

**A COMPREHENSIVE PLAN FOR THE
ADVANCEMENT OF YOUNG
PITCHERS**

DEVELOPING PITCHERS

When coaching hitters, mistakes in technique will not physically harm them. When coaching pitchers what you don't know **can** hurt them. Poor mechanics can cause injuries down the road and it is our belief that all coaches and parents should make themselves as well informed as possible. Correcting poor mechanics should be a priority for a pitching coach.

In this document we will cover the latest information on:

- How to build a Productive delivery.
- How to protect your pitcher.
- Functional Strength.
- How to Monitor Pitchers in games.
- How to get hitters out.
- The strategies of pitching.
- The Mental Side of Pitching.
- Mound Demeanor.
- Goals
- “Real World Examples.”
- Pitching from the stretch.
- Drills

¹HOW TO BUILD A PRODUCTIVE DELIVERY

The following is a pitching delivery that not only will help pitchers with control problems and will help reduce the risk of injury. We recommend teaching this to all pitchers young and older, especially older pitchers with arm problems. It is an easily repeatable motion using as little wasted movement as possible. A compact delivery is desirable.

General sequences, techniques and principles:

1. Proper vision and focus.
2. A good breathing rhythm for relaxation and muscle strength recovery.
3. Good balance, upright posture and control of the body throughout the entire delivery.
4. Proper alignment and direction of the stride leg, shoulders and throwing arm.
5. Transfer of weight, properly timed.
6. A good continuous rhythm without maximum effort.
7. Rotational forces (angular velocity) of the hips, torso, shoulders and arms.
8. A continuous efficient and repeatable arm action into the cocked position through acceleration and release.
9. A long smooth arc of deceleration of the upper torso and throwing arm.

Specifics

Stance: Balanced and relaxed. Focused on pitch location.

Rocker Step: Short, soft step back, head still. Moving the head may cause a problem with balance.

Foot Pivot: Posting foot pivots forward and parallel in front of (not on top of) the rubber.

Leg Lift: Rotates (Closes body), lifts a flexed knee pointing to 3rd base. (RHP)

Posting Position: Good posture and balance, stands tall, keeps weight back, hip and shoulder joint aligned to the plate.

Transfer of Weight: Leads with the front hip (lower body) and speeds up stride. As the front leg lowers the front hip opens. It is important that the pitcher keep the front shoulder closed until after landing.

Hand Separation: As the leg lowers the hands separate above the belt and along the mid-line of the body.

Stride: Direct to the plate, move down and out and work for a long stride.

¹ Bill Thurston- Head Baseball Coach Amherst College

Stride Foot Position: Land flat-footed on a strong stable base, toes pointed inward slightly. The pivot foot heel will be rotated upward freeing the backside.

Backswing: The hand breaks out of the glove and goes down, back and up staying aligned with the shoulders toward the plate with the fingers staying on top of the ball.

Posture: The pitcher's posture should not up or down, left or right into landing. If the posture is straight at windup it should remain straight all the way to landing. (No "Drop and Drive.")

The Cocked Position: As the stride foot lands both elbows should be flexed at shoulder height and aligned to the plate. The palm of the throwing hand should face the SS (RHP) and be closer to 3rd base than the elbow with the wrist extended. The posture should be upright, balanced with the chest thrust out, the head in the top center of the triangle. The lead elbow is flexed with the glove down under the elbow and aligned to the plate. The stride foot points toward the plate and allows for a stable foundation.

Lead Arm: The angle of the lead arm at landing should be a duplicate of the arm angle of the throwing arm. The glove is down at landing but it swivels up and remains in place as the body glides to the glove.

Arm Acceleration and Release: The most efficient and least stressful arm slot during acceleration and release is a 45° angle as the arm extends. This angle creates rotational, forward and downward forces. The wrist goes from extension to flexion on ball release and on the fastball the fingers should stay behind the ball.

Arm Deceleration: To reduce stress on the spine, back and posterior rotator cuff muscles, the pitcher should finish with the head and shoulders down outside of a braced stride leg. The arm should finish with a long smooth downward arc of deceleration outside the stride leg.

Follow Through of the Body: Some pitchers generate so much rotational force that they have a difficult time getting their body back in control to defend themselves or field their position. Experienced pitchers learn to stay within themselves and pitch with 90-95% physical effort. The more efficient their mechanics, the more control and less chance of arm injury.

PROTECTING YOUR PITCHERS

Anyone who has participated in baseball, whether as a player, coach or parent understands the enjoyment and inherent merits of this great game. It is the very difficulties and skills required to play at a proficient level that give baseball much of its appeal and enduring qualities. Succeeding at something that is difficult is very rewarding.

Baseball is also a developmental game. It takes years to master many of its skills and players must come to understand that fact. Even at the professional level learning must come in stages.

Baseball also requires a controlled mental state with an understanding of the failures that will come with a long season.

Baseball Excellence believes that development should take precedence over winning. Appreciating the beauty and symmetry that comes from playing baseball is rewarding even if your team sometimes loses a game. The importance lies in the game itself and players should eventually come to learn that simple fact. Parents and coaches should teach respect for the game.

Playing baseball and competing against other teams should be an enjoyable experience. The 'win at all costs' philosophy is a non-productive approach. This "results-oriented" mindset will usually stunt the growth of young baseball players. It is also responsible for many youngsters prematurely leaving the game.

We have talked about this subject so much on our web site that in the interest of brevity we came up with an acronym for this philosophy. We call these coaches **EROC**- End Results Oriented Coach (or Coaching). This is a philosophy that embraces only Winning and does not take into consideration teaching the necessary skills that allows players to advance. This serves the ego of the coach but does not serve the development of the player. EROC may appear to have the advantage in many youth leagues but as players advance this philosophy fades away, unfortunately along with many players.

We believe that development will lead to winning and is the best long-term approach. Coaches who know the game can make every pitch a learning experience and happily offer knowledge to their players.

The EORC approach may work in other sports. It does not work in baseball. Football is a sprint; baseball is a marathon.

Pitching is a large part of baseball and out of all baseball injuries the pitcher statistically loses the most playing time. We believe that the concerned coach and parent want to become informed about the causes and prevention on arm injuries. However the rise in reported injuries reveals we may not be paying attention to the data.

The medical evidence certainly supports a wise and cautioned approach to the development of pitchers. Is the all-too alluring specter of “Just Win Baby” overshadowing common sense? It is when winning supercedes development that young pitchers are put at risk.

If your child’ arm ends up hurting after a weekend of pitching, he may have more than a sore arm. It could be a more serious growth-plate injury.

Growth plates are areas of developing tissue at bone ends that regulate and help determine the length and shape of the mature bone. Growth plates are also the weakest areas of a youngster's growing skeleton.

The growth plate is the last portion of the bone to ossify, or harden, and until that happens it's weaker than nearby ligaments and tendons. An improperly treated growth-plate injury can lead to long-term consequences, including bones that are crooked or too short.

All of our bones form from cartilage scaffolds beginning before birth, and continuing to the ages of about 16 years old in girls and 18 years old in boys. These growth plates of cartilage provide the length and shape of our eventual adult skeletons. Unfortunately, they also represent the weak link in our bones while we are growing.

Sprains or stretching of ligaments are less common in growing athletes than adults, and too much stress on the wrist, elbow or shoulder may result in a break through the cartilage, growth plate and bone. The breaks can follow a variety of patterns. Many can be successfully treated with casting, but often to get the breaks very well aligned, the fracture must be set back in place at the hospital in the emergency or operating room. Occasionally, the breaks must be held in place with metal pins, which are removed after healing.

Although the vast majority of breaks heal in 1-2 months, the growth of the bone must be watched closely for up to a year with exams and x-rays to ensure the bone continues to grow, and especially to ensure it grows straight. Severely damaged growth plates can result in shortened or crooked bones and deformed joints. Fortunately, if these problems are detected and treated early, the potentially negative long-term complications can be minimized or avoided.

There is a startling statistic that over 60% of youth pitchers do not go on to pitch at even the high school level or beyond. The reasons are overuse, poor throwing and pitching mechanics and injury. As a parent I would not want this to happen to my child.

Hopefully this resource will better educate with the idea of creating a healthier baseball environment for their children.

ARM INJURIES IN PITCHERS

It seems the arm (shoulder and elbow) injuries are rising instead of decreasing. In fact it is seen as epidemic in certain parts of the medical community. Bill Thurston (Head baseball coach at Amherst College and on the faculty at ASMI) lectured on the common causes of arm injuries in young pitchers.

This is from ASMI's (American Sports Medical Institute) data collected by treating and rehabbing hundreds of pitchers.

Common Causes

- **Lack of a long term throwing and conditioning program.** Youth coaches ignore this "big time." There should be (at least a month) of progressive throwing before pitching in games. The real question is do you know of anyone who does this? Or do they just take the practice field and start pitching?

Preparing the arm to pitch is very important. This pre-season throwing program should include stretching, form running and throwing short to long; increasing the distance throughout the off-season. This 'long tossing' is very important in terms of gaining arm strength and endurance.

I can't imagine anyone who would ignore this vital aspect of warming up to pitch; or play (position players) for that matter. In fact long tossing should be done before every practice and every game. During the season you may want to put a limit on the distance your players throw, but throw at least 120 feet.

- **Over Use-**This is caused by throwing too many pitches in one outing. This can cause throwing with arm fatigue.

Pitching when the arm is 'tired' exponentially adds risk to the pitcher. Two years ago ASMI presented evidence that for every pitch a fatigued arm threw, add three pitches to his count instead of one.

Pitch counts are vital. You have heard us speak of this over the years and you ignore it at your pitchers' peril. It is real.

Arm injuries of course don't usually exhibit during a youth coach's tenure. They happen later in a pitcher's career; high school or beyond. This is the insidious nature of the problem. It is hard to blame the youth coach because his pitcher leaves his tutelage in a healthy state. You must pay attention to pitch counts, not innings pitched.

"Just one more inning, coach." "No son, you've reached your limit. Have a seat." Have the integrity to say that and help your pitching staff to advance injury free.

- **Overload-** This is pitching without enough recovery time. Causes may be:

1. Playing for more than one team during a season. This is common but absolutely should be avoided.
2. Too many starts in one week. (Once again innings pitched should not be the measurement.) Pitchers must have rest to allow time for the arm to heal.
3. Too much pitching in the off-season. A kid pitches in 15 games in the spring, 15 games in the summer and 15 games in fall ball- too much.
4. Lack of an arm maintenance program between starts.

There are a certain number of kids who throw very hard for their age. This elite group is subject to what we call the **Pitchers Paradox**. A kid throws very hard and so he is used too often. (More than the other pitchers on the staff.) Because he throws hard he puts more stress on his pitching arm and is at increased risk for injuries.

A kid like this is a perfect candidate for an **Overload** injury.

- **Improper Pitching Mechanics-** The body is not put in an optimum position during portions of the pitching delivery; poor arm or head alignment, landing too closed or too open, making changes in posture, flexing the trunk too early or too late, cutting off deceleration.
- **Over-Exertion** of the pitching arm. This comes from a pitcher attempting to throw 100% all the time.

This practice is not healthy. A pitcher should find the point where he can throw hard and still throw strikes; somewhere around 90% effort. To go up on the mound and throw at full effort on every pitch will cause a pitcher to tire easily and early.

When Do These Injuries Occur?

- **Pre-Season or Early in season**
 1. Throwing too hard too early. This is where the progressive throwing program comes in. Gradually get your pitchers up to speed.
 2. Learning new pitches and using improper techniques. Position of the hand, ball release, deceleration and mechanics all come into play while learning a new pitch. Make sure the coach shows all how to throw a pitch properly.
 3. Various muscle groups not properly conditioned. Train for balance as well as strength. If you train one group of muscles in your throwing arm, train the same group in the non-throwing arm- balance.
 4. Not enough arm recovery time. In the pre-season there are defensive drills that must be learned, working on various pitches or throwing batting practice. Use common sense and don't let your pitchers overthrow. For example during PFP they can shadow pitch to the catcher, they can work on different pitches at less than full effort and they can be limited to the number of batting practice pitches.

- **Late in the season-** you have overload. Not enough recovery time between games, practicing and playing other positions, lack of arm strength and long-term stamina and muscle fatigue can lead to strains.
- **On One Pitch-** you've hear pitchers say, "something snapped" or popped. This can be due to improper techniques during the release or deceleration phase, over-exertion on one pitch or fatigued throwing muscles that cannot prevent over-extension of a joint.

