



PERFORMANCE BASEBALL/SOFTBALL CONDITIONING

A NEWSLETTER DEDICATED TO IMPROVING BASEBALL AND SOFTBALL PLAYERS

Volume 17, Number 2

The Proper Sequencing of Developing Today's Young Athlete

There is currently a basic breakdown in the strength and conditioning process. This is caused, in part, by the current culture of continuous sports play without adequate time and resources to emphasize the athlete's proper, progressive physical development. Because of the limited amount of time devoted to the conditioning process and the sport specialization at an early age, many conditioning programs immediately proceed to position/movement specific training forgoing the base strength training phase. Adding to this problem is improper exercise techniques and loading which leads to muscle compensation. This necessitates the need to implement a movement correcting program before strength training is done. Here is the new 3-step model for the developing young athlete.

Step One-Good Movement Skills

Performance Conditioning has implemented its Movement to Muscle program. Movement to Muscle was created to provide a simple, 10-minute screening process to detect improper movement skill. Failure of one or more tests, the athlete must do a prescribed exercises. The sum total of these exercises constitutes the movement program. If the athlete passes all tests, they go to a muscle training program.

Step Two-to Muscle Program

This base training muscle program should occur in the off-season of the classic periodization model. Six week minimum to create a training effect. It is difficult to find the time but a solid muscle base needs to be implemented.

Step Three-Using our "Fit to a T 7-T" System of Program Design-T-7 Team Position

This T was designed to accommodate the different movement patterns within a sport based on the position played. This has to do with specificity of training, one of the basic principles of program design. It should only be done after a base muscle program has been implemented.

This T is for programs that are more advanced. The training needs of a catcher are different from the pitcher. The basic strength/power program is basically the same for all positions but variance occurs in movement patterns and the conditioning demands. This requires more specific training. Click [HERE](#) for "Fit to a T 7-T" System of Program Design details.

By following this simple three step process the development of our young athletes can take a proper course. The challenge is doing it.

Something to Think About

Ken Kontor, Publisher

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Guest Editorial - Cross Fit for Baseball: Is it the Right Thing? Is it Effective?
Phil Loomis

IS YOUR STRENGTH PROGRAM DOING MORE HARM THAN GOOD FOR YOUR ATHLETES? FIND OUT NOW - **FREE!**



Movement Training-Before Muscle Training
Avoid Injury Created by Poor Movement Skills

Follow the 5 Simple Steps

1. Do the [9 Movement Tests](#)-Takes 10 Minutes requiring little equipment-Try it NOW-FREE!

2. Record Results On [Athlete's Score Card](#) Provided FREE!

If they Pass All 9 Tests-Congratulations! Continue Your Strength Program knowing that your athletes are getting stronger, faster with minimum risk of injury.

3. If they Fail any Test, Go to the step-by-step Movement Program as presented in the M2M E-Book

4. Re-Test after 2-6 weeks of doing the Movement Program

5. If they Pass, Go to Muscle Program

Don't Strength Train? Test Your Athletes Movement Skills to insure good movement skills and are avoiding overuse and overtraining. Remember...it's FREE

Moving to the Muscle Program

Over 500 strength exercises presented with illustrations- use as a stand alone or when viewing exercises on the internet to confirm proper exercise techniques.

Follow these Muscle Principles-to gain strength and maintain good movement skills

#1 No Exercise is bad, it is how it's done and applied that makes it bad.

#2 Strength exercises should be done in a safe environment.

#3 Avoid Muscle Compensation by

- Having muscles move (fire) in the proper sequence to insure proper technique.
- Not loading too much weight that encourages improper technique.

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Pitch Count for Softball: A Perspective from the Strength and Conditioning Coach

Lauren Harris, University of Nebraska Head Softball Strength and Conditioning Coach

A certified strength and conditioning specialist, Lauren Harris became part of the Husker strength and conditioning program for the Nebraska softball, women's gymnastics, and rifle programs in 2012.

Before joining the Nebraska staff, Harris served as the director of strength and conditioning at Texas A&M-Corpus Christi, beginning in 2009. While at TAMUCC, Harris was responsible for the training and supervision of all fourteen Division I sports and oversaw the design and completion of TAMUCC's first athletics-only weight facility in the spring of 2011.

Harris served as an assistant strength and conditioning coach for Olympic sports at Ohio State from 2006 to 2009. She gained experience training numerous all-Big Ten, all-American and national team athletes. She served a six-week stint as the USA national synchronized swimming strength coach while they trained on-site at OSU. Harris also was part of the Olympic sports strength and conditioning staff at Marshall.

As a basketball player at Hardin-Simmons in Abilene, Texas, Harris earned All-ASC (2001-2004) and Kodak first team all-American honors (2004). She holds all HSU career, season, and game three-point records and was named ASC Female Athlete of the Year in 2004.

A Case for Limitations

BGN **INT** **T1** **T6** **T** *The following is from a recent article by Kyle Newman, digital prep sports editor for The Denver Post.*

All but one of a dozen local softball coaches contacted for this story said they would oppose pitching limits—but some orthopedists say they're starting to see firsthand proof that concern about unregulated pitching is warranted.



