

## New 'Home Base' for Cleveland Clinic Sports Health

All athletes deserve the best in sports-related care. Now, weekend warriors and high school athletes can receive care from the same sports health team that treats the Browns, Cavs, Indians and members of the National Hockey League. And they can receive it all at one convenient location.

Cleveland Clinic Sports Health has opened the first stand-alone sports medicine complex in Ohio. "This unique facility is one of only a few that offers athletes and patients sustaining sports-related injuries the same quality of care afforded the professional athlete," says orthopaedic surgeon Anthony Miniaci, MD, Executive Director.

### Centrally located complex

The new Sports Health Center is conveniently located at 5555 Transportation Blvd., just off I-480 in Garfield Heights. "This location is optimal for Clevelanders, Ohioans and athletes from out-of-state and out-of-country, as it is convenient to airports and major freeways," notes Dr. Miniaci.

In the complex, athletes at every level – pro, semi-pro, elite, amateur, high school and middle school — can access the full spectrum of care for sports- and exercise-related injuries. The Sports Health Center houses new outpatient surgery suites, offices and exam rooms, a rehabilitation gym, performance enhancement facilities and on-site imaging.

### Full scope of services

Cleveland Clinic Sports Health physicians offer sports health primary care for chronic medical conditions affecting the athlete, and for overuse and other injuries. Outpatient procedures are performed by Cleveland Clinic surgeons from the Orthopaedic Program ranked 3rd in the country by *U.S. News & World Report*.

Sports Health and Orthopaedic Rehabilitation services include physical therapy in the new gym, occupational therapy sessions for hand and wrist rehabilitation, and aquatic therapy.



### State-of-the-art imaging

"Our MR unit is one of only a few in the United States with a 3-T magnet, providing extremely high-quality pictures," explains Dr. Miniaci. "It's like the difference between watching regular and high-definition television." The scanner's large bore easily accommodates individuals of any size.

On-site imaging facilities mean no waiting in line with patients from other medical areas for magnetic resonance (MR) scanning or X-rays. All scans are read by Cleveland Clinic musculoskeletal radiologists.

### Performance enhancement

Our popular athletic performance enhancement programs are now offered at the new complex. Certified athletic trainers customize exercise and conditioning to improve performance and prevent injury in the following programs:

- Golf Performance Plus
- Jump Right (basketball, volleyball)
- Match Fit (soccer)
- Optimal Runners Performance Program
- Throw Right (baseball)
- Train Right

Netted training facilities are available on site for our soccer, baseball and golf programs.

**For an appointment at the new Sports Health Center, simply call 877.440.TEAM (8326).**

# Don't Let Painful Early Arthritis of the Knee Keep You on the DL

## Arthroscopic Procedure Developed Here Offers New Option



*“Now active individuals don't have to stop playing altogether or undergo knee replacement.”*

— Anthony Miniaci, MD

If you're a frustrated athlete sidelined by painful, early arthritis of the knee, a new treatment may be an option for you. The UniCAP® procedure is the first knee resurfacing procedure to be performed using arthroscopy.

Early arthritis can hobble athletes when cartilage lining one of the knee's three “compartments” begins to wear away, causing movement to be painful.

### First arthroscopic approach

The UniCAP system is the first to utilize arthroscopy to re-line damaged surfaces on the inside (medial compartment) or outside (lateral compartment) of the knee, or under the kneecap. For active individuals, it is more effective than other treatments in getting joints to move smoothly and painlessly, and less drastic than total knee replacement.

“The major benefit of arthroscopy is that we don't cut any tendons, muscles or ligaments, and we leave most of the bone intact,” explains Anthony Miniaci, MD, Executive Director of Cleveland Clinic Sports Health and developer of the UniCAP. “We set the implant into the surface of the bone, rather than cutting bone away as in traditional knee replacement.”