Where In The Pitching Motion Do Most Injuries Occur?

Most arm injuries occur during the **acceleration, release and deceleration** phases of the delivery.

Faults and improper technique are often the origin of injuries and they occur in the arm action (backswing) and cocking phase (position of the body at foot plant).

Let's explore **Mechanical Faults** that often cause arm injuries;

Injuries To The Shoulder

- Early external rotation of the shoulder. (Can effect Shoulder capsule and labrum) This can occur if the hand swings too close to the head during the arm action phase of the delivery.
- Elbow too high during the cocking phase. (Can effect the labrum) The arm should be at shoulder height- not below or above.
- Elbow and hand too low during the cocking phase. (Can effect the anterior capsule and biceps tendon) This is more common than the arm being too high. Very important for pitching coaches to observe this part of the delivery. Keep that arm shoulder-high.
- Long (stiff) arms in the cocking phase. (Can effect anterior shoulder muscles) We've all seen pitchers who do this. Their arm travels down, back and up but the arm remains fully extended as it reaches shoulder height. This is at foot plant and the arm at that time should be set in the throwing angle.
- Front side flies open too early-the throwing arm drags. (Can effect shoulder and elbow anterior shoulder muscles.) It is important for the pitching coach to make sure the front shoulder is pointing at the catcher when the front foot lands.
- Cuts off full deceleration. Does not let the arm travel outside the front knee. (This can affect the posterior rotator cuff muscles.)
- Lack of proper torso flexion. The body finishes too upright or the body recoils. (Can affect rotator cuff muscles.)

Faults That Add Stress to the Elbow

- Over-exertion- 100% effort. The elbow hyper-extends and/or the arm muscles become too contracted or tight.
- Early pronation of the wrist and arm. The thumb turns down too soon as in a screwball. This not only adds stress to the elbow but to the shoulder as well.
- Common faults when throwing the **Curve Ball**.
 1. Improper position of the wrist. The hand is turned inward.
 2. Hand under the ball, low elbow. This can happen if the pitcher turns or twists his wrist. This is very stressful and should be avoided at all costs.
 3. The hand and arm are too high. The pitcher stiff arms during acceleration and release.
 4. Over extension of the elbow during release and deceleration. This is the karate chop type of motion where the elbow is full extended. It is preferable to throw the curve ball at a 1-7 o'clock motion. (A clock behind the catcher.) This allows the elbow to nestle into the pitcher's side instead of fully extending.
 5. Over-exertion. Trying to throw the curve ball with too much velocity. It should be understood that the curve ball is a rotation pitch, not a velocity pitch.
- Common faults on the **Slider** release.
 1. Improper wrist position during the arm acceleration. Do not supinate the wrist as in a curve ball.
 2. Twisting the wrist during release.
 3. Stiff wrist at ball release.
 4. Improper angle of deceleration. The arm cuts across the body.

The arm was not meant to throw a baseball repetitively at 85-90 mph. The greater the effort, the greater the arm and hand speed, the more improper throwing biomechanics the greater chance of pitching arm injury.

As coaches and parents, take the time and effort (it takes both) to teach proper throwing mechanics, proper conditioning and proper warm-up procedures.

Warm up (stretch) to throw. Do not throw to warm up. Develop sound routines in these areas and you will give your pitchers a better chance at success.

COMMON ARM ACTION (THROWING) FAULTS

12-15 years

Hand Separation Faults

- Rolls the hand under the ball. The hand is out of position in the cocking phase.
- Wrist hooks. The hand drags up and is out of position in the cocking phase.
- Wide hand separation. (Out away from the body) This will cause poor arm alignment in the backswing.
- Brings the throwing hand straight back. This can be a sign of early fatigue.
- Separates the hands too low. This can cause a stiff arm action.

Proper Hand Separation Action

Hand separation occurs as the stride leg begins to lower. The hands should break apart on the midline of the body between the chest and belt. They should be relatively close to the body-6-8 inches.

The fingers should remain on top of the ball (thumb underneath) and the hand swings in a down-back and up arc into the cocked position. The elbow flexes as the hand comes upward keeping the hand and arm aligned with the shoulders.

Lead Arm Action Faults

- Dead front side. The lead elbow never comes up to shoulder height and is not aligned to the plate. This can inhibit rotation.
- Glove swings in an arc across the body causing the front shoulder to fly open early.
- A high glove can cause the throwing elbow to be too low and the pitcher throws in an upward plane. The lead and throwing arms should mirror each other.

Good Lead Arm Action

As the pitcher strides to the plate the glove and lead elbow come up to shoulder height and are aligned to the plate.

At foot plant the arm angles of both arms should be identical. This is the angle at the elbow.

Cocking Phase

At foot plant the arm of the throwing hand should face the SS (RH Pitcher) and be closer to third base than the elbow. The wrist is extended, not flexed down.

The posture should be upright and balanced. The chest is thrust out and the head is at the top and center of a triangle. The stride foot point toward the plate (closed about 5°). This creates a stable base. Stride length should be about 90% of height.

Youth Mechanics

What do we look for in this group- 8-12? What should we emphasize as to proper mechanics?

We know that by **changing certain flaws** we give our young pitchers a better chance of a healthy career.

Here are things to look for; things we feel are very important in young pitchers.

- Does the pitcher **lead with his hip**? Many youngsters don't and that will contribute to a poor cocked position. (The foundation from which the pitcher throws.)

By leading with the hip we mean that from the balanced position his next movement is a slight push outward with his lead hip before his front leg goes down the mound. This will help prevent rushing and gives him his best chance of landing properly.



At front foot contact the front shoulder is closed and the arm is at shoulder height.

- Is his hand on top of the ball? This should start in the glove and remain on top all the way to release. (Taking into account external rotation- the fastest human movement and something we can do nothing about.)



EXTERNAL ROTATION

The pitcher cannot feel the arm going into external rotation so the “teach” is to have him keep his hand on top of the ball the entire time- from glove to release.

Still pictures like this one have been the culprits in causing confusion in some coaches and parents. Just remember- this human movement is too fast for the naked eye.

- At foot contact is his arm (and elbow) at **shoulder height**? This is important not only for health but allows the pitcher to throw on a downward plane- a pitcher’s best chance for success. This is really a product of timing so that the front foot lands at the same time the pitcher is ready to throw.

Leading with the hip to prevent rushing will help the pitcher reach the desired height. If he still has trouble work with him “hands on”.

- Is the lead shoulder closed at foot contact? You all know the importance of this in terms of health and ball movement.

When the front foot lands, the front of the front shoulder should be pointing directly at the plate, not even one degree open.

- Does the stride foot point toward home plate at foot contact? There is some latitude here but we don’t want the front foot pointing directly at the plate. The foot should be slightly closed- approximately 5°. Too open and the front shoulder will have a tendency to open early. Too closed and hip rotation will be reduced.

There is latitude for a pitcher to have his own “style.” But if you teach the above proper mechanics your young pitchers will do well in terms of health and performance.

FUNCTIONAL STRENGTH

Okay, we're doing everything we can to improve our pitching staff and keep them healthy; not just while they play for us but long term as well.

We're paying attention to pitch counts, enough rest and proper mechanics. Now let's look at strength.

For baseball pitchers, doctors, physical therapists and trainers agree on functional strength over bulk strength.

“Functional strength training refers to specific exercises that most closely replicate and enhance the activities you want to do outside in the three-dimensional world. Training legs by doing hamstring curls and leg extensions is not "functional" because unless you are kicking very heavy footballs or lying prone on a gurney resisting a doctor, the machine movements do not replicate any actual sport activity. You get more functional strength performing squats, dips, step-ups, or walking lunges that challenge the whole body to control and balance the weight in three-dimensional space, than by letting the machines do all of that for you.”²

Functional strength also includes exercises that enhance coordination and balance. Functional strength training means performing work against resistance specifically in such a way that the strength gained directly benefits the execution of movements associated with your sport.

Trainers should teach movements with an emphasis on total body coordination **before focusing on increasing loads**. Because functional strength training has to teach the muscles and neurological system to react to each other as they do in everyday activities, it is essential to train clients to move as if they were performing the goal movement. Teach the initiation of movements from the legs, transfer of balance, stabilization of the trunk and control of the arms, just like they are utilized in the sports movement. Add weight slowly and without compromising the overall coordination of the movement.³

- Use a variety of weight training methods such as free weights, body weight, medicine ball and surgical tubing exercises.
- Avoid pressing movements with heavy weights.
- Train your lower body with heavier weights.
- Train your upper body with lighter weights.
- Never forget to train the core of the body (hips, buttocks, lower back).
- Strengthen your rotator cuff muscles using light (3-5 lb) weights.

Your aim with baseball training is to build functional strength. Baseball requires that you to stop, start, and explode. It's a sport dependent on explosive bursts of power, and reactions.

² Doug Schurman, MBA, CSCS

³ Christine Cunningham MS, CSCS

You must train your body to be strong at a variety of angles and planes. Every player bends, twists, and throws. The number one way to gain functional strength for baseball? **Play the sport and train the skills.** If you are an infielder take hundreds of ground balls. Take hundreds of swings with the bat.

It must be said that in performing these skills, correct technique is essential. Good coaches excel in helping players with technique.

Form Running

You've read in our Newsletters and Tip of the Week about our adherence to Form Running for years.

Form Running is the perfect method to use as part of a functional strength program. If you are not doing this before every practice and every game you are cheating your players in terms of baseball growth and development.

Done correctly Form Running will take a lot out of your players. (Especially the first few times) We chronicled a high school kid that had never done these exercises and he had to throw up after his initial run through.

Form Running is done as follows with strict attention to correct technique:

- Run in groups of three or four and watch your players closely.
- Run 60-70 feet down and back.
- This is team time. No stragglers or shirkers.
- Have your players pick out a spot on the fence and watch that as they go through these exercises. This keeps them in line.
- These exercises are not a race. Don't let your players try to speed through them and ignore proper technique.

We execute Form Running this way:

- **Secondary lead and steal** - $\frac{3}{4}$ speed.
Take 3 shuffle hops and run. Everyone faces the same way. This is a daily drill that reinforces an important base running skill.
- **Side shuffles**- Face the same way. Shuffle, don't hop sliding heel to heel without clicking the heels. This works the hip flexors and groin.
- **Karaokes**- Facing the same way run sideways with a step over the leg and a step behind. Move the arms and remain erect. You may do walking Karaokes, taking long strides, regular speed Karaokes and very fast Karaokes moving the feet through the routine very rapidly.
- **Power Skips**- Like a regular skip except that the emphasis is on a power movement up. Again this is not a race where the players go skipping through the petunias. It is a

power push UP. Put a lot of air under the feet and pump the arms in conjunction with the opposite leg driving up.

- **Butt Kickers-** in a normal running position take short strides trying to bring the heels into the rear with each running step. This is not a race forward but done correctly it looks as if the players are almost running in place.
- **Backward Run-** run backwards, lean forward and extend the legs out with each stride. Don't look back; look at a point on the fence ahead of you. Because we do so much running forward the Runs Backwards adds some balance to the legs. (Over the years we have never had pulled hamstrings.) We think the Runs Backwards has some influence on that. You can add this exercise onto several of the others on the way back to the starting line or you can have the players perform one exercise and halfway change it to runs backwards.
- **Walking lunges-** These are real butt busters. They are done like lunges in strength training except go the full 60' staying low without coming up or resting the arms. Weights are not needed. You will hear plenty of groaning initially.
- **Bebop-** This is a skip and hop on the same foot, alternating feet. The players should be very loose. You will find your athletes here.

Our video **The Complete Baseball Practice** and our **DVD Pitching-Position One** cover Form Running.

We hope this has sharpened the awareness of parents and coaches as they guide their charges toward a healthy enjoyment of baseball.

GAME DAY CHECKLIST FOR PITCHERS

Coaches, it is good policy to have a checklist for your pitchers as the game progresses.

You can have a mental checklist or you can write it down on an index card. List things that will have a good chance of success if your players execute them. And list mistakes that happen in the game.

Writing things down also will give the coach good ideas for a post-game talk. I know of one highly successful high school coach who carried a small tape recorder with him, made comments into it as the game progressed and played it for his players after the game.