Lauren Harris

Symbols to Success
Articles preceded by:

BGN indicate author believes content is for beginning-level athletes with training age of 0 to 2 years.

INT indicates author believes content is for sport (intermediate)-level athletes with training age of 2 to 4 years.

ADV indicates author believes content is for expert-level athletes with training age of over 4 years.

NOTE: Training age year is continuous year-round conditioning beyond just playing baseball/softball.

R following articles indicates the content has been reviewed by the editorial board.

O following articles indicates the content is the sole opinion of the author.

Article preceded by a T + a number 1-7 indicate the article is relevant to one or more T's in our 7-T system of program design.

T-1= Training Age (see above)/History

T-2= Time

T-3= Tools

T-4= Teaching

T-5=Testing

T-6=Total Workload

T-7=Team Position

To find out more about Fit to a T program go to:

www.performancecondition.com/ultimate-conditioning-library/baseball

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ASSOCIATION



PROFESSIONAL BASEBALL STRENGTH
& CONDITIONING COACHES SOCIETY

“I’m telling you, I’m hearing it from the grassroots—people are saying we need guidelines, we need pitch counts, we need more effective long-toss programs,” said Dr. Steve Jordan, an orthopedic surgeon for the Andrews Institute in Florida, who estimates he has seen about a threefold increase in [softball pitching injuries at his practice](#) over the past decade.

The majority of that concern, however, isn’t necessarily directed at high school-sanctioned softball, where teams in Colorado each have a regular season of only nineteen games.

“Travel ball and those elite summer teams is where we’re really having trouble, because what we know from epidemiological work at the high schools is that girls who had more seasonal exposure—in other words, more pitches per season—were at a higher risk,” Jordan said. “What we found is that some of these girls are pitching as many as 1,000 or more pitches in a weekend summer tournament—which is equal to the risk factors we saw in an entire season of high school ball.”

Also at issue, said Dr. Kristen Thomas, an orthopedic surgeon in Oregon, is the validity of the argument that underhand pitching cannot be harmful.

“There’s this conception that softball pitchers don’t get injured, but biomechanics studies have shown that throwing a pitch underhand is equally as stressful as throwing an overhand pitch to the shoulder, and in fact, it has a higher rate of stress to the biceps tendon than an overhand throw,” said Thomas, who specializes in shoulder injuries.

She conducted a [2010 research study](#) that examined the effect of range of motion, shoulder strength, pitch count, and pitch frequency on fifty pitchers at various NCAA programs.

“There’s a big disconnect between the players and the coaches, because any time I talked to a coach and said, ‘Hey, can I come talk to your players about shoulder injuries?’, the coach would say to me, ‘You can come here, but I don’t have any pitchers who are injured. All my players are doing fine and they don’t have any shoulder pain or problems,’” Thomas said. “But when I actually talked to the players, the fact is there’s a large amount of players who play hurt, who played injured and who end up getting surgery in the off-season.”

A Look at the Data: A Case Against

So, if top doctors maintain that too much pitching can be dangerous, why isn’t anything done about it?

The bottom line is that the hard data here—injury statistics through [High School RIO](#), the National Federation of State High School Associations’ digital collection tool—doesn’t support such a move.

“There really hasn’t been a ton of information out there to indicate that overuse injuries in softball are prevalent,” said NFHS director of sports Sandy Searcy. “So when NFHS instituted a pitch count in baseball, everyone turned to softball and wondered if that would be good for that sport, too. But everything we’ve been presented with by (High School RIO) and our Sports Medicine Advisory Committee has not indicated there is the need to create a pitch-count rule or mandatory rest days for softball.”

High School RIO’s original softball data [in 2005-06](#) listed the sport with an injury rate of 1.1 for every 1,000 participants. That injury rate has increased to 1.34 [in 2016-17](#).

But further data breakdowns show decreased throwing-related injuries. In 2005-06, 17.2 percent of reported injuries were to the shoulder or arm and 10.4 percent of reported injuries were to pitchers, while last year’s data says 8.8 percent of reported injuries were to the shoulder or arm and 8 percent of reported injuries were to pitchers.

That data is in line with the thought process of successful, longtime Colorado high school softball coaches such as Legacy’s Dawn Gaffin, who opposes limitations on pitch counts. Gaffin argues the connection between coach and player—which Thomas found to be lacking in her study—is crucial in maintaining a pitcher’s health, as is having a minimum of three quality arms on staff during the club season.

And while the coach and the doctor differ on their stance on the need for limitations, Gaffin and Thomas agree that with no rules in place, the onus is on the coach to know when it’s time to make a switch from pitchers whose competitive pride, like a dazed quarterback after a big hit, can hinder any admission of pain.

“It’s a checks-and-balances-type of situation—you’ve got to constantly be checking in with your pitchers, and you need to know your kids,” said Gaffin, who has led Legacy to six state titles using a combination of ace and staff approaches. “You know what your kid looks like when they’re fatiguing and when there’s no more pop left in their pitch, or you can even tell by the look on their face and their mannerisms on the mound.”

The Strength and Conditioning Perspective: Lauren Harris

Pitch count is all about efficiency at the collegiate level. How many pitches does it take to get outs? How many pitches does it take to get through the batting order? Three years ago, we had a pitcher who hit the wall at about one-hundred pitches, as much mentally as physically. This was more about efficiency because it was a matter of getting the outs, not her physical health. If she could get three two times through the order before she got to one-hundred pitches, she had a better chance of getting through the third time through the order. If not, the coaches knew to get someone warmed up in the bullpen.