Dr. Miniaci is also on staff in the Biomedical Engineering Department of Cleveland Clinic's Lerner Research Institute. Over the years, he has sought better means of helping young, active individuals with cartilage problems.

“It became clear that ‘biological’ procedures (arthroscopic debridement, microfractures, cartilage implants) weren't helping all individuals with a lot of pain due to early arthritis,” says Dr. Miniaci. “When these alternatives didn't work, they either had to stop playing altogether or undergo knee replacement. Now they have an option.”

Dr. Miniaci began working with industry on the UniCAP system over seven years ago. Since it won FDA approval and the first case was performed in March 2008, he has trained surgeons across this country and, more recently, from Europe in the technique. Approximately 70 procedures have been performed in the United States as of September (approximately 20 at Cleveland Clinic by Dr. Miniaci).

### Minimal pain, fast recovery

Dr. Miniaci performs the arthroscopic-assisted procedure in the new Sports Health Center's outpatient surgery suite. The procedure lasts one hour on average. Scarring and pain are minimized because the only incisions required are those needed to insert slim arthroscopic instruments, a tiny camera and the slender UniCAP component(s).

Patients are observed for 23 hours or less after the procedure, “but most say they could go home on the same day. They can walk with crutches right away,” says Dr. Miniaci. “We tell patients to use crutches for two weeks, but most are off them in less time.”

Although still in the early stages of follow-up, “patients appear to have excellent knee function and close-to-normal range and strength,” he adds. “In contrast, knees are never 100 percent normal after total joint replacement.”

### No real age limit

Currently, most patients who have had the UniCAP procedure are 40-, 50- and 60-year-olds who run and play sports, and want to ski and do other active athletic activities.

“We're trying to be careful but have not set an absolute age limit,” says Dr. Miniaci. “The youngest patient we've performed the procedure on is in her late 20s, but had significant pain without many other treatment options.”

What is critical is the degree of knee damage. If cartilage has worn away to the point where bone rubbing against bone has deformed the joint or caused bone loss, then more conventional joint replacement may be necessary.

### Exhausting other options first

On the other hand, the UniCAP is not the first treatment choice for high-level athletes who want to continue playing. “We can do a lot of other things first to help people get through their athletic activities,” says Dr. Miniaci.

**To learn more about the procedure or to request an evaluation, please call 877.440.TEAM (8326).**

# MYTHBUSTER

By Carolyn V Snyder, MPH, RD, LD



**MYTH:** Teens who want to be fit should resist snacking. It's a bad habit that should be eliminated.

**FACT:** Snacking is actually an important part of a nutritious eating plan for active teens – as long as snack foods are healthy and contribute to a well-balanced diet.

For adolescent athletes, who push their bodies daily through intense practice and arduous conditioning to be at their best, nutrition is just as important as practice and strength training. Snacking throughout the day can enhance performance, stamina, strength, speed and energy.

Active teens need more calories, protein and carbohydrates to round out nutritional needs that are not met at mealtime – and also for adolescent growth. Snacking can help young athletes meet fitness goals if healthy foods are available at home and if adolescents make good food choices while away from home.

## What parents can do

Parents can help athletes make healthy choices by having snack foods readily available and pre-packaged at home. This kind of planning can help avoid last-minute trips to the vending machine. Cookies, candy, chips and other prepackaged selections are usually not healthy choices.

Instead, prepare trail mix blends with the teen's favorite ingredients, bake healthy snacks or prepare fresh vegetables for packed lunches ahead of time. This ensures healthier meals and snacks for the day during the morning rush.

