

# BACK IN THE GAME

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REHABILITATION INFORMATION FOR THOSE WHO ENJOY THE SPORTING LIFE

## Plyometric Training

By Kurt Kerry, Physical Therapist & Sports Rehab Supervisor

Today's athlete is always looking for ways to enhance performance and obtain maximum output during practice and game competition. Nutritional supplements and strength training are frequently used in combination to achieve this goal.

For many years, both athletes and coaches considered strength to be the most important factor in an athlete's overall performance. As a result, athletes spend many hours in weight rooms using high-weight, low-repetition workouts to achieve a competitive edge. However, if this is the point where the athletes stop their training program, then they are missing one of the most important aspects of performance improvement techniques -- Power.

Strength without power is basically useless in athletic competition. The combination of speed and strength training is what produces powerful or explosive reactions. The easiest, cheapest and most efficient way to achieve this goal is with some form of plyometric training.

Plyometrics is a way to develop maximum force in a muscle group that is shortened (concentric contraction) and then lengthened (eccentric contraction). Athletic competition seldom uses just one of these muscle contractions. It is a

smooth, coordinated combination of the two contractions that leads to top performance.

Athletes should use plyometric exercises that are as specific as possible to the sport being played. Football, hockey and basketball players will use a lower body program more than a baseball player or shot putter who might concentrate more on the upper body.

The following are examples of lower body and upper body plyometric exercises:

### Lower Body

**Drop jumps:** The athlete drops from a raised platform or box and then immediately jumps back up. The force is determined by the height of the drop and the quickness of the return jump.

**Bounding:** An exaggerated stride is used with extra time spent in the air. Using both legs at once will reduce impact, but for maximum results, one-legged bounding is best. Using stairs will improve both vertical and horizontal running motions.



### Upper Body

**Push-ups with hand clap:** The athlete will do explosive push ups with a hand clap in between. For best results, minimize ground contact with the hands.

**Medicine ball:** Have a partner drop the ball while the athlete is lying on his or her back. The catch is made and the ball is lowered towards the chest, then immediately thrown back.

Remember that the plyometric program should always be incorporated with a warm up and stretching program. Younger athletes can also benefit from this program using more moderate jumps and reduced forces. Plyometric exercises can always be combined with weight training to improve your athletes explosive power.

For more information about plyometric training, please call Sports Rehab of Marquette General Health System at (800) 562-9753 ext. 3186 and ask for Bill, Brian or Erik.

## A fallen athlete -- what do you do?

*By William Elmlad, Certified Athletic Trainer (ATC)*

During athletic events and practices, it is possible that the team physician or team athletic trainers are not available to respond to a fallen athlete. This would make the coaching staff responsible for any medical emergency that may arise. It is critical for all members of a coaching staff to become certified in CPR, first aid, and to keep these certifications current.

When approaching an injured athlete, the first thing to do is assess the overall situation. You do this by checking your ABC's:

- Airway
- Breathing
- Circulation

You also need to determine whether or not the athlete is conscious.

If an athlete is unconscious, always suspect a head, neck or back injury and DO NOT attempt to move the athlete. Emergency Medical Services (EMS) should be notified immediately.

If the athlete is conscious but complains of any head, neck, back pain, or any numbness or tingling throughout the body, EMS should be notified.

If the athlete is not breathing, CPR should be administered as soon as possible.

When approaching a fallen athlete, it is important to always assume the worst. When in doubt, the athlete should not be moved for any reason and EMS should be contacted as soon as possible. Also, the athlete should never be left alone. The best approach is a cautious approach.

## Rates of Injury in Major Sports

*By Kurt Kerry, Physical Therapist & Sports Rehab Supervisor*

Injuries, whether they occur during a game or practice, are hindering athletes at higher rates than ever before. This concerns healthcare providers, coaches, athletes and their families.

According to a recent survey, an athlete who misses one or more practices or games is considered an injured player.

Using this definition, a 1999 New England Journal of Medicine study found that 50% of all athletes participating in football had been injured; 20% in soccer; 15% in basketball; 15% in hockey; and 10% in volleyball.

Proper nutrition, rest, conditioning, equipment and sport-specific techniques are essential for keeping injury rates as low as possible and reducing injuries in the future. We all have the responsibility of protecting those who are the most important to us - the athletes we coach, treat and watch.

## A Special Thanks

Surveys were sent to all U.P. area coaches asking for ideas as to what they would like to see in future newsletters. Thank you to those coaches who responded. We appreciate your



## Sports Injury Clinic Mondays and Thursdays 2:30 - 5:00 p.m.

Staffed by **John Lehtinen, MD**, (board certified in sports medicine), **Michael Kreis, PA-C**, **physical therapists** and **sports rehabilitation athletic trainers**, the clinic offers the following services:

- Acute injuries
- Post-concussion injuries
- Second opinions
- Fitness evaluations
- Evaluation and comprehensive rehab
- Custom orthotics & sport braces
- Timely consults if necessary
- Custom exercise programs

**Walk-ins and appointments welcome**  
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