It is a different story if someone is injured. Recovery or re-injury is the concern, so pitch limit is closely monitored both in practice and in games. The next part to limiting overuse injury is purposely planned time off.

During the collegiate season, especially during conference and post-season play, wins and losses play a bigger part in the decisions about how often and how many innings a pitcher plays. A good softball team is instantly elite if they have an “ace,” because they can pitch multiple games. As an extreme example, Oklahoma started the same pitcher for every game of the 2017 WCWS, and she pitched the majority of the innings. That was five games in five consecutive days! To compensate for the extremely high load during the season, our pitchers here do not throw for a month after the season is over (see Table 1). Then they start a progressive

throwing program in July and August to prepare for the fall practice season (which lasts roughly five weeks). After “fall ball” is over, they again give their arms some rest before they have to start their throwing program over the holiday break to be ready for full practices when they get back to school in January.

| | |
|---|---|
| June | Off |
| July-August | Progressive Throwing Program-gradually increase volume |
| Sept.-October | Fall Practice-High Volume |
| November | Off |
| December | Progressive Throwing Program-getting ready for the season |
| January | Pre-season Practice-high volume |
| February-May | In-season |
| Pitch Count-more about efficiency or working back from injury | |

The Youth Level

Collegiate coaches are better able to get away with high pitching volumes during certain parts of the year or season because they are in almost total control of the calendar. They very rarely have to share athletes with another sport, and they definitely do not share with another softball team. Now we should compare the regimented, mature level of training age in college softball with the young, developing athlete in high school and club softball. Athletes play for two different teams with the goal of being recruited to play at the collegiate level. They start appearing on the recruiting radar as early as middle school. A lot of recruiting takes place at summer tournaments. A fair amount of recruiting decisions have already been established by the time many athletes are in high school.

The youth club softball is like a beauty pageant; getting noticed is part of the process. After the high school scholastic season, there is little time off after the season. The club pressure begins almost immediately with recruiters dangling the "get a scholarship" carrot. The athlete might play other sports, but will continue to be involved with club softball, and in some cases, the club coach even discourages athletes (and their parents) from playing other sports. They convince them that their chances of getting a scholarship will be better if they focus solely on softball. This adds to the overall stress on the athlete (as well as their shoulders!). We must also consider tournament season, which is year-round in warmer states. Athletes may play up to three games in one day, so a pitcher might conceivably pitch as many as twenty-one innings in one day. This isn't usually the case because there is usually more than one good pitcher per team trying to get recruited. The norm is probably closer to three or four games in a weekend.

Time off is not controlled because there are tournaments, other sports, and scholastic play. Each individual coach probably considers overall pitch count for their own practices and games, but unless there is a lot of communication between the club and high school coach, they probably are not accounting for the extra work done with the other team. This can eventually wear joints down, as well as hinder the opportunity to develop base strength and increase training age, both of which are critical in injury prevention as players move up the competitive ladder. If the athlete only plays softball, the potential for early overuse is even greater.

Scholastic and Club Coaching Recommendations: A Strength and Conditioning Coach's Perspective to Avoid Pitch Count

This concept is difficult. The key is to build in time off somewhere. Youth football has implemented the “Heads Up Football” program to collectively educate coaches how to properly tackle. USA Track and Field has a certification program in order to be considered a qualified track coach. I do not know if there is a standard system for educating youth softball coaches. I am sure these topics are discussed at the NFCA (or similar organizations) coaches conferences and clinics, but creating an educational curriculum to instruct coaches on training, throwing programs, and signs of overuse and overtraining could be a great addition to what they are already doing.

For physical training to both improve performance and mitigate the chance of overuse injury, I recommend beginning basic strength and conditioning in middle school or early high school. You can do something as simple as bodyweight or dumbbell exercises (see the Resource Page). Once you start barbell training, you are "locked" into a certain bar position or path that might not be optimal for everyone. With thousands of throws and batting swings from one side of the body (except for the switch hitter), you end up anatomically "twisted.” The stress on the shoulder and spine add up over time. The single leg/side approach that dumbbells can offer is more accommodating to the young softball player.

Teaching Olympic-style movements such as the clean takes a lot of time and expertise to ensure proper technique, so while I will not go so far as to outlaw Olympic weightlifting for softball players, be cautious if you do chose that style of training. Personal trainers may be well qualified, but others may not be. Some may use the same approach as club softball coaches who use the "train with me to get that scholarship" angle to get more clients. Parents don't always know how to judge which trainers are qualified and which ones are not. I would love to be able to recommend a specific workout everyone should do, but there isn't just one. Along with dumbbell strength training, another conditioning tool would be the progressive throwing program (see the Resource Page).

A final consideration that I would recommend combines strength training, pitching volume, and the progressive throwing program. Have a unified workload chart that the parents, club, scholastic, and conditioning coaches can access to get an idea of the total workload. What is done with this chart and who is its ultimate keeper is a big question that requires a lot of cooperation from all parties involved to be completely effective. At least having something down on "paper" is a step in the right direction and can get the right conversations started. If pitch count is ever introduced in youth softball, it must allow the athlete to evolve (increase number of pitches as they mature) with the ultimate goal of reaching the collegiate level without undergoing sports-related surgery. 