## Snacks: Some Easy Fixes

If you believe that preparing healthy snacks is more time-consuming and less convenient, think again. Here are some easy, tasty – and healthy – snacks for active teens:

- Low-fat air-popped popcorn with Parmesan Cheese
- Low-fat cheese cubes
- Low-fat cottage cheese and fruit
- Low-fat yogurt with low-fat granola
- Whole wheat pretzels and low-fat cheese
- Trail mixes made at home with favorite nutritious ingredients
- Hummus on whole wheat pita
- Graham crackers and peanut butter
- Bagel with peanut butter or low-fat cream cheese
- Apple slices and peanut butter
- Pre-sliced fresh vegetables and fat-free Ranch dressing
- Low-fat string cheese
- Fig bar cookies
- Animal crackers and low-fat milk
- Cereal with low-fat milk and banana
- Rice cakes and peanut butter
- Sandwich with lean chicken or turkey, lettuce, tomato and mustard
- Package of instant oatmeal and low-fat milk
- Dried fruit and almonds

## What teens can do

Adolescent athletes can assume responsibility for packing a healthy snack/lunch daily, resisting high-fat/high-calorie vending machine temptations, reading food labels, and not wasting food from home.

The following guidelines for reading food labels are helpful in selecting prepackaged snacks. First, determine the number of servings per package. Calories, carbs and fats are usually listed per serving. Those numbers can really climb if the package contains more than one serving!

## Ideally, healthy snack labels will list:

**Calories:** 150 to 250

**Carbohydrates:** 25 grams or less

**Protein:** 7 to 14 grams

**Fat:** 5 or fewer grams (and 0 grams of trans fats)

It may take a little extra time to pack healthy snacks and a healthy lunch. But just like spending extra minutes at practice, teen athletes will benefit from the results — and the investment in their health and fitness!

**Carolyn Snyder is a registered, licensed dietitian specializing in sports nutrition.**

# Inside Our New Sports Health Facility

*“This facility, along with our clinical care and innovative research, ranks us among the premiere sports medicine programs in the country.”*

— Anthony Miniaci, MD



## First Floor

**Treatment Rooms** – Where you'll see your Sports Health surgeon or primary care physician

**Aquatic Therapy Pool** – Where you'll do rehab that's gentler on the joints

**Netted areas** – Where you can hone your strike, slider or drive

**X-Ray Room** – Where pictures of fractures are taken

**MRI** – Where soft-tissue injuries are imaged in a “high-def” scanner that fits patients of all sizes

**Radiology** – Where a musculoskeletal radiologist reviews your images

**Gym** – Where you'll rehab your injury and enhance your performance

## Second Floor

**Offices** – Where our physicians manage their practices, review charts and consult colleagues

**Post-Op Recovery Area** – Where you'll stay up to 23 hours after outpatient procedures

**Outpatient Surgery Suite** – Where our surgeons perform arthroscopy and other procedures

# Making the Change from Athlete to Active Adult

By Heather Nettle, MA

What happens to high school and collegiate athletes when structured practice and competition are over for good? Making the transition from a performance mentality to a healthy lifestyle mentality will maintain fitness long after you walk off the field for the last time.

## Redefining Exercise

Exercising for performance is different from exercising for wellness.

- Just because a specific exercise benefits performance does not mean that it's good for you. Maximal lifting may make you stronger for football, but continuing extreme lifting into later life will likely cause orthopaedic problems.
- Real life does not mimic the off-season, pre-season, in-season and post-season rhythm of athletics, which provide necessary rest for the body and prevent overtraining. Former athletes can wind up pushing their bodies to extremes all year. This can cause long-term problems, including chronic injuries that may prohibit exercise altogether.
- Moderation is vital. A long-term exercise plan should be reasonable. Exercise is as much a physiological stress on your body as heat, humidity and cold. It's difficult to maintain high levels of physical performance indefinitely without rest.

## Finding a new motivator

When improving athletic performance is no longer your primary motivation for exercise, it's crucial to find another one – something that won't change. This may be:

- maintaining a healthy weight
- preventing a chronic illness that runs in your family, such as heart disease
- effectively managing stress
- improving sleep patterns
- enjoying higher energy levels

Everyone is different, so look for your own motivator – something outside sports performance that will ensure consistent exercise throughout life.