If you want your players to keep improving take that suggestion to heart. Remember that baseball axiom, **“If you’re not getting better, you’re getting worse.”**

It is vital that players continue to improve throughout their baseball careers. Baseball has a way of setting aside a player who doesn’t improve.

Pitcher Checklist

- Is he getting **strike one** with regularity? This is one of the most important weapons a pitcher has at his disposal. It opens up all his other pitches and locations and keeps the batter on the defensive. You would like your pitcher to get first pitch strikes on 8 out of 10 batters.

First pitch strikes give the pitcher a chance to go 0-2. With 0-2 you can waste a pitch. (Not really a waste but a pitch outside the strike zone that has a purpose; for instance up and away to change the eye level of the batter.)

First pitch strikes help keep the pitch count down. The pitcher is in a favorable position with strike one as opposed to ball one. It forces the batter to swing at more pitches because he is behind in the count. The ball is put in play and the pitch count stays low. It is an offensive count for the pitcher and a defensive count for the batter.

Strike one pitches don’t all have to be fastballs. A pitcher can throw a first pitch breaking ball for a strike to a good hitter. But keep in mind that everything a pitcher throws comes off his fastball. It is his number one weapon.

- What is the pitcher’s **demeanor** in tough situations? The ideal is for your pitcher to remain in control in all situations. In fact, opposing teams should not be able to tell if a pitcher is winning or losing.

My son, Stephen once pitched in a high school playoff game and he was behind the entire game until the end. He told me, “Dad I thought we were going to lose the game 2-1.”

The point is he pitched the same when he was behind as when he was ahead. Knowing he might lose the game made no difference in the way he acted. Coaches, take a lesson from that. Positive mound demeanor is very important for your pitcher. Your team responds to positive mound behavior in an affirmative way. On the other hand the opposing team draws encouragement from a negative mound demeanor.

- Is he **fielding his position**? When the baseball is released the pitcher becomes another infielder and he will usually get a play or two in every game. He **must** make those plays. They are typically only routine plays but can really affect the outcome of the game if not handled properly.

Look at errors in these situations as a coaching shortfall. Did you as coach give your pitchers enough repetitions in Pitchers Fielding Practice? Did you teach proper technique? Did you correct on the fly during practice?

The following plays are all very simple and should be covered in PFP. They are:

1. Covering first base on all ground balls hit to the right side of the infield. Don't forget it is the catcher's responsibility to call out loud and clear, "Get over there!"
 2. Comebackers with no one on base. He must field the ball, get a four-seam grip, set his feet and throw a strike to the first baseman. Mistakes here are made because the pitcher threw flatfooted or rushed the throw. As Roy Campanella once said, "You know you can't outrun that ball." Take your time.
 3. Comebacker with a runner on first base or first and second. This is an easy 1-6-3 double play and it should be made every time. Coaches, demand perfection on this play in practice. Mistakes to look for are not closing off the glove-side shoulder, not moving the feet and hurrying the throw (usually resulting in throwing from a low arm slot and the ball sails). Also the pitcher must have in his mind where he will throw the ball with runners on first and second. He should not try for the lead runner here. He should throw to the SS to begin the double play. Do not even practice throwing to third. Even if you are successful you probably won't be able to get the DP.
 4. Bases loaded comebackers. The ball should immediately be thrown, chest high over the plate to the catcher. Mistakes here are usually mental. The pitcher didn't run the scenario in his mind before the pitch. This is a mental toughness issue and should be discussed after the game.
 5. All bunted balls. These are all routine and are dependent on the pitcher's athleticism, technique and mechanics. (Does he have solid mechanics in that he is facing the catcher after ball release? If he falls off one side or the other of the mound he will not be able to field all bunted balls. The opposing team will easily see that and you can be assured they will bunt on your pitcher.)
- Is he throwing on a **downward plane**? Typically this is measured by the number of ground ball outs the pitcher gets. The 2-seam fastball, coupled with the pitcher throwing with his elbow shoulder-high and keeping his fingers on top of the ball will usually produce good results. Pay close attention to the hand arm and elbow. This is an

indicator that he is not only throwing properly but it will often drop if the pitcher becomes fatigued. If his arm drops his pitches will be “up.”

We try to have our pitchers all throw the 2-seam fastball at the knees. The only time we throw the 4-seam fastball is when we want the ball up, above the hands. With the 2-seamer you sacrifice a small amount of velocity to get more movement- **down**.

- Is he throwing his **change up** for strikes? This allows him to throw the change up when behind in the count- a particularly potent weapon. What better time to throw a change than when the batter is expecting a fastball?

Those of you who are former subscribers to our newsletters know we prefer the pitch on a 2-1 count to be a change up, especially to good hitters.

Time teaching and reinforcing this pitch should be in bullpens. But it can also be practiced when in the outfield; throwing change ups to the bagman during batting practice.

- Does he “bear down” with two outs? This is a very dangerous time as many a game has been lost with two outs. It is critical that he be aggressive in the strike zone in those situations. Remind your pitcher to “close the deal.”
- Does he work quickly? Get the ball from the catcher, check the defense, get the sign and throw the pitch. No walking around the mound or other ways of hesitating. The infielders will play better if the pitcher works quickly. Typically if a pitcher hesitates or stalls, the defense will become sluggish and they will be “back on their heels.” Keep the game flowing. Don’t give the offense any extra opportunities to beat you.

MONITOR YOUR PITCHER

The pitching coach should observe his pitcher carefully during the course of a game. Since the game is played one pitch at a time the coach should observe every pitch he throws.

These are the things we look for when our pitchers are on the mound in a game.

- What is his **demeanor**? Is he keeping his poise? Does he display self-confidence? Does he keep that positive demeanor when he gives up a few hits, or his teammate makes an error? In big games is he relaxed? I went to the mound in a championship tournament game this past summer after our centerfielder committed an error allowing two runs to score. Our pitcher had lost his focus and was lamenting the error. His eyes were very wide and I could see he was quite tense.

I asked him to hold out his arm and I felt the underneath side of his forearm. It was as tight as a guitar string. Those tight muscles were restricting the flexibility of his wrist, flattening out his pitches and affecting his velocity.

I had him massage it to loosen it up a little and told him to focus only on hitting the glove. To ignore the consequences of the pitch; “Hit the glove.” Nothing else matters.

It is very easy for young pitchers to get caught up in the moment and lose their focus. I saw several instances of it in the LL World Series as well.

When that happens, pitchers lose their ‘looseness.’ (For want of a better word) They have a tendency to overthrow and their fastball flattens out, making it very hittable.

It is the pitching coach’s job is to help keep his pitcher loose and relaxed- often a difficult job in big games.

Humor is a great tool. It can serve to put the moment in perspective and take some of the burden off the pitcher’s shoulders.

I often see coaches take themselves so seriously that all perspective is lost and they themselves become tense and overbearing; as if their actions could control the outcome of the game.

A word of advice to young coaches- “**Act like you’ve been there before.**” Any negative emotions or body language will be immediately picked up by your players. Help your pitcher succeed; don’t hinder him.

- Are his pitches staying **down** in the strike zone? When a pitcher has his mechanics working well, his arm will be up at shoulder height and his pitches will be released on a downward plane. His front shoulder will be closed at landing and he will have good movement on his pitches.

The two most dangerous times in a game is early on and in the later innings. Early in the game he may be overthrowing and his mechanics will break down, - causing his pitches to come up. It is, in my opinion very important for the coach to monitor this time in the game.

Just telling him to get his pitches down will not be beneficial to him. That’s like saying, “throw strikes.” Don’t you think your pitcher is trying to throw strikes?

Look for the root cause and a trip to the mound may be called for. There is nothing wrong in going to the mound early in the game to settle your pitcher down. But have something constructive to say. And say it in a calm, gentle manner. He may just be nervous so remind him to breathe properly.

Even if you pinpoint the cause of his problem and he understands your instruction there is no guarantee he will settle down and be effective. When that happens make a mental note to address the problem for future games.

In the **later innings** fatigue may be the reason for a pitcher to lose his effectiveness. It is important that the coach understand that time in the game as well. Fatigue will cause pitches to come up and lose their effectiveness. Look at his balance point. Is it consistent with his delivery early in the game? Is he rushing, trying to 'get it over with'? Rushing and an inconsistent balance point will impede his regular arm action with the result being a low arm slot. The arm will not get to shoulder height and pitches will be up; either up in the zone making them hittable or up out of the zone.

All pitchers, from LL to the major leagues struggle with release points and rushing at times. If the pitching coach will address them immediately he will give his pitcher a better chance of staying on track.

- Is your pitcher getting **behind** in the count? Is he struggling to get ahead? Consistent 2-0 and 3-1 counts are a recipe for eventual disaster. This may be the result of the factors we have mentioned earlier. Our suggestion is to give him a chance to get back on track but have your bullpen at the ready.
- Does your pitcher show reticence to **throw strikes** after giving up a few hits? It is important for the coach to know the difference between a physical cause and a mental one. After giving up a home run or a big hit does your pitcher come back with strikes or is he inside-outside, off the plate? You are looking for fear; fear and even lack of heart. This is the one time we will visit the mound and be forceful with our pitcher.

First we go through a mental checklist; are his mechanics good, has he been effective earlier, what is his pitch count, does his ball have movement? Fastballs that are "straight as a string" will get hit hard by good hitters.

If we can rule out the physical then we go to the mound to see what our pitcher is made of. Questions we have asked in that situation are: "Do you want to come out of the game? Are you afraid? Are you hurt? Do you realize what you're doing?" "Then it's time for you to grow up and compete. Show me what you're made of. Bear down and hit the glove."

A coach has to have a little amateur psychologist in him. And he has to say these things at the right time and in the right situation; and at the right age. (LL age may be too early.)

I believe that if you have a pitcher with talent but lacking in the 'heart' department it is your responsibility to point it out to him; to help him understand what it takes to compete. This can be shaky ground for a coach so it is important to get to know his pitchers well. Not all personalities will respond to this approach. But a player must learn to compete in order to advance. Successful pitchers must be mentally tough. The coach can help him.

There is an old saying; "Yeah he throws great bullpens but he doesn't do so well when he pitches where the grass grows around the mound."

- Pay attention to your pitcher's **rhythm**, his tempo. It should be consistent throughout the game. We have seen pitchers slow down their delivery in dangerous situations and the results are often poor.

We can recall a playoff high school game where the pitcher lost a game because he slowed his rhythm. Throughout the game his tempo was 1, 2, 3, 4, 5; a nice free flowing delivery.

Late in the game with a runner on third base he pitched from the windup and dramatically slowed his delivery; 1--2--3--4--5.

This inconsistency caused his command to suffer, resulting in two bases on balls and an eventual loss.

His body didn't understand what was happening when he reached his balance point and he couldn't get his arm into his normal arm slot.

Is he doing this from fear or is he thinking too much? The coach should pay close attention to this anomaly, especially at crucial times in the game.

- Is his breaking pitch sharp or does it roll? Rolling curve balls often get hit very hard. Be alert for that fault. The reminders/ cues we use are to tell him to make sure he throws 'over his glove.' The lead arm should be high and throwing the curve over the glove helps it break. The other cue is to tell him to 'see the release of the curve out of the corner of his eye.' This will assure that he will get the pitch down. He might need to be reminded not to slow his arm down as well.

The pitching coach plays a vital role in the development of his pitching staff. Game situations provide a great classroom.

THROW INSIDE

Our observation of youth and high school baseball is that pitchers do not throw inside nearly enough. Those fastballs come one after the other on the outer half of the plate. Fastballs on the outer corner, curveballs on the outer corner, sliders on the outer corner.

Why? Because it is usually easier to get the average hitter out there. But when you run into a team that has been well coached in hitting to the opposite field you are in trouble.

If an observant team (and well-coached teams are observant) sees this pattern of outside pitches they will tee off on them. Getting too comfortable with outside fastballs is a recipe for disaster. It lets the hitter know what is coming next. Hitters love to know what's coming next.

But don't you have to throw hard to throw inside, Coach? Nope. Average velocity can be very effective inside. Many hitters will pull the inside strike foul. That's an automatic strike for the pitcher.

The pitcher just has to be careful he doesn't get too much of the plate. **So he has to practice throwing a lot of bullpen pitches inside.**

Another good reason for throwing the inside strike is that many hitters don't like it in there. It makes many of them uncomfortable. A coach who is calling pitches should be attentive to those things and take advantage of them.