More Information Please! Contact Lauren at lharris@huskers.com.

Resource Page - Dumbbell Exercises

DB Squat

- Under control but quickly, bend hips backwards; bend knees and ankles.
- Inhaling, descend until tops of thighs are parallel to floor.
- Keep back straight and abs tight and hips neutral.
- Exhale as you straighten hips and knees when returning to upright position. Entire movement should take one second.
- Do not bounce at bottom position.
- Do not bring knees together coming up (common in female athletes).



Dumbbell Squats

Single Leg RDL

- Reach as far as possible with hands.
- Raise leg straight back and up.

DB Stability Ball Chest Press

- Start by sitting on stability ball with dumbbell in each hand and walk yourself out until only the shoulders are on the ball.
- Keep the hips high, with your knees bent and feet flat on the floor.
- Raise dumbbells and reach as high possible.
- The stability ball should roll slightly under the shoulders



Single Leg RDL



DB Stability Ball Chest Press

Incline Push Ups

- Start with feet on the floor, palms of hands higher than shoulders on a stable surface.
- Lower yourself as close as you can to the stable surface, keeping abdominals engaged or tight and staying as straight as possible.

Seated DB Press

- On a stability ball with back straight and feet wider than shoulder width for balance.
- Elbows should be slightly forward (30°), palms facing forward.
- Dumbbells should move up and angle in at the top.



Incline Pushups



Seated Dumbbell Press

DB Lateral Raise

- Exhale, pushing dumbbells under control in an arc to shoulder level.
- Elbows should be slightly bent, body straight.
- Inhale, lowering dumbbells following the same arc as on the way up.
- Don't lean forward to aid in going up.
- Control dumbbells on the way down.



Dumbbell Lateral Raises

DB High Pulls

- Bend over, back and arms straight, slightly bent knees, and flat footed, with the center of gravity shifted back from the balls of the feet toward the heels.
- Raise the dumbbells to an upright row “up” position, and without stopping.
- The dumbbells should be kept as close as possible to the body.
- The dumbbells should be moved down with the same technique and in an opposite order of execution.



Dumbbell High Pulls



PROFESSIONAL BASEBALL
**STRENGTH &
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Presents

Members' Forum

Physical Factors That Can Influence Player Development

Gene Coleman, Ed. D., RSCC-E, FACSM

Gene Coleman was the Head S&C Coach for the Houston Astros from 1978-2012 and is currently a strength and conditioning consultant for the Texas Rangers and Professor Emeritus in the Exercise and Health Sciences Program at the University of Houston – Clear Lake. He is an author, professor, strength and conditioning coach and speaker. If you are a Nolan Ryan fan, you may recognize Coleman's name. When Ryan was inducted into the Baseball Hall of Fame in 1999, his acceptance speech cited Coleman as one of the reasons he was able to enjoy such a long career. In 2004, Coleman was selected by his peers in the Professional Baseball Strength and Conditioning Coaches Society to be the recipient of the first-ever Nolan Ryan Award. It recognizes the strength and conditioning coach in professional baseball whose accomplishments reflect an exemplary dedication to strength training and conditioning.

It also recognizes the recipient's professional and personal accomplishments as well as his integrity as strength and conditioning coach.

Experience: Research indicates that professional baseball players experience an increase in body weight, % body fat, lean body weight, power (vertical jump), strength (grip strength), speed (10-yard time) and lateral speed and agility (pro-agility run) from Rookie ball until they arrive at the Major League level (1). Some of these improvements are the result of maturation, others, especially the measures of physical ability are also influenced by training. An important goal of player development should be to continue to subject each player to comprehensive conditioning and sports nutrition programs that will ensure that he makes consistent and appropriate improvements above those expected as a result of maturation in both anthropometric and performance variables.



Gene Coleman

Offensive Performance (HR, Total bases and Slugging Percentage): There is a significant positive correlation between home runs, total bases and slugging percentage and lower-body power, strength and lean body mass (1, 2).

- **Conclusion:** Increasing lower-body power, strength and lean body mass should improve the ability to hit with power.

Offensive Performance (Stolen Bases): There is a significant negative correlation between stolen bases and speed and agility (1, 2). Note, a negative correlation in this case is good because as speed gets faster (less time to run 10 yards) the number of stolen bases increases.

- **Conclusion:** Improving speed and agility should improve the ability to steal bases and put a player in a better position from which to score.

Defensive Performance (Fielding Performance – UZR/150): There is a significant positive correlation between fielding performance (range) and lower-body power and agility (3).

- **Conclusion:** Improving lower-body power and agility should improve the ability of players to successfully reach and field both ground and fly balls in game situations. Improving fielding ability should enable a player to help his team by preventing batters from getting on base and scoring runs.

How can this information be utilized by the strength and conditioning and player development staffs? Strength, speed, agility and lower-body power are each significantly related to both offensive and defensive performance. Improvements in each of these variables should help improve player performance and team success. In addition, improvements in each of these variables should help a “skilled” performer advance quicker through the system than a similarly “skilled” performer with less strength, speed, agility and lower-body power.