## Moderate workouts ideal

With a reasonable approach to exercise, you can meet national guidelines for health and fitness, and maintain a strong physical fitness level throughout your life.

Exercise regimens should incorporate the four components of fitness.

**Cardiovascular exercise** (AHA recommendations): At least 30 minutes of moderate-intensity cardio most days of the week (divide into 10-minute segments if you prefer). Walking is fine! Alternatively, do 20 minutes of vigorous cardio exercise three times a week.

**Resistance/strength training:** Using free weights, machines, calisthenics, exercise balls, bands or Pilates twice a week to exercise all major muscle groups and keep up lean muscle mass. You can get by with two sets of 12 reps. If time is tight, try a short strength workout with multi-joint resistance exercises: pushups, squats, lunges, leg presses, chest presses, rowing. (Don't worry about isolating individual muscle groups. In a pinch, try simple pushups to work the biceps, triceps, chest, upper back and abdominal muscles.)

**Balance and agility training:** Doing crunches on a ball or biceps curls while standing on one foot to improve strength and balance. Can be combined with strength/flexibility exercises such as pilates or Yoga.

**Flexibility/Stretching:** Can be done at a completely different time of day – at the office, after your morning shower, etc. Stretching at your desk, or at home while watching TV, can be helpful.

Exercising for health and wellness can easily fit into a working lifestyle. A moderate fitness regimen takes just one hour, three to five times a week. However, you can spread the different components of exercise throughout your week; if you can't exercise for an hour, do just 30 minutes of cardio or strength training and make up the rest later in the week. Exercise need not be done perfectly to be effective.

## Putting sports back in your life

Finally, just because you no longer have a coach directing practice does not mean your days of chasing a ball are over. Athletes become athletes because of the joy they find in sports and activity. If your playing days ended in high school, try participating in intramural and recreational athletics in college to maintain an active lifestyle and prevent the boredom that active athletes often feel in the gym. If your playing days ended in college, consider joining a tennis club or a racquetball, softball or baseball league as an adult to help compensate for any sense of loss. Throughout the seasons, incorporate outdoor sports such as skiing, hiking, cycling and running into your life.

**Heather Nettle, MA, is Coordinator of Exercise Physiology Services at Cleveland Clinic Sports Health.**

# Sports-Related Concussions: Ensuring Proper Care

By Robert S. Gray, MS, ATC



Annually, approximately 1.6 to 3.8 million concussions are linked to sports. Football, soccer, field and ice hockey, lacrosse and basketball players, and divers are at special risk. Concussions are injuries to the brain following a traumatic event. While they do not affect its anatomy, they disturb the brain's metabolism.

Poor management of concussions can result in serious injury. Interscholastic, intercollegiate and recreational athletes with concussions can – and should – receive the same expert care that professional athletes do.

## Know the signs and symptoms

Concussions do not always cause loss of consciousness. Here are some of the most common signs and symptoms:

### Coaches/parents may notice:

- a dazed or stunned appearance
- confusion about the play
- clumsy movements
- slow responses to questions
- personality/behavior changes
- retrograde amnesia (forgetting play prior to “hit”)
- anterograde amnesia (forgetting play after “hit”)
- loss of consciousness (even temporary)

### Athletes may report:

- headache
- nausea
- balance problems
- double vision
- sensitivity to light
- feeling sluggish
- changed sleep patterns
- cognitive (mental) changes

Certified Athletic Trainers and coaches who suspect a player has sustained a concussion should conduct sideline testing. The sideline testing should include a neurological check, along with a mental status evaluation that includes orientation, concentration and amnesia, both anterograde and retrograde. *Any positive findings preclude a return to play.*

## ImPACT testing useful

Used correctly, the ImPACT test can also provide valuable information to athletes, parents and sports medicine practitioners, and promote a safer return to competition. This computer-based neuropsychological test is administered online at home or school to measure verbal memory, visual memory, reaction time, processing speed and impulse control.

