A Parent's Guide to Youth Baseball Pitching

If you're reading this, chances are your player has taken an interest in pitching. Supportive parents are the best coach your child will ever have. You can change someone's life with a simple game of catch. That's why even the toughest baseball moms and dads shed a tear when Ray Kinsella asks, *"hey dad, wanna have a catch?"* at the end of Field of Dreams.

There are 7 billion people on the planet and almost all of them throw *something* every day. But kids today pitch too much and throw too little. Previous generations played outside until the sun went down throwing a baseball, football, frisbee, skipping rocks, etc. Now, most throwing is organized. Make no mistake, most coaches can tell who picks up a ball outside of practices and games.

The purpose of this guide is to provide a look into our pitching philosophy and give parents some simple tools to utilize when working with and caring for their player. Naturally, this guide is just the tip of the iceberg in terms of pitching 101 and there may be those who disagree with some of the key elements we discuss below. We encourage parents and players to look all over and experiment as they begin their pitching journey,

Three Keys to Youth Pitching

Throw Strikes First

What's the best pitch in baseball? A well-located fastball.

Kids' minds are warped by video game pitchers who can throw a perfect backdoor slider simply by pressing triangle on the controller. In the real world, getting the ball over the plate consistently is already incredibly hard. Walks are boring! We need to throw strikes and locate the ball where we want before we start thinking about the more exotic pitches. Learn how to throw strikes first and the velocity and the movement will come.

Body Language is Contagious

What's the most important pitch in baseball? The Next Pitch.

Whether you're on the field in the final inning of a game or in the batting cages during practice, understand that failure is part of the game. When you're 8-10 years old and learning something new, mistakes should be expected, and they should not be discouraging. Youth pitchers tend to carry the weight of their mistakes on their shoulders and problems begin to snowball. It's our job to make them understand that their mental approach and their body language is as important as their physical tools.

Arm Care is Critical

Warm-up TO throw. Not throw to warm-up.

It should go without saying that the health of our players is more important than the results of a game. Throwing a baseball is a violent motion that effects every joint and muscle in the arm, but the impact can be managed safely. Sports science tells us that arm fatigue is the number one cause of improper mechanics. Fatigue can be mitigated by proper preparation and recovery. While coaches also bear some responsibility, parents MUST be the biggest advocate for the arm health of their player.

How to Throw Strikes?

"See the glove, hit the glove! Just pretend you and the catcher are having a catch!"

If only it were that simple.

Proper pitching mechanics use the entire body to deliver the ball effectively. From foot placement when coming set, to the degree your knees bend, to hip direction as you step, to shoulder rotation at landing, to back bend upon finish. Each element has an impact on where the ball ends up after it leaves your hand. Pitching is so much more than having a catch.

What We Teach: A "Basic" Step-by Step

For the purposes of this step-by-step explanation, we will assume a pitcher is right-handed.

1. SET
    a. Player is loose in an athletic stance with feet slightly wider than shoulder's distance with toes facing 3rd base.
    b. Player comes set by bringing hands together at chest and bringing feet closer together with a slight bend to the knee. Shoulder should be slightly closed to the batter. Front toe positioned ahead of back toe.
    c. Proper grip on baseball is important. Utilize the laces with a 2-seam or 4-seam grip. Fingers need to stay on top of the ball at release.
2. ELEVATE
    a. Pitcher elevates their front knee above their back toe. Knee should reach hip height; heel remains below knee. Body should be compact
    b. Player simultaneously elevates their hands together to head height. Maintain balance
3. SEPARATE
    a. Player separates their hands in opposite direction with glove hand moving forward the plate and ball presented back towards 2nd base.
    b. Throwing glove arm to the target, body will follow
4. ATTACK
    a. Player drives off the back leg leading with the hip, shoulders remaining closed to the batter for as long as they can, with their chest stretching towards the extended glove (Don't just tuck the glove).
    b. Stride direction should be towards the plate with foot landing between 12 and 1 o'clock to the plate. Front leg should be braced to help transfer power to upper half.
5. FINISH
    a. Player's step should extend with chest continuing towards the plate which tucks the glove under the arm and creates a flat back follow through.
    b. Pitching arm should bend all the way around the body allowing for proper arm deceleration.

