

2 MINUTE DRILL

SPORTS MEDICINE NEWSLETTER

March 2004, Volume 2, Issue 1

- 2 Athlete Spotlight
- 2 Question and Answer
- 3 Certified Trainer Spot Light
- 3 Maximizing Throwing Performance NOW!
- 4 Product Review

Don't Know Squat!

by Mark Hawkins MA, ATC, CSCS

Of all of the lower body exercise for legs that can be performed in the gym, the squat is number ONE. It builds strength, power, and muscular size in one movement. It is also essential that you know how to squat properly. The last thing you want when you have a large amount of weight across your shoulders is improper form. This article will touch on the 7 most common mistakes that can happen when squatting.

- **Incorrect foot placement.** If your feet are too close together, it makes it difficult for the hamstrings and glutes to properly assist the quads. If the feet are too wide, then the hamstrings and glutes will be over-emphasized and take away from the quads. The best placement for the feet is a little wider than shoulder width with the toes pointing forward.
- **Heels come off the floor.** If your heels come off the floor, more than likely you have tight calf muscles. Work on your flexibility to correct this problem.

• Knees travel to far forward.

Practice will correct this problem. Use a chair, box, or bench placed behind you for a safety measure. Squat down until your glutes touch the object. You can start with a box that only allows partial range of motion and work your way down to a box that allows your upper legs to come to parallel with the floor. Another idea to practice your

...continued on page 2

CORE STRENGTHENING

A vast majority of athletes are deficient in basic strength and conditioning prior to their season. The core is where movement begins and is a great place to start. Movements such as throwing and hitting a baseball, passing in lacrosse and throwing a shot put are just a few examples that involve core strength. If the athlete does not have adequate core stability during these activities it will lead to poor performance as well as increased risk for injury.

...continued on page 3

Don't Know Squat! ...continued

form is to squat while facing a wall with a chair behind you and your toes almost touching the wall. This will force you to keep your knees back or they will hit the wall.

- **Stopping before your thighs reach parallel with the floor.** Have a spotter watch you from the side and cue you when you reach parallel with the floor. Also, take a look at how much weight you are using; too much weight will cause your body to automatically stop your motion early.

- **Your upper body leans to far forward.** To correct this, there are two different things you can do. First, work on the flexibility of hip flexors. Tight hip flexors can cause forward upper body lean even with a strong back. If your hip flexors are just fine, then take a look at your lower back strength. Strengthen your lower back with back extensions. If neither one of these is you, take a look at the next tip.

- **Improper bar placement.** Resting the bar to high on the traps places more stress on the lower back and raises your center of gravity. Keeping the bar to low causes excessive forward lean.

- **Incorrect head position.** If you look down to low, it can cause you to round your back. Looking too high can cause you to loose your balance. Keep you eyes level and looking forward.

Following these safety tips will have a positive, and safe, effect on your squatting experience. Remember to not overload the bar with to much weight. Only use a weight you can handle safely. Too much weight can compromise form, which can lead to possible injury.

Question & Answer

By: Nicole Zarucki, ATC

Q. I'm a freshman in high school trying to decide on a career path, and I find the field of athletic training/sports medicine very interesting. What type of classes would I have to take if I pursued this career path and also which schools in the state of Michigan offer this program?

...continued on page 3

ATHLETE SPOTLIGHT

In memory of Jack Lark and Marvin Admon both from L'Anse Creuse North High School who passed away on December 19, 2003.

Jack Lark – Tennis - No. 2 singles

- Went undefeated for the 2003 season in match play and was voted best singles player by the coaching staff.
- Placed 2nd in the district divisional match.

Jack was an outstanding leader who played hard and led by example. He always knew when to step it up and lead the way. Jack would have been named captain for the 2004 season.

He was all business on the tennis court. After the matches were over, he always congratulated and gave praise to his opponents. Jack was well liked in part due to his attitude on and off the court.

Outside of tennis, Jack was an umpire for little league baseball. He was always trying to help the little leaguers improve their game. Jack was the type of kid that whenever you needed something done, he was always there to help. Jack was a mentor to his little brother Jerald who misses him a lot.

