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Know the Risks of Cheerleading and Be Safe

By Brett Owens, MD, LTC, MC USA



While cheerleading once involved leading cheers, modern cheerleading involves a highly athletic mix of dance and gymnastic skills, as well as complex stunt and pyramid maneuvers. With these advances, both the injury rates and the potential for severe injury have increased. Cheerleading accounts for more than 16,000 emergency room visits annually in the U.S. and more than half of the catastrophic injuries in female athletes. Cheerleading injuries are most common in competitions and involve the entire body — most commonly the ankle, wrist, shoulders, head, and neck.

In order to minimize the risk of catastrophic injury, restrictions have been placed on stunts. Limits include the height of pyramid stunts — 2 body lengths for high school and 2.5 for collegiate. There are also rules for the number of tossers and spotters in basket toss stunts. Mats are encouraged for practice and when possible for competition. Cheerleaders who are ill or injured should not participate in these complex events. Stunts should also be avoided in inclement weather and adequate supervision is always necessary.

Cheerleaders are encouraged to perform resistance exercises during the off-season to prepare for the rigors of this sport. Also, a regular stretching routine is critical. Regular interactions with a local athletic trainer can help cheerleaders prepare and care for injuries.

Cheerleading has become a sport that places significant demands on the body and can result in severe injuries. Proper attention to safety and preparation can help minimize injury risk.

For more information on cheerleading injury prevention, visit www.stopsportsinjuries.org/cheerleading-injury-prevention.aspx.



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Set Realistic Expectations Following Sports Surgery

By Richard Y. Hinton, MD

“She’s return her ACL? How could that possibly happen? Well, let’s get it fixed, she has more college showcases in six months.” In sports today, there are three unfortunate realities on a collision course:

- focus on single sport specialization,
- increased competitive exposure time,
- and the adoption of a professional sports model for youth and recreational athletics.

All of these place athletes at higher injury risk.

Another issue is the growing public assumption — fueled by the lay press and medical marketing — that whatever is broken can be fixed as good or better than it was. With regard to anterior cruciate ligament injuries we need to take a step back and recognize a slightly different reality.

Yes, through ongoing research orthopaedic surgeons are improving the understanding of ACL function and best practices for injury prevention, treatment, and rehabilitation. We are also more diligent and closely following our post-operative ACL patients over time to see how they do. Unfortunately, it is not as good as we have all hoped. ACL reconstruction does still provide the best option for return to jump, cut, twist, and turn sports. But even in the best of hands, many patients will develop progressive arthritis, decrease their levels of participation and require at least a year to eighteen months before returning to “normal” participation.

Most patients and their families assume that a simple outpatient surgery and a short course of rehabilitation will have the athlete back at pre-injury levels in six months. However, recent comprehensive reviews have found that less than one third of recreational athletes are back to competitive sports a year following their surgery and that only 50 percent will return to

pre-injury levels of participation at 2–7 years post surgery. Why this disconnect?

- Success stories among athletes are promoted and most athletes and their families feel if they work hard enough they will be successful. Unfortunately, players who don’t make it back can slip away from view.
- Recreational athletes are often comparing their situation to that of high level collegiate or professional athletes. These athletes have different core sporting abilities, lifelong training habits, and unlimited resources that improve their postoperative and return to play situations. Still less than two thirds of NFL players will return to regular participation after ACL reconstruction.
- Until recently research has characterized surgery as being successful if repeat surgery was not required. We have not done a good job at recognizing that many post surgical patients decrease their level of activity and avoid higher demand athletics because of knee symptoms or fear of repeat injury upon return to participation.
- The public assumes that ACL injuries are all the same. This isn’t the case some ACL injuries also include other parts of the knee or surrounding areas.

Athletes and their families need to recognize the following:

1. The major risk factor for ACL tears is participation in high demand jump, cut, twist, turn sports. It is not appropriate to have an ACL injured athlete in an environment in which the knee is constantly buckling or giving way.
2. Children and adolescents are at a higher risk of re-injury after ACL reconstruction.
3. Talking with an orthopaedic sports medicine specialist allows you to discuss realistic expectations following ACL injury and subsequent surgery.



4. Realize that surgical and rehabilitative successes with return to full activities are attainable goals but that re-injury or failure to return to pre-injury levels of participation can occur even in the best of situations.
5. Most importantly, make the athlete’s knee health the priority, not secondary to athletic participation or gains.

References

- Ardern, CL. Return-to-Sport Outcomes at 2 to 7 Years After Anterior Cruciate Ligament Reconstruction Surgery.
- Dunn, WR. Predictors of Activity Level 2 Years After Anterior Cruciate Ligament Reconstruction (ACLR).
- Reinhardt, KR. Revision ACL Reconstruction in Skeletally Mature Athletes Younger than 18 years.
- Ardern, CL. Return to sport following cruciate ligament reconstruction surgery: a systematic review and meta-analysis of the state of play.
- Shah, VM. Return to Play After Anterior Cruciate Ligament Reconstruction in National Football League Athletes.