Data also indicate that the lowest scores in terms of speed, agility and lower-body power are recorded among players who are 20-years of age and younger. These findings are attributable, in part, to a lack of maturation and limited opportunity to participate in a professionally designed and supervised strength and conditioning program. Continuing to provide a structured and progressive program of nutrition and conditioning should help younger players achieve improvements beyond the “natural” improvements associated with maturation, enhance performance and reduce the risk of injury.

Data also indicate that decreases in speed, agility and lower-body power tend to occur after age 30. Some of the decline may be attributed to a lower population sample, i.e., fewer players older than age 30 were tested, and a reduction in the number of older players tested due to previous injury or declining interest in being tested. Only 165 (14%) of the players tested were age 30 or older. Given the relationship between speed, agility and lower-body power and performance, there should be concerted effort to continue to offer programs that will maintain and improve speed, agility and lower-body power among this population. 🏋️‍♂️



References

1. Hoffman, J. R., et. al., Anthropometric and performance comparisons in professional baseball players. *J S&C Res.* 23:2173, 2176, 2009.
2. Mangine, G. T., et. al., Effect of age on anthropometric and physical performance measures in professional baseball players. *J S&C Res.* 27:375-381, 2013.
3. Mangine, G.T., et. al. Predictors of fielding performance in professional baseball players. *Int. J Sports Physiology and Performance.* 8:510-516, 2013.

A Look Back at the Favorite Exercises of the Stars

From the Pages of Baseball/Softball- enjoy these favorite exercises of these MLB Stars. This series of features provides a small glimpse of a conditioning-related exercise that a star baseball player does to improve their performance. It should be understood that this is only a very small part of their formula for success. A developing player should always remember to set priorities based on their individual weaknesses and to establish their own “favorite exercises” to overcome these weaknesses.

The Star: Orlando “El Duque” Hernandez, Pitcher, NY Yankees

The Exercise: Power Step Ups with Barbell

Jeff Mangold, Conditioning Coach, New York Yankees

Why They Do It

- Orlando has a very powerful lower body. This exercise, which he learned in Costa Rica where he did a lot of his training before leaving Cuba, is very similar to his style of pitching with a high knee kick with his lead leg before delivery. During the game he throws up to 130 pitches. In order to repeatedly and effectively bring his left leg near his chin with a little pause requires great muscular endurance. He does this exercise with 135 pounds for a set of 10 repetitions, rests a minute or two, and then does a set of eight repetitions.

How They Do It

The Start

- Stand 12 to 18 inches from a box that is high enough to create a 90° angle (approximately 24” in Orlando’s case) at the knee when the foot is placed on top of the box.
- Place bar on shoulders.
- Keep body erect.

Coming Up

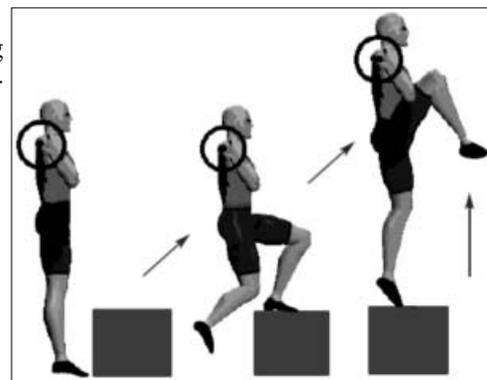
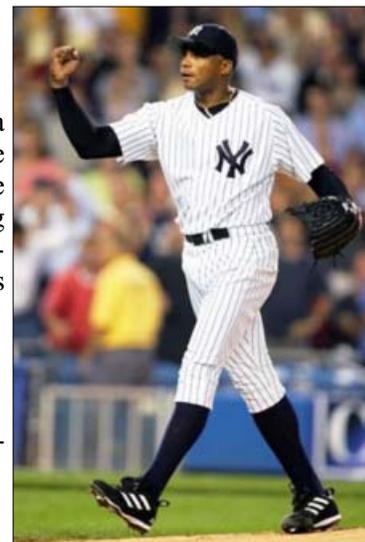
- Inhale, stepping with lead leg onto top of box placing it in the center, toes straight ahead.
- Keeping body straight, shift weight to lead leg (on the box).
- Pull body with lead leg. The trail leg should forcefully accelerate, bringing the knee up to chest high position. The trail leg thigh should be above parallel to the ground during this movement.
- The heel of the lead leg foot may come off the box.
- Bring the body to a standing, balanced position on the box.
- Body should be fully erect at the top position.

Going Down

- Shift body weight to same lead leg.
- Exhaling, step off box using unweighted leg.
- Body stays erect while placing foot onto the floor.
- Balance feet and repeat.

Tips

- Be sure to remain in control through out the exercise to maintain balance.



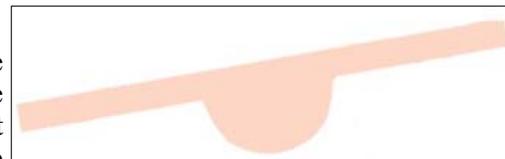
The Star: Eric Milton, Pitcher, Minnesota Twins

The Exercise: Balance Board Pitching Routine

Randy Popple, Conditioning Coach, Minnesota Twins

Why They Do It

Improve balance, leg stability, lower leg strength. This is to improve confidence/balance in the pitching position with the leg on the rubber. Balance is important because you have to go to home plate when you are ready, not when your body starts falling toward home plate. Or, to avoid the tendency to



lean backward with the lift leg up, which leads to poor mechanics.

