

Sports Vision – A Critical Skill For Pitchers

Collegiate Baseball, October 2002, - The Business Of Baseball Training

John Pinkman with guest columnists

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“Vision Training in baseball in this decade will be what strength conditioning was to the 90’s”, John Pinkman

Safety, as pointed out in several Collegiate Baseball articles last year, is almost always seen in regard to protecting batters. Profitable aluminum bats continue to anesthetize batters into believing they are better hitters, regardless of the danger to pitchers. Assuming pitchers will not wear protective headgear and aluminum bats will continue to launch rockets, consider this:

A pitcher is 50% closer to the batted ball than the 3rd baseman playing at regular depth. We used to call 3rd base the “hot box”. This position requires excellent 1st step quickness because of the speed at which balls are hit and the short time the player has to move to catch them.

When a pitcher extends his body down the mound (which by the way, often resembles the crater-like surface of the moon), landing on one leg, he ends up at approximately 51 to 53 feet away from the batted ball. Everyone who has used a professional radar gun has seen the high speed of the ball leaving the bat. Many times it is higher than the incoming pitch velocity.

But, the pitcher is not in the same secure fielding position as the 3rd baseman, poised with a firm body core foundation and ready to spring into action, eyes fixed like a laser beam on bat/ball contact, with the added advantage of a side angle to anticipate the impact vector.

In addition to balanced follow through mechanics, pitchers need vision training. What a radical concept, especially when the sport has yet to discover and embrace vision skills for hitters and fielders. Pitchers must utilize a variety of vision skills that impact their concentration, fielding, and decision making while on the mound.

You may remember my (Pinkman’s) disappointment when the majority of coaches attending last year’s ABCA conference left my co-author’s lecture on vision – only to return en masse to the very next session on “How to Hit a Curveball”. The first words out of Joe Barth’s mouth on hitting were related to the vital importance and priority of visual pitch recognition (*“Hold on, John, as a pitching coach, do you really care about batters hitting better?”*)

Here are the facts:

At 90 mph a stationary batter on flat ground, trained to eliminate head motion, with a requisite dark green background in center that creates maximum contrast, has 2/10 second to recognize

the pitch and determine its speed at the plate and bat on ball vector. Then he has 2/10 of a second to execute a swing.

Now place yourself in the position of the pitcher – hurling down the surface of the mound. What is the background? Is your head level to the horizon? Are you perfectly balanced? Are you able to field the ball? Can you even see it? Can you at least protect yourself? Remember, you are 50% closer to home plate than the 3rd baseman.

The traditional solution dictates more physical practice, i.e., more ground balls, hard work and sweat. But, when are we going to learn that the amount of practice time alone does not ensure quality performance? Developing visual skills and integrating those skills into game performance will enhance quality performance – not to mention SAFETY.

We are not talking about correcting pitchers to 20/20 eyesight. Yes, pitchers are required to “see” the catcher’s signs and recognize signals from the dugout. But this is just one element.

The ability to see clearly and focus up close or at a distance is referred to as “acuity”. Vision skills are an entirely different subject. Vision skills require acuity plus much more. While eyesight or “vision” is the foundation of your visual system, there are other factors that contribute to how athletes see.

Here’s the thing – the results from a computer are only as dependable as the quality of the input.

Consider the other components of the visual system that all athletes must possess - visual skills. Visual skills such as depth perception, efficient eye movement, focusing, peripheral vision, and hand-eye coordination, are just as important as your eyesight. Visual skills are a critical portion of an athlete’s make up and are frequently what differentiate players of equal size, mechanics and motivation. It is a well-known fact that superior athletes, like the best hitters in baseball, have these superior visual skills. After all, “the eyes lead the body”.

So, if our objective is to “create” superior pitchers, why not focus on their visual skills?

At the College Pitching Coaching Conference, Dr. Seiller presented statistical data revealing a trend that good pitchers possess good visual skills, and that there is a relationship with a better win-loss percentage. **That information can be found at www.vizualedge.com**

Here’s how efficient visual skills help a pitcher on field:

Self Defense - A line shot back at your head/body - you need excellent eye tracking skills, recognition, and depth perception to avoid or field the ball. (or you could depend on good luck)

Controlling the running game - Good peripheral vision is necessary to watch the runner and continue to fixate on the plate.

Backing up bases– Do pitchers often back up the wrong base? To know which base to back up, you must be able to visually calculate the distance the ball was hit, its speed, and the angle of attack, foot speed, and arm strength of the outfielder. All of which must be compared to the speed of the runner.

Concentration - There is a visual component to concentration. "Visual noise" or extraneous visual stimuli can distract pitchers, causing them to inaccurately process information. A loss of concentration can impact pitch consistency.

Scouting - Re-creating ball location on pitching charts. All of the tactical information captured on the charts is based on where the ball was caught. Pitchers sit at least 60 feet away from the plate doing charts. Seems to me we have questioned the visual skills of a gentleman much closer.

Fielding - Fielding a bunt requires efficient and accurate binocular eye movements to field the ball. The pitcher must shift his gaze quickly, and assess and process visual information, i.e. location of the ball, the speed of the runner, and the distance to the bag. His eyes and subsequent body commands must converge to the ball. Then he must stop, spin, stand and visually diverge at a much greater distance.

Visual skills and abilities can be evaluated, taught, trained and perfected. A number of Major/Minor League Teams (Cleveland, Milwaukee, Chicago) as well as university programs, like Georgia Tech, have begun to evaluate and train these visual skills, utilizing new technology in order to improve their athletes' performance on field. A new tool that is available to evaluate and train these visual skills is the Vizual Edge Performance Trainer™. This interactive CD-ROM vision performance program will operate on a desktop or laptop computer and was designed to offer easy access to this type of technology. A demo version is available to team coaches upon request.

So, where does the future of baseball performance lie? Will it be in a greater trampoline effect off the bat or in more supple leather for the glove? Will new shoes create more speed? Will we train our bodies more efficiently without introducing artificial stimulants and steroids? Or will baseball travel into the future with greater human skills? Will we manage the mental and emotional stress of the game and travel? Will we tune peak performance through natural sports nutrition? Are we professional enough to see a healthy future and preserve the integrity of the game? How quickly will we "see" the obvious benefits of visual training?