Hit the Slopes Prepared and Injury Free

By Daniel J. Solomon, MD



Snowboarding preparation

requires optimizing balance, core strength, endurance, and flexibility. The better your pre-season routine, the more you will enjoy your trips to the slopes while also minimizing your risk of injury. Just as you tune your gear, you should tune your body. Some helpful tips include:

- Plan on preparing for a month (3–4 times a week for 4 weeks) before strapping on your snowboard.
- Make sure your equipment is clean, properly fitted and in good working order.
- Make sure you have all the necessary equipment to participate safely: helmet, goggles, and gloves (for beginners strongly consider wrist guards too).
- Make sure boots fit well and bindings are in good working condition.
- Make sure you have clothing appropriate for the temperature and conditions.
- Stay hydrated during the day by taking frequent breaks or carrying water with you.

Some sample workouts which can help increase core strength and stamina for snowboarding preparation are noted in the table. Doing this preparation cannot guarantee safety or fun, but it certainly will help, and may get you more fit in the process. Enjoy the snow!

Workout Examples

Consider doing your workouts in this order: warm-up for 5 minutes with an easy jog or jump rope for bit to mix it up, then perform the following exercises:

BALANCE EXERCISES

Basic

- Single leg balance 30 seconds at a time.
- Single leg balance with eyes closed 30 seconds at a time.
- Single leg toe-raises 20 times each side.
- Single leg mini-squat — stand on one leg, and bend knee 20–30 degrees; repeat 10 times each leg (combines balance and core strengthening).

Intermediate to Advanced

- Do similar exercises as basic but on a balance ball or other balance device.
- Single foot balance and bend forward to touch toes 10 times each side
- Balance on one leg and swing other leg forward and back. 10 times, then side to side ten times, then switch legs.
- Jump and balance with single foot landing 10 times each side.

CORE STRENGTH

Basic

- Crunches / pushups / hang on to a pull-up bar in a chin-up position.

Intermediate to Advanced

- Burpees — from standing drop down to pushup and then jump to standing; repeat 10 to 20 times.
- Hang on pull-up bar; bring knees up to elbows; repeat 10 times.
- Box jumps — jump from floor to step or box; repeat 10 times (can substitute 10 hops for distance).
- Squats or lunges; 10 of either.

ENDURANCE

20+ minute exercise with heart rate goal of 70–75% of Max Heart Rate (pick one or more from these suggestions or substitute your own favorite).

- Swim
- Stationary bike
- Rowing machine
- Stairs
- Jog
- Elliptical



For more information on preventing ski and snowboarding injuries visit <http://www.stopsportsinjuries.org/skiing-and-snowboarding-injury-prevention.aspx>.



AOSSM

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About AOSSM and *In Motion*

As a world leader in sports medicine education, the American Orthopaedic Society for Sports Medicine (AOSSM), we have designed the publication to highlight relevant information for multiple age groups from exercise and rehabilitation to nutrition and psychology.

This important educational tool is published quarterly and distributed electronically.

AOSSM members can add their practice name and logo to *In Motion*. Personalizing *In Motion* is an easy way to get pertinent, patient-friendly sports medicine information to your patients with just a click of a mouse. For more information, please e-mail Lisa Weisenberger at lisa@aossm.org or contact the Society at 847/292-4900.

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Injecting More Fun Into Sports — Lessen the Pressure

By John D. Kelly IV, MD

Times are tough and, the price of a college education is continually rising. With the mounting financial burden of a college education, many parents are hoping their child can attain an athletic scholarship. While this is certainly understandable, sports participation may easily degrade from an enjoyable pastime into a “do or die” proposition. With the added pressure to perform, many youth have lost any sense of fun; sports have become a job with the task at hand to attract the attention of college recruiters.

Sadly, many youth athletes are simply acting out the scripts their parents and/or coaches have prepared for them. Several negative consequences can result, including:

- **Overuse injuries** — In an effort to excel, the athlete over trains and becomes injured. Personal training, sports performance sessions and extra lifting/conditioning sessions are common place. One singular sport becomes the focus. There is no “down time” and the same bones and joints are stressed continually with tissue breakdowns and then injuries occurring.
- **Poor Performance** — Athletes who undergo extreme pressure to perform seldom realize their full potential and fall short of the “zone.” Excessive

anxiety impairs performance. In addition, an athlete performing to please a parent may feign injury or simply “choke” during the big game. True, lasting commitment to a goal will never occur when motivation is external. True winners are self motivated and have formulated goals for themselves.

- **Unhappiness** — Athletes who undergo the rigors of competition to please others are seldom happy. Anxiety and depression are common. The suboptimal performance that a poor mood promotes merely generates more stress and anxiety.

The Solution: FUN

Happy athletes perform better. When a youngster is having fun and is playing for themselves, everyone wins: the team is benefitting from enhanced performance, the athlete sows many fond memories and the parent will derive great satisfaction knowing that their child is truly enjoying themselves!

Inject some fun into your child’s athletic endeavors. Affirm your love by continually reminding them that sports are to be enjoyed. Both your child and team will benefit.

For more information on preventing overuse and traumatic injuries in kids, visit www.STOPSportsInjuries.org.