We highly recommend baseline ImPACT testing prior to the season for collision/contact sports. The test can be re-administered 24 to 72 hours after a concussion and before the return to competition. Even with ImPACT testing, a thorough medical evaluation is a must after a concussion. This includes neuropsychological assessment. CT and MRI tests will be performed to rule out more serious head injury.

## Recovery from concussion

Recovery from a concussion may take days to several weeks, and begins with complete rest. This means no activity. The athlete remains under the observation of an adult or healthcare professional.

Once the signs and symptoms of a concussion have resolved, gradual exertion (such as light aerobic training) is permitted to the degree that the athlete can withstand. The athlete can then move on to sport-specific training. Non-contact drills are followed by full-contact drills, and, if no symptoms appear, a return to competition.

*If at any point signs or symptoms of concussion recur, the athlete must return to full rest and start the process over.* Honesty from the athlete is absolutely key! Athletes should not return to play until the appropriate healthcare professional ensures that they are totally symptom-free.

Late effects of concussion may include short-term memory problems, academic difficulties, fatigue and sleep disturbances, irritability and depression. School teachers, administrators, guidance counselors and nurses should be familiar with the signs and symptoms of concussion to monitor the athlete academically during healing.

## Prevention

To reduce the risks of concussion, teams should provide the correct protective equipment and ensure that athletes wear them, and coaches should insist that players follow the rules of the game and display good sportsmanship.

If one of your athletes sustains a concussion during the season, that athlete should not return to play until he or she has been evaluated by the appropriate healthcare professional and received permission to return to competition.

**For more information on concussion management or ImPACT testing, contact Bob Gray, Coordinator of Athletic Training Community Affairs, at [grayb1@ccf.org](mailto:grayb1@ccf.org).**

# Protecting Your ACL: Stopping the ‘Pop’

By Susan Joy, MD

Soccer, basketball and volleyball can spell anterior cruciate ligament (ACL) injuries for athletes who aren't aware of proper "cutting" and "planting" maneuvers.

The jumping, landing and pivoting involved in these sports all stress the knee's ACL – particularly in female athletes. To understand how and why, researchers have been studying athletes' bodies in motion.

The knee's four main ligaments tether the tibia (shin bone) to the femur (thigh bone) where they meet at the knee. The ACL plays a vital stabilizing role, keeping the tibia from sliding up under the femur. It also limits over-rotation of the knee joint.

## Cutting and planting stress the ACL

Seventy percent of all ACL injuries arise from the cutting and planting maneuvers used in all sports. Cutting involves taking a hard, quick step to accelerate in another direction. Planting involves landing hard on your feet from a jump or a step.

Initiating a cut (or landing after a jump) can compromise the ACL's ability to resist rotational forces. Planting incorrectly can overwhelm the ACL's ability to move the knee the way it was designed to do. The unmistakable "pop" of a torn ACL usually spells a season-ending injury requiring surgery and extensive rehabilitation.

A number of factors increase the risks of ACL injury, including gender-related anatomic differences and individual differences in moving, jumping and landing.

## Female athletes at higher risk

Male and female athletes tend to have different alignment from the hip to the lower leg, which may affect knee mechanics and increase ACL injury risk. Hormonal differences also play a part, although how significant that role is remains unclear. A woman's estrogen cycle may affect the ligament itself or her movement patterns.

In terms of actual performance, male and female athletes seem to execute jumping and cutting maneuvers differently. Women tend to activate their quadriceps first, whereas men tend to activate their hamstrings first. This difference in activation may alter the amount of strain applied to the ACL and other knee ligaments.

In addition, after a jump, women tend to land with their knees closer together than men. Athletes who land with their knees farther apart appear to be at less risk of ACL injury.