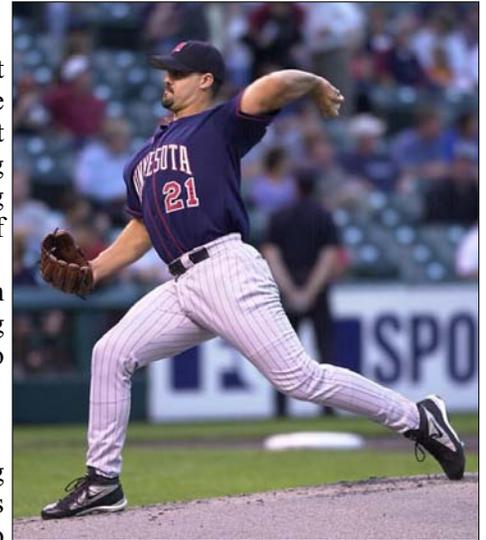
How They Do It

The exercises are done on a balance board. This is a board with a disk at the bottom about the size of a softball (see illustration). The larger the size of the disk the more difficult the exercise. The pitcher balances on the board. The left leg remains on the board while the right is lifted (Eric is left-handed) into pitching position. Keep hands together as in pitching position and balance without touching the ground. Return the right leg to the ground and touch. Perform 2 to 3 sets of 10 repetitions.

Next Progression: Start by facing the pitch back machine. Put the arm in internal/external rotation with a heavy ball bouncing it off the pitch back, staying on the same foot that's on the rubber. Repeat using the other leg. Progress up to 2 to 3 sets of 40 to 50 tosses. One-minute rest between sets.

Adapting the Routine for Softball

The motion is a step back/step forward with balance. Bring the lift leg into a forward step position and hold, facing forward rather than to the side as with baseball pitching. The heavy ball toss with internal/external rotation can also be done from this position.



The Star: Mike Sweeney, First Base, Kansas City Royals

The Exercise: The Squat

Tim Maxey, Conditioning Coach, Kansas City Royals

Why They Do It

Mike does the squat because it is a total body exercise emphasizing the hip and legs, generating power from the ground. This is specific to the force generated from the ground while hitting. He feels that he can gain the speed aspect of power on the field. He has to take batting practice every day, working on bat speed. The strength aspect of power is achieved by doing the squat exercise.

How They Do It

The Start

- Use rack, with supports at mid-chest level.
- Be sure spotters are in position.
- Grasp the barbell palms down, slightly wider than shoulder width.
- Step under bar feet parallel and shoulderwidth apart.
- Place the center of the bar on the upper back so it is balanced, resting securely across back of shoulders.
- Elbows pointed back, eyes slightly up, chest up, squeeze shoulder blades together.
- Straighten legs to lift the barbell off rack and step backward, feet slightly wider than shoulder width and toes pointed out slightly with back flat and tight.

Going Down

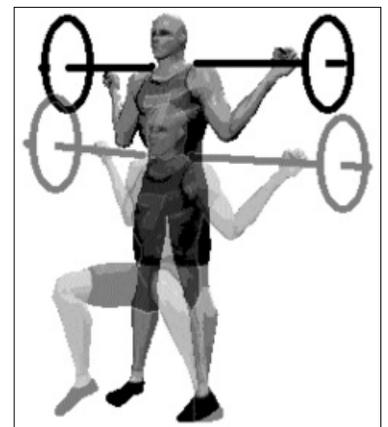
- Under control, bend hips backward, bend knees and ankles.
- Keep bar over middle of foot to heels, feet flat on the floor.
- Inhaling, descend slowly until tops of thighs are parallel to floor; pause.
- Keep back straight and chest up.

Coming Up

- Exhale as you straighten hips and knees to return upright under control.
- Keep hips under bar, eyes focused straight ahead.
- Back flat as possible.
- Knees over ankles.

Tips

- Do not bounce at bottom position.
- Be sure head and chest come up before the buttocks.
- Do not bring knees together coming up.
- Do not speed bar up at the top.
- Stay tight throughout movement.



Note: Because each athlete is different, the exercise must be individualized to suit the needs of the athlete. Adjustments may be made to width of the stance, depth of the squat, etc. With some of the older players, alternative exercises such as the dumbbell lunge may be selected.

In-season, Mike will squat twice a week, but you can't make the same gains as in the off-season. He will do three to four sets, combining for a total of 20 reps, about three to four sets of five or six reps. This allows strength to be maintained and even gains without muscle soreness, which is important when playing everyday. Mike takes care of himself nutritionally by simply eating food all day, six, seven or eight meals a day. This is also important to his recovery.