Throw Inside Early. Establish your inside fastball early in the game. Not only does that make you more unpredictable it gives you feedback about what a certain hitter can do with your inside fastball. Did he hit around the ball and pull it foul? Did he flinch and look ill at ease? Or did he keep his hands inside the pitch and rope it for a hit?

Whatever hitters can do with your pitches, it is best to find out early in the game. This gives you a strategy for when you face each hitter in the later innings, perhaps with the game on the line.

Not only is it good strategy to throw the inside fastball early in the game it is good practice to throw inside early in the count. Being unused to that strategy hitters keep looking away and he keeps pounding the ball inside. Then when they look in, throw away. And maybe two or three times a game throw a curve ball on the first pitch.

When you use both sides of the plate you keep the hitters guessing and you have an advantage.

Add "up and in" and you have another weapon.

Jim Stoeckel, former Dodgers coach and scout, said the Dodgers take the approach that the fastball is actually four pitches; in, out, up and down.

(What about a LH hitter? Make a mistake with a left hand batter inside, and he may make you pay. Down and in is usually a left-hander's hot zone. Be careful there.)

Throw inside. You don't have to have a blazing fastball, in fact I think pitchers with average velocity do better throwing inside.

Occasionally you're going to make a mistake and the hitter will rope it but that is no reason to stop throwing inside.

And if you have developed your arm strength you are going to have some natural movement "in" on a right hand hitter. Take advantage of that by throwing inside.

That movement gives you even more of an advantage. You will get a lot of comebackers if your ball moves in and you throw inside. You may hit a batter or two but that's okay.

For all the Atlanta Braves publicity of getting the fastball strike called on the outside corner, they actually throw inside a lot. It's nice to have a reputation for throwing outside when all the while you are getting them out, inside.

Coaches, teach your pitchers to use both sides of the plate. Throw your bullpens with that in mind and get that fastball in there.

REAL WORLD EXAMPLES

For the past two years Coach Jack Grant and I have been working with a group of kids that we took right out of LL at age 13. They are now a 16 and under team.

As a group they have progressed well, but we are having trouble getting consistency from our pitchers.

What is consistency? It is the ability for a coach to be able to "trust the game" to his pitcher. He can expect 0-2 bases on balls in a game and he can expect the pitcher to hit the glove with regularity. That just didn't happen this past fall.

- In my opinion none has advanced to the point that he will be on the varsity this coming year. I attribute this to the fact that this group of kids have had poor or little pitching instruction when they were in LL. The plethora of information on the Internet has produced conflicting opinions which has resulted in confusion. Some of the advice put forth is at best worthless; at worst harmful.

Pitching is a skill that you cannot just leave alone and "let him pitch." It is not a natural skill. Faults may cause inconsistency and even arm injuries.

Jack and I critique the pitchers after every game they play. It seems to boil down to two different problems; too many bases on balls and being "afraid" to throw strikes in critical situations.

One pitcher in the group (who has the best chance of making the varsity team) is a 16 year-old with an electric arm. His ball jumps at the plate, he is very good at throwing strikes and he has no fear. But his arm is always sore. (Medial side of the elbow) Judging from his mechanics, they are not the problem. We did not throw curve balls this past fall; we wanted them to develop a change up. So breaking pitches are not at fault. He also did not throw many innings so that is not an issue. I believe this is a young man who may not reach his potential because he is not putting in enough work.

He is not throwing enough. You have heard us say this over the years; too much pitching compared to not enough throwing. That is a recipe for a sore-arm pitcher.

A baseball player has to get out on the field and throw. He has to develop arm endurance. This takes work, and if you throw in a few missed practices it adds up to a potential problem.

We see many kids fail to develop because they don't have a good work ethic early in their careers. Then when they become a junior in high school they have a growth spurt and expect to be effective. Whoops. Probably ain't going to happen.

Develop a solid practice routine and stick with it. Throw your long toss, throw your bullpens, practice your defensive responsibilities, get in your form running, get in your poles and your sprint work. There is no magic formula guaranteeing success.

Some kids don't put in the work necessary to succeed. (Wasted potential always gets my dander up.)

Let's explore some of the faults we have seen in our pitchers; flaws that we believe require correction if future success is to be achieved.

- **Inconsistent Hands-** By that we mean at some point in their windup they move their hands off center. They start in the middle of their body (which is correct) but they move their hands to the side as they continue their delivery. This has the unfortunate effect of creating an inconsistency in their arm path. They don't set their hands in the same place every time and the arm path may be slightly different every time. The timing will be off ever so slightly.

The pitcher may think his hands are in the same place but there may be a very slight difference. That is why we want the hands in the middle where the ball can come out of the glove at the **same point every time**. It is important to keep the hands fixed in the middle of the body all the way to leg lift. This will help with a more consistent arm path. (Arm path is the circle the arm makes out of the glove all the way to release.)

As we know **strikes are thrown at the rubber**. Any (no matter how slight) flaw at the rubber will be amplified at the plate.

- **Blocking-** throwing across the body. The landing leg touches down to the right of the pivot leg. This will inhibit velocity and hip rotation. It also contributes to hitting the glove with consistency. There is also some evidence that blocking can contribute to arm problems. We have two pitchers who do this and are having a tough time correcting this flaw. One of them lands a good foot to the right. (RH Pitcher)

You have to correct this during his bullpens. We draw a straight line in the clay from the ball of his pivot foot down the mound toward the plate. Then we have him check his foot after each pitch. You have to get the pitcher to understand what the correct landing position feels like. ***And he must do this at full speed.***

There are two things we have seen in these pitchers that I feel cause this incorrect leg and foot path.

1. **Swinging the lift leg-** As the pitcher comes out of the top of his leg lift he swings his leg "out and around" to landing as opposed to staying aligned and keeping the side of the foot directed to home plate. This causes inconsistency at landing.
2. **Watch that heel-** If a pitcher allows his back heel to come away from the rubber he will have a tendency to land to the right of the line. Merely pointing this out to him may not be enough. I have actually held the heel in place as the pitcher threw to the plate. (Don't forget to let go.)

- **Moving the head-** We have a pitcher who yanks his head as he delivers the pitch; sometimes he moves it down and sometimes to the side.

Not keeping the head still causes all kinds of control problems. The pitching delivery is not a natural motion and the head wants to go away from a line to the plate. The pitcher has to 'bow' his neck and keep his eyes level and 'right on' the catcher's glove. This is sometimes difficult for a pitching coach to see. Using a camcorder may be necessary.

We have been trying to change this pitcher's arm slot. He throws too much "over the top" as opposed to 3/4. ●__! **instead of** ●__/. This causes his head to move out of the way as the arm delivers the pitch. The 3/4-arm slot helps the head to remain still in addition to giving the ball more movement.

It's going to take some time but we think this kid has the desire to succeed. We have him throwing a rolled up white sock at a mirror in his home. He goes through the delivery in slow motion and watches his arm. We have told him to set his arm at the cocked position and leave the angle the same as he delivers the pitch. ("Set it and Forget it" to quote Tom House.)

Of course a pitcher has to understand what the correct delivery feels like at "full speed" but it is valuable to have him correct any flaw slowly until he can incorporate it into his delivery. This may take only one or two attempts and then reinforcement at every bullpen.

This is where a good pitching coach comes in. He understands what a sound delivery looks like and he gives his pitching staff constant reinforcement to help them reach it.

This "nirvana" of pitching success does not come easy but it is crucial to development.

- **Ball Movement-** The ball moves the wrong way. A right hand pitcher's fastball should move toward a right hand batter and away from a left hand batter.

Incorrect movement is caused by the pitcher's index and middle fingers coming off the side of the ball. He actually 'cuts' the ball, and instead of his wrist staying in the direction of the catcher's glove it comes around the ball and causes it to move away from a RH batter.

He must learn to stay on top of the ball. As this is a function of proper throwing it should be corrected during long toss.

Watch your team as they warm up. Do their balls move correctly? Fix this one early.

We watch our players throw during every practice. This is a great time to help them with throwing faults.

- **Fear-** A kid gives up a couple of hits sandwiched around a walk and he falls apart. He becomes afraid to throw a strike. You can see it in his eyes and in his demeanor on the mound. This is simply a lack of mental toughness and a *willingness to compete*. We have seen this quite a bit over the years and you must look for it.

There are different reasons for it but we believe some youth coach somewhere probably had them focusing on the wrong things:

1. "Come on, strike this guy out."
2. "That umpire's squeezing your strike zone."
3. "Will you quit walking the whole team?"
4. **Allowing** any excuse that the pitcher comes up with.
5. Blaming a teammate for an error.

We have been working on getting them to focus on the right things:

1. "Don't think too much out there - just hit the glove."
2. "Strike one is the best pitch in baseball."
3. "Try to make him hit the ball."
- 4 "Grow a pair, will you." That's when we get frustrated and say it so the kid doesn't hear us.

There is no question that hitting the glove consistently is the most important aspect of pitching. Then why don't these youth coaches get it? We have always felt it is the coach's job to instill toughness in his pitchers. How many times have you heard us say, **"Here it is; I got it; here it comes."** That is the attitude you want your pitchers to eventually have.

We teach kids to focus on the things they can control and ignore those that they cannot. Easier said than done, but it is the coach's responsibility to use the game to have an ongoing teaching dialogue with his pitchers.

This is a developmental process, and the coach must not give up on a youngster who is struggling mentally. You are developing his mechanics. Why not develop a positive mindset?

Here are some things we have said and do say during games:

1. "When you give up a hit or a walk don't hang your head and go walking around the mound. It looks like you're beat already. Keep your head up, take the throw from the catcher, get on the rubber, check your defense and throw the pitch."
2. One, two, three; "see how easy it is when you get strike one?"
3. "That change up on 2-1 popped him up. Now do you see how it works?"
4. "That was a very good job, making the hitter hit the ball on the ground."
5. "Great pitch!"- After a teammates error on a ground ball.
6. A visit to the mound when a pitcher looks like he may be losing it. (Watch his eyes and posture.) "Runners on second and third, one out. Let's focus on one pitch at a

- time. You're just two pitches from getting out of this inning. You're doing a good job." (Jog to and from the pitchers' mound. Keep the game moving.)
7. Remind your pitcher (and team) to, "Close the deal" with two outs. (Two outs can be a very dangerous time.)
 8. "Do not concern yourself with that umpire's calls. He has been calling that pitch the same all day. If he won't give us the inside pitch let's go away for a while." (**Give your pitcher an alternative plan.**)
 9. "Quit looking over at your dad in the stands. He can't help you pitch. That's your responsibility. Now get to work."
 10. To your catcher-"Go talk to him." (That may be to settle the pitcher down or to give the bullpen pitcher a little more time.)
 11. Two runs in, runners on first and second with the three- hitter at bat and one out. Count is 2-1. Pitcher is squirming and you visit the mound. "You're just one pitch away from ending this inning. The catcher is going to set up on the outside corner and I want you to hit the glove with your change up. The hitter is going to ground out to the SS and we will roll a pair and we'll get in the dugout so we can swing our bats. Focus on that glove."
 12. Never, never, never give in to an umpire's poor or what you think is poor ball and strike calls. Do not allow your pitcher to see your displeasure. (Or any other player for that matter.) **It gives them an excuse to lose.**
 13. "You got a little too much plate on that last inside pitch and that guy hit it over the palm trees. Now, get your sign and give me strike one on the next batter."

A pitcher has his best stuff usually only one time out of four so don't put great expectations on him. That is a burden he may not be able to deal with. Instead teach him how to win when he doesn't have his best stuff. Keep him focused on the glove and let the chips fall. If he has hit the glove then he has done his job. So he gets through five or six innings and you are behind 4-2. He has still given your team a chance to win. Pretty good job for not having his best stuff.

You are developing a pitcher. If he has hit the glove consistently and not walked anybody then he has done a great job. Keep your pitchers thinking that way. You will make winners out of them.

BE CAREFUL WHAT YOU SAY

Last spring we were asked to coach a group of 14-15 year-olds.

The venue was Senior League. We took on this task with the attitude that we would be helping them play baseball at the high school level. Helping kids advance is something we thoroughly enjoy.

There is one young man on this team that has the perfect pitcher's body; tall, lean and very athletic. His arm action is sound and fluid and he has a great attitude.