## Fatigue: a problem for both sexes

Fatigue is a hazard affecting both male and female athletes. Tired athletes are more likely to use poor mechanics, such as landing with their knees closer together. This is especially true when a fatigued athlete makes a split-second decision to execute an unexpected move.

## Supervised training reduces risks

Studies show that training programs supervised by sports health professionals will improve athletes' leg strength and jump-landing techniques. Proper training has been shown to decrease ACL injury rates in basketball, volleyball and soccer. The techniques that improve ACL safety can also enhance performance, and increase vertical jump height, acceleration and the ability to change direction.

Nothing can prevent ACL injuries altogether. But exploring their potential causes and maximizing prevention strategies can stop the "pop" and its frustrating consequences.

**Susan Joy, MD, is Director of Women's Sports Health in the Department of Orthopaedic Surgery at Cleveland Clinic. To learn more about our *Jump-Land* program, call 877.440.TEAM (8326).**

## Competitive Edge

*Competitive Edge* offers active individuals, athletes, coaches and athletes' parents updates from Cleveland Clinic Sports Health professionals on nutrition, health and injury prevention.

**Editorial Board:** Alan Blauch, PT; Gary Calabrese, PT; Rick Figler, MD; Bob Gray, MS, ATC; Tricia Hamad, MEd, ATC; Susan Joy, MD; Heather Nettle, MA; Carolyn Snyder, MPH, RD, LD

**Executive Director, Cleveland Clinic Sports Health:** Anthony Miniaci, MD

**Managing Editor:** Cora M. Liderbach

**Designer:** Irwin Krieger

**We welcome your questions or comments.**

**Contact Information:**  
Cleveland Clinic Sports Health/AC311  
9500 Euclid Ave.  
Cleveland, Ohio 44195

**Email:** sports-health@ccf.org

*For a tour of the new Cleveland Clinic Sports Health Complex at 5555 Transportation Boulevard in Garfield Heights, please contact Marketing Coordinator Mary Jindra at [jindram@ccf.org](mailto:jindram@ccf.org).*

© 2008 The Cleveland Clinic Foundation

08-SHL-003



The Cleveland Clinic Foundation  
 9500 Euclid Avenue / AC311  
 Cleveland, OH 44195

RANKED  
 ONE OF  
 AMERICA'S  
 TOP  
 HOSPITALS



	Non-Profit Org.
	U.S. Postage
	<b>PAID</b>
	Cleveland Ohio
	Permit No. 1940

# Sports Health Competitive Edge

A newsletter for athletes, coaches, parents and active individuals | Fall 2008



### Many Convenient Locations to Serve You

Sports health and rehabilitation services are offered at Cleveland Clinic's main campus and at community locations including Beachwood, Brunswick, Euclid, Independence, Mentor, Solon, Strongsville, Westlake and Willoughby Hills.

**877.440.TEAM (8326)**  
**sports-health.org**

For expert advice on how to handle your sports injury, or for an appointment at any location, call our toll-free number or visit us on the web.

## Learn How to Train 'Smarter'

Learn to *Train Right* using state-of-the-art equipment in the new Cleveland Clinic Sports Health Center. Our certified professionals will design a program that enhances your strength, speed, agility and overall athletic performance, and helps you avoid injury. Your program will be customized to suit your individual goals and tailored to your sport.

### *Train Right* offers you:

- a comprehensive evaluation to establish your individual baseline scores, goals and training plans
- input from NSCA-Certified Strength and Conditioning Specialists
- an evaluation of your progress on existing training plans
- coordination with high school-based programs so that you'll avoid over-training
- individual and small-group packages for you and/or your teammates

### Mentor Sports Health and Orthopaedic Rehabilitation Opens

You can now access our full range of Cleveland Clinic physical therapy and rehabilitation services in Mentor, along with our athletic performance enhancement programs.

Our new, nearly 8,000-square-foot facility at 7533 Center Street, is located at the intersection of routes 20 and 615.

Call 877.440.TEAM (8326) for information about *Train Right*.