The Star: Aaron Boone, Third Baseman, Cincinnati Reds

The Exercise: Seated Row

Lance Sewell, Conditioning Coach, Cincinnati Reds

Why They Do It

Aaron is coming off knee surgery from last year. He has worked out every day during the off-season in Cincinnati. He likes to do this exercise to prevent injury or problems in the lower back. He believes it will carry him through the long season. It can be performed off a low pulley machine or a Hammer low row machine. This exercise is done along with back extensions. He does three sets of 10 repetitions, then a set of 8, ending with two sets of 6 with the seated row, adding resistance with each set.

How They Do It

The Start

- Sit on seat pad or floor facing the machine. Body is held straight.
- Keep back erect with a slight arch.
- Grab bar palms out, arms fully extended at elbows.
- Bend knees slightly.
- Bend trunk slightly at waist.

Going Up

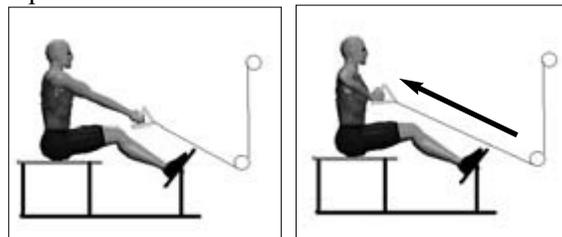
- Exhale, pulling bar to lower chest area and pull torso back to straight position with control.
- Keep elbows pointed outward with head, shoulders and chest up.

Coming Down

- Inhale, allowing return to starting position.

Tips

- Avoid leaning backward going up.
- Avoid dropping chest and shoulders coming down.



The Star: Edgar Martinez, Designated Hitter, Seattle Mariners

The Exercise: Medicine Ball Throw Down Routine

Allen Wirtala, Conditioning Coach Seattle Mariners

Why They Do It

Edgar loves to do medicine balls. He works on explosive throws to assist him in improving bat speed and power.

How They Do It

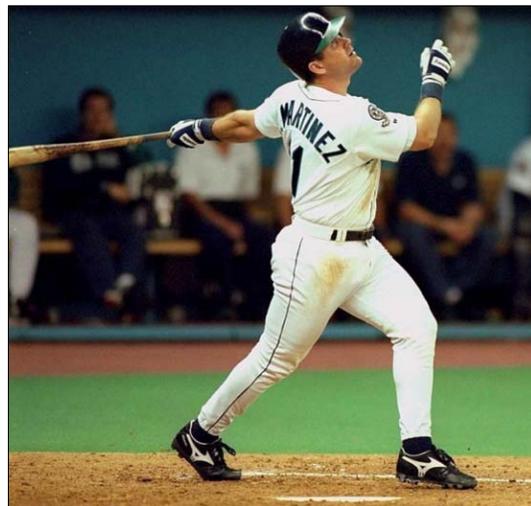
The following exercises are done in a circuit fashion. Edgar will do 15 to 20 repetition of each for three sets.

Medicine Side Toss Downs

Using hip rotations and the ball at the armpit, forcefully slam the ball against the ground. Repeat with the other side.

Medicine Overhead Toss Downs

Place the medicine ball overhead with arm extended and the elbows slightly bent. Forcefully throw the ball down to the ground, bending at the waist and elevating off the ground on release. This works the shoulders, lats and abdominals. 🌐



Library LINKS - From the "Fit-to-a-T" 7-T System of Program Design Library

T-1 Training Age

Conditioning Interview – The Major Responsibilities of Minor League Conditioning Coordinators: Developing Young Players, Sean Marohn,

Questions Answered:

- What are some of the challenges you face with such a diverse group of players ranging from young 16-year-olds to seasoned four year college players?
- You may have athlete coming in with poor lifting and training habits and techniques that might create bigger issues than an athlete with no training background. How do you handle this challenge?
- How does the maturation process create a challenge for you in establishing your program?
- Tells us how testing fits in to all this. Is testing integrated into maturation determination?
- Do you keep data from year to year for comparison purposes and to create benchmarks for use in the rehabilitation process if injury should occur?
- You have coaches at different levels for hitters, position players and pitchers. What challenges arise from this multi-boss scenario?
- How do you handle the issue of total workload and volume in a sport where activity and playing is almost constant month after month? And how do you coordinate baseball skill loading with conditioning loading in order to avoid overuse and over training?
- What is your overall philosophy?
- Let's talk about dedication to program. Beyond the fact that these players are professionals and there's a dollars and cents issue, how do you insure dedication?



[Click HERE to Read Now!](#)

T-2 Time

In-Season Simulated Base Running Drills, Gene Coleman, Ed. D.

Presented: Speed, especially speed on the bases, is one of the five tools that scouts, coaches and management look for when evaluating talent, but how do you work on it once the season starts.

Learn:

1. Timed 10-yard starts.
2. 30-yard sprints.
3. Curve runs (1B to 3B).
4. Curve runs (Home to 2B).
5. Get Back (Pick off at 1B).
6. Pick off at 1B – Over Throw (1B to 2B).
7. Pick off at 1B – Run Down (1B to 2B)
8. Get up and Run to 2B.
9. Head First Slide into 2B, Get up and Run to 3B.
10. Feet First Slide into 2B, Get up and Run to 3B.

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T-4 Teaching

The Carry: An Underutilized Effective Exercise for Rotational Athletes, Cory Ritter

Learn:

Strength coaches hear it from players all the time.