Marvin Admon – Tennis - No. 3 doubles

- Marvin and his brother Andrew had an undefeated 2003 season winning 11 out of 11 matches.
- The two brothers won a silver medal in the Port Huron Team District Championship.
- Marvin was voted best doubles player by the coaching staff for the 2003 season.

Marvin always worked hard being the best he could be. He and his partner, Andy, lead the team to many victories. He always gave his opponents complete respect and was very valuable to his team and his coaches. He was always the first to step up and help whenever the team needed him or to do anything out of the ordinary.

Marvin was also involved in student council. He was said to be very helpful in school with teachers and on the court with the coaches.

Marvin was one of three brothers. His big brothers Andrew and Mario were very important to him

Question & Answer ...continued

A. The career of a Certified Athletic Trainer requires a minimum of a Bachelor's Degree of Science in the field of Sports Medicine. Typically required classes include Anatomy, Physiology, Kinesiology, Personal Health classes, and specific classes on the evaluation and treatment of athletic injuries. When choosing a university for a career in sports medicine make sure that their program is accredited by the Committee of Allied Health and Education Professionals (CAHEP). A non-inclusive list of schools in the state of Michigan that have a CAHEP accredited sports medicine program are Central Michigan University, Grand Valley State University, and Hope College. For further information visit with your schools Certified Athletic Trainer (ATC) to learn more, and possibly experience the life of an ATC. It is highly recommended that if you are considering a career in Athletic Training that you should volunteer with your schools ATC to experience first hand all that the position entails. March is also National Athletic Trainers Month so further in depth information can also be found at the National Athletic Trainers Association Website www.nata.org.

If you have questions about training, nutrition, injuries and/or injury prevention please email us at: cassandra.robinson@stjohn.org

Questions will be answered by our staff of Certified Athletic Trainers.

Maximize Throwing Performance NOW!

St. John Rehabilitation Services is please to announce the addition of its newest program **Maximize Throwing Performance Now!** Our team of both **Certified Athletic Trainers** and **Physical Therapists** will perform an in-depth one on one evaluation, geared towards maximizing the athlete's performance. We will also identify those best served through special exercises, rehabilitation, or medical intervention.

For further information or to sign up contact Nicole Zarucki, ATC at 586-498-3500.

Core Strengthening ...continued

So what is the core? The core is the body's center of gravity and where all movement begins. The core consists of muscles of the hips, abdomen and low back. Core training should begin with training the transverse abdominis and multifidus because they are the first muscles to activate in the core even before movement occurs.

How do you know if you are training these muscles? Try the following tests known as the abdominal drawing in test and the leg loading test:

Abdominal drawing in test

Lying on your stomach, place a blood pressure cuff under your navel. Pump the cuff up to 70mmHg and allow it to stabilize while you are laying on it.

Breathe in and out one time. After you breathe out, pull your navel slowly toward your back and resume normal breathing for ten seconds while holding your navel in. The blood pressure cuff should drop approximately 10mmHg reading 60mmHg. You have good control of your core musculature if you can breathe normally while keeping the pressure at 60mmHg for ten seconds. To test the endurance of the musculature repeat the ten second holds ten times.

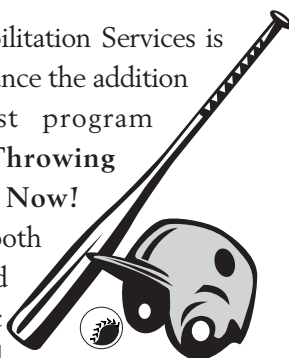
Leg loading test

Lay on your back with your knees bent and feet flat on the floor. Place a blood pressure cuff under your low back. Inflate the cuff to approximately 40mmHg and perform the drawing in technique above. Watch the blood pressure cuff increase 10-15 mmHg. Maintaining this pressure and breathing normal perform the following:

1. Straighten your left leg by sliding your heel along the floor and return to start position. Repeat with right leg. Alternate left and right legs repeating for 30-40 repetitions.
2. Straighten your left leg out keeping your foot 12 inches off the ground and return to start position. Repeat with right leg. Alternate left and right legs repeating for 20 repetitions.

During these exercises there should NOT be an INCREASE OR DECREASE in cuff pressure!

