compared to other sports participants.

The authors suggest perhaps these athletes had better muscle control or proprioception (sense of joint position) to explain why they decreased the intensity with which they played in order to protect the shoulder. Specific studies of volleyball players would be needed to really gauge whether or not this group is at greater or lesser risk than other athletes for recurrent shoulder dislocations.