“What can I do to get abs?”

“What should I do for my core?”

While the actual answer is both nutrition and exercise related, the player typically puts all their effort into various abdominal exercises done in circuit fashion. And although we have tried our best to remove the crunch from our programs, it still remains a “go-to” exercise when players catch the bug and want to do extra core work. With all the research available and work done by people like Stuart McGill, we need a better alternative when the question is asked. We need an exercise more efficient, more effective and possible to do in all situations.

Presented: Why It Fits in Baseball

The loaded carry can be such a great tool for rotational athletes because it allows you to train a fundamental movement while stabilizing the midsection. When you have an opportunity to train shoulder and hip stability while performing a fundamental movement of life.

- Farmers Walks – 2 dumbbells/2 kettlebells/2 sandbags
- Suitcase Carry – 1 dumbbell/1 kettlebell/1 sandbag (one side only).
- Offset Farmer Walk – 2 dumbbells of different weights or 2 kettlebells of different weight

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Guest Editorial – Cross Fit for Baseball: Is it the Right Thing? Is it Effective?

Phil Loomis, President Baseball Fit

Phil Loomis is founder of Baseball Fit an educational resource/coaching service. Baseball Fit provides current and relevant information to the youth baseball community (ages 8-18) through the Complete Baseball Performance program.

Complete Baseball Performance addresses 5 critical elements:

- Mental skill development
- Sports Nutrition
- Strength and Conditioning
- Injury prevention
- Intra-organization athlete/player development systems



Baseball is as competitive as ever and young athletes are always looking for an edge on their competition. One of the ways they seek to do this is with off field strength and conditioning.

This can be a powerful addition to a baseball athlete’s sport performance plan. That said the type of off-field training you choose is very important.

If you choose what’s “trending” in the fitness industry you are not optimizing the potential off-field training has to improve your on-field performance.

For example I frequently get asked what I think about Cross-Fit for young athletes and baseball players.

First, I respect the culture that Cross-Fit creates for it’s members. They do a great job of creating camaraderie and an environment that motivates folks (who might otherwise despise exercise) and encourages them to test their limits. From a programming perspective for the most part they focus on full body movements and not isolationism like bodybuilding, so that’s a plus.

However, there are several things that concern me when applying Cross-Fit type programming to developing young athletes and more specifically baseball players.



Phil Loomis

Most young athletes lack foundational strength.

Kids that can barely hold themselves up in a basic push-up or lunge are being tasked with highly technical lifts and explosive movements. Young athletes with poor posture, limited joint mobility/core stability are being subjected to high volume (lots of sets and reps) training programs that overload their already weak and under conditioned bodies.

Just like with throwing or hitting, it's important to do things RIGHT before even considering doing them A LOT.

The movements place a lot of stress on the wrists, elbows and shoulders. For that reason alone it's not a good fit.

And it's not just the stuff that is included in these workouts that can be problematic it's the stuff they are leaving out.

A rotational sport like baseball requires a lot of dedicated work to address the small hinges that swing big doors. Qualities like thoracic spine mobility, hip mobility, rotator cuff strength and function, anti-rotation core strength and opposite side rotation are essential for enhancing on-field performance and more importantly ensuring the athletes can play consistently and not sitting out due to nagging injuries.

I would go so far as to say programs like Cross-Fit are not workouts at all. They are practices. They make you better at Cross-Fit. It's a competition!

Just like baseball is a competition and you use batting/fielding/pitching practice to improve your skills so that you can improve your on-field performance.

I'm all in favor of athletes trying different sport/competitions but for competitive baseball players Cross-Fit type workouts just aren't a good fit.

Instead of enhancing performance most popular fitness trends will push athletes closer to the brink of injury, while reinforcing poor movement quality and joint mechanics especially in the case of one-side dominant, single sport, rotational athletes (baseball, tennis, quarterback).

I see baseball players being exposed to programs that are inappropriate due to lack of specificity (Cross-Fit, Football programs). Or training modalities that actually hinder athleticism (body-building, long slow distance running) or workouts that amount to little more than a glorified warm-up routine that doesn't meet the complete needs of what should be explosive/powerful athletes (band programs).

The answer is finding a conditioning program that meets the unique needs of the modern baseball athlete. They don't need to be pampered but they also should not be hammered. A training program, should boost athletic performance and not teach a kid merely how to survive a workout...

I developed my program Forever Fit over 15 years ago to meet then needs of all developing young athletes. To give them what they are missing out on due to lack of free play.

In the last 5 years I have been working hard on developing Baseball Fit because this generation of baseball athlete needs what it provides. Modern baseball athletes need something that counteracts the unique demands of their sport while also providing them with the crucial athletic growth they need to realize their full potential on the field of play and in the game of life. O

Contact Phil at: Philloomis@yahoo.com

Opinions of this guest editorial are solely that of Phil Loomis and not the publishers of Performance Conditioning Baseball/Softball.

Correction: In the article last issue Recovery in Baseball: Reducing the Ins and Enhancing the Outs by Nate Shaw, ATC; CSCS; we have the following correction:

There are also improved supplementation and anti-inflammatory supplements are now NSS certified. It should read: "supplementation and anti-inflammatory supplements are now NSF certified." We apologize for the error.

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