I said to him, "Son you are going to be our opening-day pitcher." He said, "Coach I can't pitch." I said, "Why not?"

Then he said something that floored me.

"Coach, I don't have a curve ball."

Who gave this young man the impression that he needed a curve ball to be a pitcher? It had to be either a former coach or his dad; more than likely a former coach.

How ill-advised is that? Who has given pitchers the impression that they have to trick hitters and strike everybody out?

Why can't we take the time to develop players instead of going for the immediate *end results*? This EROT has taken many a young player out of the game.

In our haste to win baseball games we sometimes overlook a player's potential. We may brainwash a youngster into limited thinking. *"Coach I can't pitch."*

Well, that was challenge enough for me. I dedicated a lot of extra time, both on the field and at my home to teaching this player how to pitch. We spent a lot of time on mechanics, mound demeanor, pitch selection, fixing flaws and fielding his position. In short, he got a crash course in the art of pitching.

As stubborn as I am I was determined he was going to be our opening day pitcher.

We All Like Happy Endings

I would like to report to you that he pitched great all season and had a wonderful year. The fact is he struggled most of the time; one good inning followed by two poor ones. Immediately after he gave up a hit he was not able to throw strikes.

I think I may have fallen into the trap of wanting him to succeed more than he did.

As coaches we often forget a coaching axiom.

Our job is to give the player good information. It is then up to him to use it to improve. We cannot make the youngster into a player. He must do it on his own.

I believe this young man firmly believed he couldn't pitch. His dad was *gung ho* during our pitching lessons. He was a constant cheerleader for him. He gave a lot of support.

Practices were always productive. His bullpens were effective. His attitude was good. It was when he took the mound that he was less than effective.

This past summer this young man played ball on the high school "C" team; a team put together for kids coming out of middle school and going into their freshman year.

He told his coach he wasn't a pitcher. He played the outfield the entire year.

Let's be careful when we say something to our young players.

Coaches sometimes forget the great influence we have on youngsters and sometimes we can easily say something damaging.

What is the medical creed? "*Physician, do no harm.*" Coaches, do no harm when you talk to your players.

I know I saw potential in this young man but I ignored the signs that told me he wasn't going to be a pitcher. "*Blinded by the light.*" Whether some former coach dented his psyche or he just didn't have the aptitude for pitching I will never know.

But I can report he had a good year in the outfield. He hit pretty well and he got better at tracking the ball. Not everyone can become a pitcher. Let's be careful when we talk to our young players.

UPDATE: This young man received a college scholarship and is an incoming freshman this year; playing centerfield. (2007)

EFFECTIVE VELOCITY⁴

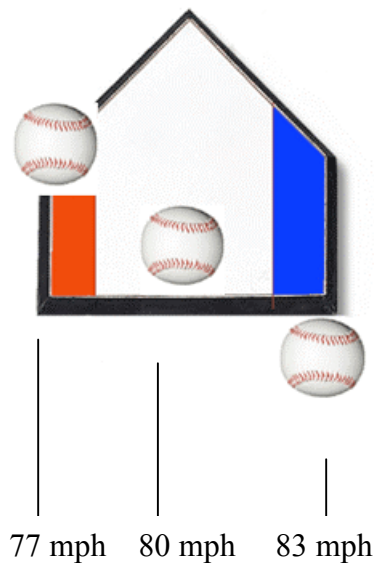
We can place velocity in three categories; real velocity, perceived velocity and effective velocity.

Real velocity is what a gun measures. He throws 80 mph. (Pitch selection.)

Perceived velocity is what a hitter ‘sees’ on both sides of the plate. (Location) Because of where the hitter must contact pitches it’s measured this way:

Fastball Speed

- The middle = 80 mph
- Outside corner = 77 mph
- Inside corner = 83 mph



Perceived velocity is the batter’s capacity to react to a pitch. Notice he must let the outside pitch get deeper so the ball travels farther and becomes slower than a pitch on the middle. (-3) The inside pitch he must react more quickly and hit the ball out front. (+3) Notice the 6 mph differential- outside to inside.

We won’t talk about the pitch on the middle because we don’t want to throw there. If we do, just go over and back up third base.

But what if the batter contacts the outside pitch in front of the plate and hits it when it is traveling (a perceived) 80? In that case he will ground out to the SS. That is fine with the pitcher.

⁴ Tom House

Conversely if the batter lets the inside fastball travel to the plate he will be late and foul the ball off or hit it off the handle.

Effective velocity is the combination of pitch selection and location; the right pitch in the right place. So you have real velocity plus perceived velocity equals effective velocity.

Let's see how as pitchers, we can use this information.

For the sake of argument let's say a pitcher's fastball is 80, his breaking pitch is 74 and his change up is 71. (These are Middle of the plate speeds.)

Looking at a perceived difference of 6 mph on either side of the plate we have these **First Pitch Scenarios**:

- Fastball inside- batter "sees" 83. The beauty of the inside fastball is that it gives the pitcher several options. He can throw the breaking pitch inside or outside, the fastball outside or the change up outside. Those pitches will not be perceived at close to the same speed.

That is what we're trying to avoid; **throwing two pitches in a row at the same perceived speed**. Even if they are different pitches, if they are perceived at a similar speed they are easier to hit successfully. These are "at-risk" pitches. Try to throw as few "at-risk" pitches as possible.

- Fastball outside- the batter "sees" 77. Now we have to be careful. We have some "at-risk" pitches. If we throw a breaking pitch inside we are right at the outside fastball perceived speed. (77) Change up- too close. (74) I would throw a breaking pitch outside or a fastball inside. Breaking pitch outside would be "seen" at 71 and the fastball inside would be "seen" at 83. Neither of those pitches would be "seen" close to the 77 mph fastball on the outside corner.
- If we start the hitter off with a breaking pitch inside (perceived 77) we don't want to throw a fastball outside on the next pitch. (Perceived 77) Then the hitter would "see" the same speed and you will have thrown an "at-risk" pitch. You probably should back up that pitch with a fastball inside.
- Don't throw a breaking pitch outside and then throw a change up inside. The breaking pitch outside is 71 and the change up inside is 74. The same would follow for a breaking pitch outside and a change up outside. Too close. They become "at-risk" pitches.

Third Pitches

- Fastball inside and fastball outside. Great pitch selection. You all know we believe in **0-2 smart** here as a third pitch. Throw a fastball outside well off the plate and up above the batter's hands. The batter has seen 83, 77, 77 and you have changed his eye

level on the up and away fastball. What now? It's hard to make a mistake here except I would not throw another fastball outside. Batter has seen that speed too many times in a row. Change up in or out, breaking pitch out or fastball in, just off the plate. Avoid the breaking pitch in. (77-77)

- Fastball inside and fastball outside but one of these pitches was a ball. Now you need a strike. Whatever pitch you have command of that day is okay except for another fastball outside. **Inside, outside, inside** with the fastball is often a good combination.
- Breaking pitch away and fastball in. The breaking pitch was called a ball. What do you throw here to get a strike? Since you got the inside fastball for a strike you're in good shape. Fastball away is a good choice.
- Breaking pitch in and change up away. With the count 1-1 a fastball inside would be a great choice. Avoid the breaking pitch away here.

2-1

This is a very important count. You don't want to go 3-1 and the hitter is looking for a fastball he can drive- a dangerous time.

We have always liked the change up in this situation. The hitter "sees" a fastball until it's too late. We are not looking to strike him out. We are hoping he takes a good hack at this pitch. He will be out front and he probably will not hit the ball hard.

Try not to get into the situation where the third pitch is too close to the perceived speed of the change up. Breaking pitch away would be too close to throw the change.

It's okay here (2-1 count) to throw the change on the middle of the plate. That way the hitter will be more likely to offer at it. Remember, we want him to swing at this pitch.

Who said pitchers are dumb? This is very much a thinking man's game. Gregg Maddux has retired Barry Bonds 25 out of the last 29 times he has faced him. He has used this very thought process. He kept the perceived speeds as far apart as possible on each pitch. Many successful pitchers use this instinctively.

We believe this can be a very potent weapon for any pitcher who has command of three pitches.

Even if you don't have good command of one of your pitches on a certain day you can use that one as a waste pitch.

For instance if your curve ball is not breaking well or you don't have good command, use it off the plate or in the dirt to give the hitter something to think about and as a set up for the next pitch.

But to do that you have to get ahead early in the count. **"The best pitch in baseball is STRIKE ONE."** Try to get strike one on every batter.

For example, you get strike one on a fastball on the outside corner. You can waste your breaking pitch here off the outside corner. The batter has “seen” 77 and 71. Fastball on the inside corner would be a great pitch to get ahead with. Now you are 1-2 and the last pitch the batter has “seen” has been 83. You can now throw the change up inside or outside.

All “at risk” pitches are not going to be hammered just as some good pitches may be.

This is a very good pitching plan for any pitcher to put use. Good luck with it.

Final Thoughts

- The fastball inside offers the pitcher his best perceived velocity. Any pitch off this will be perceived as a change in speed.
- Sometimes you may want to waste a pitch. You can throw it at the same speed but off the plate. This can be very effective for setting up the next pitch.
- Early in the game with no one on base it is good to know what a hitter can or can't do with your inside fastball. This information can be valuable later on in the game. Throw inside early and often.
- Sometimes you can dominate a certain hitter. In that case just throw the ball by him. But at higher levels the hitters are better. Understanding **Effective Velocity** is important against good hitters.
- You don't want to throw too many breaking pitches. (Counterproductive in terms of fastball development.) Use them sparingly and against the good hitters.
- An outside change up after an inside fastball is a particularly good pitch- if you can get ahead in the count.
- Try this in the pre-season and get your coaches to call pitches with Effective Velocity in mind. See how it goes for you. Let us know.

Developing the Change-up

There is no question that the change-up is a great pitch, some say the best pitch in baseball. It is devastating to good hitters because it is recognized as a fastball until it is too late. If you are able to develop change-up command you can throw it any time in the count. It is a great pitch to throw when behind 2-0, 2-1 or anytime the hitter is expecting fastball. Your mental approach should be such that you want the hitter to swing at the pitch. If you have fastball arm speed you will upset his timing, the result will often be a weak grounder or fly ball. A pitcher that can throw an effective change-up will get a lot of fly ball and ground ball outs. This will help keep his pitch count down. Let 'em hit it. Change up command is a formidable weapon in a winning pitcher's arsenal.

Why it Works

As the pitcher delivers his pitch the hitter's brain begins to process information. Anecdotal evidence suggests that the hitter sees location (direction and trajectory) first, then spin and movement. The last bit of information that is processed is velocity. (Speed of the pitch.) Because the change up is thrown with fastball arm speed the hitter assumes it is a fastball and gears his swing to fastball velocity. The pitch looks like fastball until it is too late.

An effective change, thrown with fastball arm speed, is about 10 mph slower than the pitcher's best fastball. All pitchers as they advance in levels of play must develop a change up. Our suggestion is that pitchers begin to learn the pitch when they are young. It is less stressful on the arm than the curve ball and will serve them well in the future.

Change-up Grips

There are several grips that are effective. The four most common are the circle change, box or straight change, palm ball and split fingered fastball. We don't recommend throwing the splitter at a young age because spreading the index and middle fingers too wide can restrict wrist movement and ultimately place undue stress on the elbow. The palm ball is effective but because it is placed well back in the palm of the hand it is difficult to control. That leaves the box and circle changes as the grips of choice. The circle change requires larger hand and finger size than the box so we recommend the box change for youth pitchers. Unlike other pitches the change up grip is **vital**. The grip does all the work. The circle and box changes are thrown by placing emphasis on the middle and ring fingers. That partially slows the velocity and a loose grip does the rest. Whatever grip you choose it should be comfortable and you should be able to develop command. Trevor Hoffman has one of the best changes in baseball. The grip he uses is the box or straight change.

PITCHING FROM THE STRETCH

This year, over 300,000 youth coaches will be in charge of teaching 9-14 year olds how to pitch. Many will resort to their faithful cliché's "just let em hit it", "drop and drive", "shove off", "rock and fire", "bend your back", and that old standby; "Throw Strikes!" The best coaches will offer fundamentally sound advice that will prevent injuries and enable their pitchers to * "correct themselves" during games.