Remember, proper core strength improves body control and balance enhancing overall athletic performance. If you are unable to complete any part of these two tests you need to begin your core strength program today! See the Certified Athletic Trainer at your High School for more information.



Product Review: Soccer Shin Guards

Most, if not all, soccer players have the competitive need to play a full 90 minute game for each and every game. So would it not seem silly to have to miss a game due to a lower leg injury caused by ill-fitting shin guards? Here are some quick facts and tips about this piece of equipment that just might keep you in the game.

* Shin guards are worn to protect the shin and lower leg from impact injuries that occur from contact with another player. Shin guards, or shin pads, work in two way: (1) through their large surface area, they spread out the impact over the entire area, and (2) they also absorb the energy of the impact with the padding thus lessening the blow of that impact. This can be the difference between 90 minutes or sitting the bench due to an injury.

* Proper fit is important. The shin guards should cover the entire shin from below the knee to the ankle. This is crucial and helps to disperse the energy from the impact over a wide area. They should be tight enough that they do not slip when playing or turn around on the leg and give unsatisfactory protection. They should also have a secure method of staying up against the shin while playing (usually a Velcro strap of some sort). There are now even shin

guards that can be molded right to the players leg for a personal fit. A player may need to try a few different brands to find a pair that is comfortable and does not feel too large or bulky to impair the players movements.

* Sizing is general for most brands of shin guards. Senior-or large-shin guards are designed for players 5'4" or taller. Junior-or medium-shin guards are designed for players 5'4" or shorter. Small is usually worn by children younger than 12 years old. Each player is an individual and that is why the sizing is just a general guideline. Shopping at a soccer specialty store can provide wider selections and help ensure proper size and fit.

* Padding. Shin guards should have adequate padding so that they can absorb the energy of the impact. Obviously the thicker the padding material the more protection from injury. Better materials can sometimes mean higher prices, but there are enough choices on what feels comfortable at a reasonable price and without compromising protection. Also, some shin guards are now being made with plastic protective cups at the ankle to help protect the bone at either side of the ankle.

With these quick tips on

proper fit, there should be no excuses for not wearing proper protection on your shins. Remember, the shin guards need to be capable of providing protection for the entire shin, or it could cost you precious playing time.

St. John Physical Therapy & Sports Medicine Locations

1. St. Clair Shores–Beaconsfield
586-771-6084
2. St. Clair Shores–
Twelve Mile Road
586-498-3500
3. Warren–Schoenherr
586-582-7825
4. Madison Heights–
St. John Oakland Hospital
248-967-7537
5. Harrison Township–
St. John North Shores
Hospital
586-466-5234
6. Clinton Township–Garfield
586-263-5220
7. Macomb Township–Romeo
Plank
586-226-6500
8. Shelby Township–Schoenherr
586-566-3050
9. Rochester Hills–Rochester
248-844-6140

GIRLS BASKETBALL PRESEASON CONDITIONING CAMP – SIGN UP NOW!

- Be trained by the WNBA Detroit Shock Trainer!
- Meet a Detroit Shock Player!
- Get in shape for basketball season just like the Detroit Shock!
- August 2 - August 6, 2004
 - Limited Registration
 - Call: 586-498-3503

Who is your Certified Athletic Trainer?

• DeLaSalle Collegiate HS
Maureen Ashley
586-771-6084

• East Detroit HS
Nicole Zarucki
586-498-3500

• Grosse Pointe North HS
Janel Mroz
586-771-6084

• L'Anse Creuse HS
Cassie Robinson
586-466-5234

• L'Anse Creuse North HS
Maureen Lilla
586-226-6504

• Sterling Heights HS
Mark Hawkins
586-498-3519

• Warren Cousino HS
Erika Lombardo
586-771-6084

• Warren Mott HS
Ulrike Bierkamp
248-967-7537

MASSAGE THERAPY

Available at all of the Physical Therapy Sites listed above.
Call for an appointment.

Pilates Classes & Personal Training

- Available at Beaconsfield
586-771-6084
- Available at Twelve Mile Road
586-498-3500

Tia Chi Classes

- Available at Beaconsfield
586-771-6084
- Available at Romeo Plank
586-226-6500