Below are 10 skills that every pitching coach should memorize. We teach and monitor these same things with our pitchers during every game and bullpen. Since there are so many things for them to think about, we recommend that youth coaches start out by teaching early "kids pitch" players to pitch from the stretch (set position.) There is less movement to teach and once the fundamentals are down you can easily add the rocker step.

1. **PIVOT FOOT.** The side of the pivot foot rests against the edge of the rubber or in the hole in front of the rubber. (Toes in the hole, not heel.) The pitcher should imagine a line from the ball of his pivot foot to the target. His head should not leave this line during or after the pitch. Feet at double shoulder width, glove on front knee, and ball in hand and behind the back. (Or ball in glove) The pitcher gets his sign from this position.

Common faults:

- Pivot foot not in contact the rubber (balk).
- Cleats on top of the pitching rubber. (Loss of balance)
- Rocker (wind up) step. This is a mistake with runners on base.
- Head off line.
- Heel in hole instead of ball of foot. (Loss of balance)

2. **STRETCH or SET.** Feet come to approximately shoulder width, glove and ball hand gather at chest height. We like the front foot to come set slightly ahead of the rear foot. This makes the leg lift a heartbeat quicker getting to the balance position.

Pause at least one second. As the pitcher looks at the 1b runner, he should drop his chin and peer out of the corner of his eyes. Once he pauses or "sets" he cannot move his shoulders or any other part of his body (unless he steps off the back of the rubber first). To eliminate "flinching", we teach pitchers to come set with a slight bend in their knees. (An athletically balanced position.) NOTE: The pitcher must pause or come "set" before throwing to the plate only (not a base).

Common faults:

- Forgetting to pause (balk).
- Moves shoulders to look to 1b (balk).
- Flinches another body part (balk).
- Feet come together instead of remaining shoulder width (wrecks pick off moves).
- Hands remain separated.
- Head off line.

3. **KNEE LIFT.** After pausing, the knee lifts to the balance position. We do not teach the slide step to younger pitchers but we do encourage them to perform a quicker knee lift when the runner on base is a threat to steal. When the knee lifts the eyes should be on the target. It is a common fault for youngsters to pick up the target **after** the knee is in the balance position. Our 'teach' is; "When the leg goes up, the eyes go up."

Common faults:

- Foot and knee "kick up" or swing out instead of lift up. (Balance issue)
 - Front leg not 'closed' enough. We teach "knee over knee" or knee pointing at third base.
 - Elbows akimbo and not in a relaxed position, pointing down. (Can create a faulty arm path.)
 - Picking up the target too late.
 - Loss of balance.
 - Head off line.
4. **KNEE & HANDS DROP.** The hands break at the exact instant the knee begins its downward decent, at the same time and speed. **The fingers should be on top of the ball with the thumb underneath.** When the knee straightens, the foot goes to the plate WHILE the hands go all the way down, back and then back up, forming a slightly extended "L". The pitcher should lead with his hip. It is very common for young pitchers to lead with their upper body creating a rushing motion. Have them try to keep the outside of their lead foot closed to the target as long as possible. This helps keep their front side closed longer. As the pitcher starts down the hill his body wants to open before landing. Keeping the front side of the foot closed helps keep the body closed.

Common faults:

- Shove or push off.
 - Upper body travels toward the plate along with or ahead of the lower body. *
 - Knee swings out toward corner infielder instead of traveling down and then out.
 - Rushing. *
 - Drop and drive. (Posture change)
 - Hands separate outward.
 - Ball faces target instead of away from it.
 - Loss of balance.
 - Head off line.
5. **LANDING.** The stride foot lands softly and on the ball of the foot. (Flatfooted) WHILE the ball hand travels to the cocked position. * 75% of the pitcher's weight remains on his back foot. A RH pitcher lands with his toes across the line, pointing at the RH batters box. At the cocked position the ball is facing away from home plate (pointing at the SS).

Common faults:

- Landing hard and on the heel.
 - Upper body weight travels forward with the lower body weight.
 - Front elbow is lower than front shoulder.
 - Front elbow does not point at target.
 - Hips or shoulders land open.
 - Loss of balance.
 - Head off line.
6. **UPPER BODY WEIGHT TRANSFER.** The head stays on line and goes toward the target. The front elbow serves as a “gun site” and points to the target as the pitcher looks over his forearm and glove. This delays the batter’s view of the ball longer and helps the pitcher stay closed longer. Once the front foot has planted the body starts to square to the plate.

Common faults:

- Upper body weight transfers too soon, during the “knee hands drop”.
 - Back elbow drops below shoulder.
 - Arm comes forward before the body has squared to the plate. (Looks like the pitcher is slinging the ball.)
 - Loss of balance.
 - Head off line.
7. **PULL BACK, TRUNK TWIST.** The pitcher should ‘click’ his glove into an up position as the body moves to the glove. The hips, back and shoulders also twist as fast as possible (on all pitches). This motion takes the ball from the cocked position (pointing away from target) and “whips” the arm into the proper throwing position. The elbow remains OVER the shoulder during this.

Common faults:

- Back elbow drops below shoulder.
 - No maximum twist because they watch the ball travel.
 - Loss of balance.
 - Head off line.
8. **RELEASE-¾ ARM SLOT** (arm shoulder high with the forearm extended slightly away from the humerus). The ball is released past the head when the “nose is over the toes.” At ball release the head will have a tendency to drop or fall to the left. (RH pitcher) Teach the pitcher to “BOW” his neck and attempt to keep his head level and his eyes on the target. This is not natural but will affect control if his head drops.

Common faults:

- Elbow drops below throwing shoulder.
- Throwing straight over the top.
- Hand inside the angle of the forearm, closer to the head.
- Dropping head.
- Releasing the ball by the head instead of out front.

9. **STRAIGHT SNAP OF THE WRIST.** The ball is released “out front” with a powerful and straight snap of the wrist (on all pitches). The fastball is released with full extension of the arm.

Common faults:

- Twisting wrist or forearm.
- Hand flopping off the either side.
- No snap due to small hands.

10. **FINISH** with the head and weight over the FRONT foot as the back foot and leg swing around due to the rotational force. The body should be in a good position to field the baseball.

Common faults:

- Neglecting to follow through.
- Falling to one side.
- Loss of balance.
- Head off line.

*Arguably the most important mechanical position in pitching is what Bill Thurston refers to as the ‘**cocked position.**’ It also has been called the ‘power position’ and the ‘high cocked position’. This is the position of the body immediately after the lead foot plants. The act of throwing occurs from this platform. Pitching mechanics are all about getting to this position. Everything a pitcher does up to that instant is in preparation to get into the correct cocked position.

COCKED POSITION

LOWER BODY

1. Stride- aligned to the plate on a straight line.
2. Foot position- flat-footed and stable, toes pointed at the right hand batter’s box. (Closed 5°. Open, or pointing directly at the catcher has a tendency to pull the front should open too soon. Closed more than 5-10° may restrict hip rotation.)
3. Stride leg- knee flexed at approximately a 135° angle. Watch that stride leg. Do not let it drift forward.
4. Pivot foot- begins to roll over as it leaves the rubber.

UPPER BODY

Head is the top center of a triangle between the feet.

1. Lead elbow, front shoulder, back shoulder and pitching hand aligned directly to the plate.
2. Lead elbow, front shoulder, back shoulders and throwing elbow level to the ground.
3. Head, eyes, shoulders and hip line are level. **The hip has opened but the front shoulder remains closed.** It is natural for the shoulder to want to open with the hip. Pitchers must separate their lower from upper half of their body. Keep that shoulder closed.

4. Lead arm- lead with the front elbow or glove directly toward home plate, shoulder high: stay aligned to the plate. (The lead arm action is unique to each pitcher, but it is essential for him to keep it closed. Leading with the elbow serves two purposes: it is the best way to keep the front shoulder closed and the elbow provides a ‘gun sight’ for the pitcher.)

THROWING ARM AND HAND AT STRIDE FOOT PLANT

1. Hand high in the cocked position; hand slightly higher than the head.
2. Palm of hand faces the shortstop (RHP). Fingers on top of the ball and wrist slightly extended back.
3. Elbow shoulder high.
4. The throwing hand should be outside the angle created by the forearm and elbow. (This prevents early external rotation of the shoulder and helps keep the arm from dropping.)
5. Forearm at a 90° or slightly beyond from the upper arm.
6. Firm grip with a loose wrist and forearm.

(BALANCE, BALANCE, BALANCE- Dynamic balance-maintaining balance throughout the delivery.)



Correct themselves. This is an important skill in itself. As coaches teach their pitchers they should ask questions and make sure youngsters understand each segment of the delivery. They must coach themselves on the mound and make their own adjustments.

1. From the set position, balanced with hands on the midline of the body	2. As leg lifts eyes focus on the target, the head stays still and weight shifts to the back side.	3. As leg starts down the mound head remains over belt and the body is balanced.
4. At landing the head is still over the belt and foot is parallel to the rubber. Head is still and focused on the target.	5. Arm goes into external rotation head is still and at the apex of a triangle created by the legs.	6. Neck is bowed to keep head still and arm finishes outside front leg.

MOUND DEMEANOR AND PITCHING GOALS

Why do pitchers with great stuff get beat? How are pitchers with average fastball velocity able to consistently win? What's their secret?

A good coach is a vital link in helping pitchers reach their potential. He will have a logical concept of what he wants his pitchers to accomplish during games.

We'll leave the mechanical and conditioning aspects out of this discussion and concentrate on what a pitcher should try to do when he is on the mound. We will assume he is relatively sound mechanically and in good physical condition.

What should his strategy be? How should he think? How should he act? What is his overview of what to do when runners get on base? What are his goals?

Over the years through study, games, observation and discourse with professional pitchers and coaches we have developed a pitching philosophy.

We believe this philosophy is valid at the youth and high school levels. Some of it is sound at all levels, but if a young pitcher can adopt this view he will have developing success.

These are not new secrets or magical tricks, rather they are sound principles based on the fundamentals of the game.

There is some effort involved and the coach has to get his players to accept this overall view. It is a learning process and constant verbal dialogue will be necessary.

- **Mound Demeanor-** It's not just the **win** or the loss. It is the way a pitcher approaches the game. The pitcher should not show emotion. No matter the circumstances, he should remain in a controlled mental state.

This is difficult to do but I think, very important. Stuff happens in games. They happen in almost every game; a teammate makes an error, an umpire makes a disputed call, the hitter ropes a pitcher's best pitch, etc.

The game begins with the pitcher throwing the baseball and he above all others must remain calm and controlled.

What is that old deodorant commercial? "Never let them see you sweat."

I watched a game with 14 year-olds last month and the pitcher was working with a new catcher.

The catcher was having a rough time. He couldn't 'stick' the outside pitches and the umpire was calling them balls, runners were stealing at will, and balls were getting by him- 2 runs scored on passed balls.

The pitcher lost it. He developed a scowl on his face and he started yelling at his catcher. He lost all control and the team went from 4 runs up to 2 runs down in a very short time.

I don't care how hard this pitcher throws; if he is my pitcher I sit him down the second he shows up his catcher.

If you are looking for a quick way to lose a game that's it.

- **Mental Toughness-** This goes hand in hand with a positive mound demeanor.

Whether a kid is 10 or 18 he has to have a certain amount of mental toughness and discipline.

He has to have a willingness to compete. He has to be able to throw his best pitches in tough situations as well as easy ones. He has to be able to overcome negative conditions and continue to compete. He has to be able to take a win as well as a loss with grace and class.

The coach must become a psychologist sometimes in order to help his pitchers find some mental and emotional grit that they may not even know they have.

We believe that one part of establishing this toughness is for a coach to set up his pitching order in advance and not change it just because a good team is playing the day his second or third line pitcher is scheduled to pitch.

That sends a message to his team. "I have taught all my pitchers to pitch and they can pitch under any circumstances." It must include verbal reinforcement by the coach when a pitcher wavers.

Helping pitchers develop mental toughness is a coach's job and it is a NGI directive.

True story: ten or so years ago Coach Grant had a HS senior left- hand pitcher on the mound. In Jack's view this youngster was not throwing strikes because he had a couple of heavy hitters to face. He had given up a couple of hits and was starting to buckle a little bit.

Jack called time and walked up on the mound and proceeded to dress this pitcher up one side and down the other. He got his face about 6 inches away from the pitcher- nose to nose. As he was chewing this young man out the pitcher was nodding his head up and down. You could tell he was saying, "yes sir, yes sir, no sir, no sir."

Because of this attitude and demeanor Mike Easom, head coach of Indian River Community College (a great coach and great program) signed him to a scholarship. Coach Easom told Jack that the reason he signed him was because he was in the stands that day and saw Dale's attitude and demeanor under those negative conditions. He liked the way he responded to Coach Grant's criticism.

Two years later this player signed with the Yankees. He didn't make the major leagues but he fulfilled a life-long dream. He got his shot. His development of a positive mound demeanor was instrumental in his success.

- **Hit the Glove-** The coach who is calling the game is moving his catcher around back there. So the pitcher has to have a target. The glove is his target, not the plate and not the hitter.

Whether it is in the game or throwing a bullpen session; that is the pitcher's mandate. **Attempt to hit the glove every time.**

We have talked about this many times and how important it is. Work on hitting the glove in long toss practice and work on hitting the glove in bullpen sessions.

It was said of Steve Carlton that when he was on the mound it appeared as if he was just playing a game of catch with his catcher.

That is the essence of hitting the glove. **Pitching is an advanced form of playing catch.**

Mentally block out all distractions and focus on that glove. You can 'fine center' on a smaller part of the glove. We'll call that 'micro focus.'

My other mandate is to help pitchers with the mindset that they will not throw outside the frame of the catcher's shoulders. No matter where he sets up, the catcher's shoulders offer an imaginary enclosure that the pitcher can use as a guide. Stay inside the catcher's body- always.

- **Get Strike One-** This is extremely important. It should be the number one game goal of every pitcher, get strike one on each batter. (This is a valid concept at all levels of baseball.)

He now has the hitter at a disadvantage. He can throw anything he wants in this situation. I read a few years ago that professional hitters hit .228 if the pitcher gets strike one and .288 if he throws ball one.

I think it is especially important to throw strike one to the next batter immediately after a hitter gets a big hit. That shows the other team and the pitcher's teammates that you will compete.

I have seen many pitchers even at high levels that were afraid to compete. A coach should recognize this and find a way to help the player.

- If a young pitcher gets a little wild, call a fastball strike down the middle.

With younger players call for a fastball down the middle if he gets behind in the count.

We just tell our catcher to set up on the middle until the pitcher regains his control.

It is worse to walk a batter than let him hit it. If he hits it you at least have a chance to make a play. There are exceptions to this: a team's best hitter in a situation that may beat you. Don't give in to the hitter in that case.

- **Trust your Stuff-** What does that mean? It means throw the ball over the plate for a strike so the hitter will swing at it. He may or may not hit it that's irrelevant. What is important is that the pitcher throws a strike.

There are times against a good hitter that you may throw a pitch out of the strike zone hoping he will offer at it. That's a valid strategy but first you have to get ahead in the count. So the pitcher can't be afraid the hitter will hit the ball. In fact, he **welcomes** the swing.

- **Let the Hitters Put the Ball in Play-** This goes along with trust your stuff. There is absolutely nothing wrong with letting hitters put the ball in play. That's how the game is played

What did Nuke's catcher say in Bull Durham? "Quit trying to strike everybody out. Throw ground balls, they're more democratic."

This is the correct mindset for a coach to take: You are not trying to **trick** the hitter. You are trying to teach the pitcher to throw strikes to a desired location and make the hitter swing at the pitch you want.

Upsetting the hitter's **timing** is a desired result. Making the hitter uncomfortable is a desired result. Those are the approaches a pitcher should learn- not trying to trick the hitter.

If a pitcher threw all fastballs down the middle of the plate the opposing team wouldn't get all hits. We have had team scrimmages and used a pitching machine set up to pitch down the middle and no team has ever lit it up.

So the pitcher has the best of it. He has a defense to help him.

- That goes along with this one-**Teach your team how to play defense.** Your defense has to be adept at picking up ground balls and throwing them across. Your catcher must be competent.

All good pitchers have a defense that can make the routine plays. Good pitching and good defense goes hand in hand.

- **The Coach Calls Pitches-** This is controversial but I believe the coach should call the game. Derek, being a former professional pitcher thinks the pitcher should call his own game. His logic is that the pitcher gets the win or loss, let him call it. That's how he learns.

Coach Grant and I disagree with Derek on this point. I have yet to see a youth or high school pitcher that has the savvy or experience to effectively call a game. I think they learn more quickly if the coach calls it.

The coach has a good view of how the hitter reacts to every pitch. He can see the hitter's flaws. He has the scorebook to tell him a hitter's tendencies. He can keep the pitcher from getting in the rut of throwing too many breaking balls or getting into a predictable pattern. He can force the pitcher to throw his change up. (Many young pitchers, including high school, are afraid to throw their change in certain situations.) He has a better overall view of the game, the defense and the other team. He can move the defense according to what the next pitch will be.

And you take a little heat off your pitcher. The responsibility is yours.

Four years ago Stephen was pitching against a rival LL team. A good hitter was at bat and had already had two hits. I called a first pitch change up. Boom, over the fence and they won 3-2. That loss was my fault not the pitchers. So we began working harder on creating better fastball arm speed when he threw the change up.

DEVELOPMENT.

- Throw **fastball strikes inside**. Early in the game if you throw inside you can find out what a hitter can do with your fastball. Many hitters don't like the ball in there. And if a hitter can handle your fastball inside he will usually rope it foul-strike one. It might go 400 feet foul, but it is still strike one. This information tells you how to pitch to him the rest of the game. Successful pitchers throw the inside strike.
- Throw the **change up** for a strike to good hitters when **behind** in the count. The pitch has to be a strike and it should be down the middle of the plate so the hitter will offer at it.

A few years ago I was Coach Grant's pitching coach on our American Legion team. He had me calling the pitches. We were having a rough day and were playing a double header with a district foe. We had already lost the first game.

The situation was this: score 6-5 us in a late inning, they had bases loaded, the 3 hitter was up and had already hit a home run, our pitcher was struggling and was behind to the hitter 3-1.

I called for a change up down the middle. The pitcher threw it down the middle, the hitter popped it up and we got out of the inning and split the double header.

I won't finish Coach Grant's quote but he turned to me and said "Byrd you've got...
... .."

His philosophy had always been to go after the hitter with a fastball when behind in the count. Well that's just what the hitter is looking for. Why not throw him a pitch that has fastball spin and looks real big coming up to the plate?

Anyway I grudgingly converted Coach Grant. (I sure am glad the pitcher threw a strike.)

Don't throw the change or breaking pitch to **weak hitters**. They should see nothing but a steady diet of fastball strikes. What happens when you get behind and walk the 8th and 9th batters? Right, you've got the top of the order coming up with runners on base- a bad situation. How do you think the number three hitter comes to the plate with the bases loaded? Often there is a base on balls to a batter in the lower third of the order.

- **Don't throw a strike on 0-2.** Again not everyone agrees with us on this point but we believe it is a cardinal sin to let a hitter off the hook when you have him 0-2.

Keep the pitch out of the strike zone. The best pitch is high and away. It changes the hitter's eye level, the pitch won't get away from the catcher and it won't hit the batter by mistake.

- **Change the hitter's eye level-** See above. Occasionally offer a fastball up.

If a hitter swings and misses throw it again. Throw it until he doesn't offer at it. Then come back with a knee-high strike. Up, down, in and out, a good pitching approach at any level.

- **Close the Deal-** Again we have mentioned this but it is very important. Refocus after there are **2 outs**. That is a very dangerous time. The pitcher and the defense have a tendency to let down a little after 2 outs. And before you know it a team can be on the verge of giving up a big inning.

Stephen's team played a game a week or two ago where they consistently retired the first two batters.

But for whatever reason our pitcher couldn't close the deal. The other team kept putting runners on base with 2 outs and eventually we gave up several runs. That's a no-no with 2 outs.

I don't have pat answers for preventing this situation except to make sure your team is aware of it and really bears down. Murphy's Law was made for circumstances like this.

- The importance of **2-2**- This count is very important. Now is the time when a pitcher wants to throw his best pitch.

He has the hitter at a disadvantage with 2 strikes but he doesn't want to go to 3-2. At 3-2 the hitter can be pretty sure there will be a fastball coming. At 2-2 he does not know what the pitch will be. The pitcher can throw anything he wants here but he must throw it close enough to the strike zone so the hitter will offer at it.

This is a good time for the coach who calls the pitches. He can use the information he has gathered on the hitter in previous at bats. Does the hitter shy away from the inside pitch? Will he swing at a breaking ball? Is he unable to keep his weight back when the change up is thrown?

The 2-2 count does not mean the pitcher has to strike out the hitter. It means he has to throw *his* pitch where he wants it. A ground ball or a pop up is just as good as a strike out.

- Concentrate on the **hitter** with runners on base. We talked about that last month and it should be part of a coach's philosophy.
- Keep the ball **down**- this goes along with good pitching mechanics. But the coach should be aware if the pitcher is getting the ball up in the strike zone. The ideal fastball strike is between the knees and mid-thigh.

Make sure your catcher is offering a good low target and not one belt high.

- Learn to throw both **2 and 4**- seam fastballs for strikes- The 2-seam fastball has a little more movement and is slightly slower (velocity change upsets timing)

There is another grip I like with young pitchers, a 3-finger fastball. The index and ring fingers are placed along the long seams and the middle finger is between them.

This pitch is a little slower yet and has some 'sink' to it. Use the radar gun to see the differences in velocity. (That is what I think the gun should be used for. Not just measuring fastest velocity but for measuring the different speeds of pitches.)

Say a pitcher's best 4-seam fastball is 55 mph. His 2-seam is 53 and his 3-finger pitch is 50. His change up is 45.

That gives the hitter an awful lot to look at.

Heck, most young hitters won't realize the differences. They'll just ground out or pop up and won't know what happened.

Occasionally they will rope one but that is not a reason to change your philosophy.

We have talked about that many times. *Make teams play up to your level, don't play down to theirs.*

That's when you know you are beginning to do a good job of coaching, when the opposing coach doesn't have a clue what you are trying to accomplish.

The subtleties of baseball offer all sorts of situations where a good coach can have an unrecognized edge.

That's the game within game.

- **Refocus** when you take the mound after your team has just scored- that is a goal that directly leads to wins. Shut the other team down the next inning. We always remind our teams right before they take the field after we have scored.

GAME CUES

Every coach should have a set of cues for his players that he uses during games. They should be short and to the point. And they should be based on the way you teach them.

Your kids will hear your cue and they will immediately relate to the technique or situation you have taught them.

I coach a lot of baseball games and I the majority of coaches I see do not use this important tool.

The value lies in the fact that the cues are used before something in a game happens. They are designed to prevent offensive or defensive mistakes.

They become instant reminders.

These are some we use. They relate to game situations and they carry some message to a certain player or to our team.

A coach may choose to develop his own cues. Just make sure your players understand what message you are sending.

- **"Close the Deal!"** See previous article. You will hear us call this out to our pitcher every time after two outs have been recorded.
- **"0-2 Smart!"** teams that play us (especially more than once) hear us say this before every 0-2 pitch. We say it loud enough for the opposing dugout to hear it. The reasons

are two-fold. We want our pitcher to throw the next pitch high and away and we want the opposing team to expect that a pitch high and away is coming.

We want them to get used to expecting a ball and not a strike in this situation.

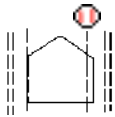
Late in a game, with the game on the line we may get into an 0-2 situation.

We will say “0-2 Smart” and our catcher may see me wipe my hand across my chest.

That tells him that we want a fastball strike on the outer half of the plate, knee- high.

Over the years without exception hitters will take that pitch, expecting a fastball high and away.

Pretty deceiving, huh?



TEACH THE MENTALITY OF HITTING THE GLOVE

We all want our pitchers to throw strikes. Throwing strikes means hitting the catcher's glove. It is that simple; nothing more than that. The umpire may not call it a strike but if a pitcher hits that glove he has done his job. This is the most important cue you can give your pitchers.

Here's another important example of developing a winning mental approach.

Teach your pitchers to focus only on things they can **control** and learn to ignore the things they can't. We have written of this many times. It is non-productive to worry and fret about things beyond your control. In fact it will hinder your success on the mound. That's true in life as well as in sports.

Here are items pitchers cannot control and should be mentally pushed aside.

- Crowd noise.
- The weather.
- Teammates play- mental and physical errors.
- Umpire's calls.
- The other team's noise.
- The condition of the field.
- A win or loss.

Here are items they can control and pitchers should concentrate on these.

- Preparation.
- Work ethic.
- Demeanor.
- Focus on the catcher's glove.
- Productive bullpens.
- Short term memory of failure and long term memory of success.

PITCHING DRILLS

Here are a few of our favorite drills. They are designed to help assist the pitcher in building a sound overall delivery. We have used them with success over the years.

THE 2X4 DRILL

The 2x4 drill is very good for establishing and getting feedback on balance. We set up the board by nailing a 2x4 on top of two other 2x4's placed together. You can nail a 2x4 over a 2x6 or anything that will give you a solid base. The pitcher performs his delivery on the balls of his feet.

Drill 1 is Lower Body only. The pitcher balances on the balls of his feet and simply strides out to landing. Repeat.

Drill 2 is Lower Body again except this time, lift the leg to balance and go to landing. This drill is a little more difficult and will take practice. Repeat.

Drill 3 is the complete delivery, from the stretch. Repeat.

The Checkpoints are:

- Balance on the balls of the feet.
- Balance at leg lift.
- Lead with the hip.
- Balance when the front foot lands.
- Lead with the hip- do not rush the delivery.
- The front foot should be slightly closed.

A towel is used to provide resistance so the pitcher can throw at "full speed."



After the pitcher becomes proficient he may do Drills 1 and 2 with his eyes closed. **(You may notice a flaw or two in this pitcher. His front shoulder has come open too early and his front toes could be closed a degree or two more. As he has matured he has corrected these flaws.)**

THE DUCT TAPE DRILL

(For our friends in the frozen north)

This works exactly like the 2 x 4 drill except that it can be done indoors. Simply tape to the floor a 6' strip of duct tape to serve as the "target line". Then tape a 2' strip across and near the end of this to serve as the "pitching rubber". No ball is required, but 6 oz. weights (with handle) are not a bad idea.

From the wind up, the pitcher begins by placing the arch of his pivot foot on both the target and rubber line. His head and pivot foot should never leave this line throughout the entire delivery.

From the stretch, the pitcher places the balls of his back foot on the target line and against the front edge of the "rubber" line. Again, his head should never leave the target line throughout the entire delivery.

Dads (and moms) can teach and monitor all 10 segments of the pitching delivery from last weeks SOW (at home). If you are creative, you can also help your player rehearse his pick off moves to every base as well as his 1st and 3rd situational skills (all, in doors and without a baseball). This will enable him to "hit the ground running" so to speak once the weather turns. He will have better balance and less to think about at that time.

A mirror (for side view) is also beneficial for him when he works on his own. He can use a hand towel or a rolled up white sock to throw at the mirror.

THE 1-2-3 DRILL

This simple little drill breaks the delivery down into three segments. We like it because it allows the coach to monitor and correct flaws in every part of the delivery. You must explain to the pitcher that the delivery is a free-flowing movement without stops and you are stopping him only for the purpose of this drill. Breaking down the delivery makes it easier to work with specific flaws.

Many pitchers respond well to tactile teaching and this drill is a great "hands on" tool. This drill is performed without a baseball.

- **Step One-** the step back to balance. Have your pitcher pause at his balance point. All pitchers should be able to get to balance and hold that position for a few seconds.
- **Step Two-** from his balance position go down and out to landing to the "Cocked Position."
- **Step Three-** From the Cocked Position finish the delivery.

THE TOWEL DRILL

Ah, the ubiquitous Towel Drill. I have found Tom House's Towel Drill to be a good and faithful friend over the years.

The Towel Drill as introduced and described by Tom House is one of the best drills for helping pitchers with arm action, direction and extension that we have used. And we have used it many times and with very gratifying results.

Have a player whose arm path takes him "around" the ball? Use the towel drill. Have a player who doesn't extend his arm at release? Towel Drill. How about landing open or too closed? Towel Drill. How about the front shoulder flying open? Yup, towel drill. Head moves offline? (Eyes not level to the target) Towel Drill. There is instant feedback if the pitcher reveals any of these faults because they will cause him to miss the target.

I have used this drill with all our pitching students at one time or another. When Stephen was 9 or so we started using this drill often. We would do it before his bullpen. Get the body going in the right direction with good balance and direction and half the battle is won. When we use it as part of our students' routine, we have them stretch, form run and throw. Then go to the towel drill. From the towel drill, they throw a bullpen. After a month or so, or whatever pace their progress takes we use the towel drill only on occasion. Sort of a reinforcement tool. And if we saw an old flaw rearing its ugly head we would get that hand towel out of mothballs and go to it.

With all these benefits, there must be a downside.

There is a caveat. The pitching coach must be ever vigilant that this drill **does not cause his pitcher to rush his delivery**. Do not let him **dive** into the pitch. Because the pitcher is increasing his stride length in order to make contact with the towel he will have a tendency to lead with his upper body, causing him to rush. He will want to have success by hitting that towel and he may use any means to do it.

Do not let him rush. His focus is going to be on hitting that towel. Your focus should be on his body before and after his front foot lands.

It is very important that he keeps good balance and leads with his front **hip**.

That is the correct way to increase stride length; lead with that hip and keep the upper body back.

The Drill

Go to your linen closet and get a plain old ordinary hand towel. Don't get a good one; one that will cause your wife to reprimand you. That's speaking from experience. Did you know that those things come in sets?

This drill is performed from the stretch. However I have pitchers go to the windup after they have become proficient at it from the stretch. This can be done on flat ground or the mound. Basically with youth players the mound is almost flat anyway.

The pitcher grips the towel with his thumb and middle finger. Have him hold his palm open and drape the towel over his middle finger so that there are equal parts of the towel on both sides. (About a 12" length)

Have your pitcher toe the rubber and stride out to landing several times, making a mock delivery, snapping the towel. That is so he may establish where his front foot lands consistently.

Make a mark in the clay just in front of the mark his toe made. Then pace off 5 steps away from that mark. (5 steps of **his foot size** on flat ground- 6 steps if he is on a regulation mound. (Youth league mound- 5 steps are okay.)

His partner or coach kneels behind where that 5-step mark is and extends his palm or glove about chest high over that mark. He makes his normal delivery and attempts to powerfully strike the hand (or glove) of his partner; make a real snapping sound. Pop that glove hard.

Here is where it gets interesting. That glove represents a strike and a perfect delivery. If the pitcher misses the glove he has not thrown a strike and he has a fault somewhere in his delivery. And you are going to find that many of your pitchers will initially miss that glove. They will continue to miss it until you discover the cause.

To my way of thinking that is the beauty of this drill. It helps you to discover the fault(s) and at the same time allows you to teach the correct way. And it gives the pitcher instant feedback.

This gives the pitcher a way to measure his progress and continually reinforce good habits. When he hits that glove he knows he has thrown a strike; a real confidence builder.

And the kids love to hit my palm, hard. I don't use a glove just my open palm. It doesn't hurt but it sounds like it does. Crack!

You will also find that the pitcher has increased his stride slightly. That is a good thing **if he is not rushing and if he can good hip rotation**. A 2" increase in stride length is a 2" better fastball in terms of less hitter reaction time. But remember that warning.

There are several common faults the towel drill reveals in pitchers. I have seen them time and time again.

- **Poor extension**- the pitcher comes up short of snapping the towel on the glove. Look at arm path, arm angle and balance.

- Front shoulder **flying open**- a RH pitcher will come up short and to the left of the glove.
- This is also true of **landing open** and not on a straight line from the pitcher's back instep to his front toe.
- Landing too **closed**- blocking, or throwing across his body. His hips cannot open all the way and he may throw short. Draw a line in the clay to reinforce his landing position. Draw a straight line from his instep toward the plate.
- **Eyes not level** to the horizon- look at balance, arm slot and too much effort. You want to teach a smooth easy delivery. Too much effort equates to overthrowing. You want that head level. Teach, "put your chin" in the glove.
- Any aberration in his body posture, head off line, flexing his back leg too much, head forward too early, etc. will cause poor results.

That's another thing to like about this drill. Faults **always** cause poor results; either missing the glove all together or not hitting the hand with any force.

When I was coaching LL I always had a hand towel in my bag at practices and games.

Misunderstood, this drill can reinforce a **rushing problem**. There. I've said it again. Don't ignore it. If you use this drill, use it with that in mind. But used correctly this is a wonderful tool. Lead with the hip and keep the upper body back.

I have always felt the towel drill has had a beneficial impact in helping my son with his control.

Respect the drill and it will respect you.



Drape towel over middle finger and hold with thumb so that equal parts drape across the finger. (About 12 inches)



Make several mock deliveries to establish the position of the landing foot.



Draw a line in front of the landing toe to establish his stride point.



Step off 5-6 steps in a straight line from the toe of the stride point.



From the stretch execute a delivery.



With good balance and direction the pitcher will snap the hand of the kneeling player.





FAULTS: low elbow and opening up the front side too soon.



FAULT: Diving into the pitch. (Rushing.)



FAULTS: opening up too soon and improper hand placement. (Pitcher's arm path is taking him "around" the ball. Also, look at his front arm.)



Faults will be exposed.

DRILL for PITCHERS BACKING UP THIRD-

My son's college coach uses this drill and Stephen showed it to us over Christmas break. Coaches worldwide have trouble with their pitchers backing up bases. They have a tendency to stand around after giving up a base hit. We need them to get where they are supposed to be very quickly.

What you need: pitchers and catchers, an accurate fungo hitter.

Pitchers line up behind the mound and the fungo coach sets up further behind the mound to get a good angle to simulate balls coming in from left, right and center field.

One pitcher toes the rubber and delivers a strike to his catcher. (We did this drill after throwing bullpens so we had the pitchers go through their delivery without a baseball.)

The coach calls "left field, center or right field" and the pitcher sprints to the deepest point along the third base line that is in line with where the simulated outfield throw will come.

The coach then hits a fungo to the pitcher and he fields it to simulate an overthrow to third base. He then hustles with his ball to the back of the line.

The keys are the pitchers must hustle to the right spot deep along the fence. They must not let the ball get by them; dive, block it with their body, nose- whatever it takes because if it gets into the dugout a run will score.

Run this drill several times through, until the coach is satisfied that they will perform properly in games.

BACKING UP HOME-

Now have the pitchers line up off to the side of the mound. The coach is going to hit fungoes through the catcher to the backstop.

One pitcher simulates a pitch and the coach calls out "Home" or "four" whatever your preference. The catcher moves to the proper position to block the plate and the coach hits a ground ball fungo to him. The catcher must let the ball get by him and the pitcher (who sprinted to the deepest point along the backstop and behind the catcher, fields the baseball.

Again the key is for the pitcher to get to his spot quickly. It is more difficult for him to field the ball here because the catcher is blocking his view. He must react very quickly. It is very important for him to immediately gain control of the baseball.

We ran this drill for about 1/2 hour. It was a day when we had pitchers and catchers only so we throw bullpens. We had two pitchers throwing pens

while the rest of them were fielding bunts and throwing to first and second base. After we had rotated all pitchers through their pens we performed the above drill. You can add this as a part of Pitcher's Fielding Practice.

This is a great drill because fungoes are somewhat unpredictable as they are hit to the pitcher. They may hit the baseline dirt the infield or the grass beyond the baseline and the pitcher must be very quick in fielding the baseball.

Other Baseball Excellence products that may help you are:

DVD's-Pitching-Position One

Pitching Mechanics & How to Throw a Bullpen
 Youth Skills and Special Drills
 The Game Within the Game
 Thrive on Throwing

Books-A Coaches Guide To Baseball Excellence

Head Games

Email Products- A skill and a Drill

Coaches Practice Planner

SUMMARY

We have covered how to build an effective delivery so that pitchers may:

- Develop Pitch command
- Have a good chance of remaining injury free
- Develop movement on their pitches

We have given you a game-day checklist to monitor your pitcher.

We have introduced the idea of functional strength development. This can start at an early age.

The importance of pitching inside.

Real world examples of pitching success and failure to help the coach or dad prepare his pitchers.

Coach pitching cues.

A pitching Plan.

The importance of the change up.

Pitching from the stretch.

The importance of positive Mound demeanor.

The mentality of pitching.

Pitching Drills.

*We hope this document has helped you with a better understanding of the art of pitching.
 The best of luck to you.*