Why do we teach pitching out of the stretch?

A: I believe that the key to establishing pitching fundamentals is minimizing the opportunity for mistakes. Pitching from the stretch tends to have fewer moving parts which allows for fewer opportunities to throw off timing, balance, and rhythm.

What If my son is more comfortable pitching out of the windup?

A: Then keep going for it! If your player takes naturally to a windup delivery, then let them progress that way. A solid, repeatable delivery is what we're searching for and if your player can maintain more consistent motion from the stretch then that should be encouraged as well.

Young pitchers (and many parents) tend to have it in their head that their throwing arm is what controls where the ball ends up, when in reality the rest of the body is more important. Proper pitching creates a rubber band type motion that reverberates through the body at release of the ball. Proper mechanics also align the body so that stress isn't limited to one muscle or joint. Make no mistake, players who pitch with their arm only have a higher likelihood of pitching inaccurately and a higher likelihood of arm fatigue or injury.

Lots of words, but how do we focus on throwing strikes?

- Stop thinking about velocity. Hitting a baseball is extremely hard. Pitchers already have an advantage by standing 10" higher than the batter. The game is already in our favor!
- Staying on top of the ball at release. Balls that miss the strike zone wildly tend to "fall" out of the side of the player's hand. Use your fingers on top of the ball to limit lateral movement.
- Extending glove hand towards the strike zone. Throw the glove towards the catcher and, body, then the pitching hand will follow the glove hand to nearly the exact same finish position.
- Stride Direction. The stride landing point carries the body behind it. Falling off to the side leads to pitches missing left or right.
- Bringing the center of the chest towards the glove. Again, center mass of your body towards center of the target.
- Maintain eye/head level throughout delivery

What We Don't Teach

Arm slots. When a player is first learning to pitch, messing with their natural arm angle and arm movement can become counterproductive.

Curveballs. Improperly thrown breaking pitches are 80-300% more likely to cause an army injury.

How to Overcome Mental Hurdles?

70% of kids in this country quit sports by age 13. Unfortunately, that is the age when the lessons learned through sports become most important to personal development. Teamwork, dealing with adversity, recovering from failure, etc. As parents, we need to understand that the way we interact with our player is going to have an incredible impact on how they handle the mental hurdles the game throws their way.

Moving On Quickly

As soon as the ball leaves the pitcher's hand, what happens next is largely out of their control. What they do control is how they handle their new job. Cover a base, backup a throw, get ready for the next pitch, etc. Bad things might happen that are no fault of the pitcher: a fielder might make a mistake, or the umpire might miss a call. How we carry ourselves into the next pitch is what matters the most.

Philosopher, Ted Lasso once said:

"Do you know what the happiest animal on earth is? It's a goldfish. It's got a 10 second memory. Be a goldfish."

One pitch, one game, or one season does not define a pitcher. If we carry the memory of what just happened into what is about to happen, we're setting up for more failure. There's no easy solution to teaching your player to recover mentally. As a coach, when I see signs of things a pitcher losing confidence, I visit the mound and lead with a joke: *"What's your favorite color? What are you having for lunch after the game? Do you see that ridiculous hat Billy's Dad is wearing in the stands?"* Anything to change their mindset. Parents should think about it the same way. A few bad pitches don't need to be discussed on the car ride home. Highlight and praise the bounce back moments. Baseball is a game of second chances and there's always a next pitch. A pitcher who can manage the highs and lows on the mound will see personal success but also be a team leader.

The Outcome is Largely Meaningless

Unpopular opinion, but the outcome of an 8-12yr old Little League game is meaningless. No one is being offered a scholarship, no one is earning a salary, and the trophy that you might get at the end of the day will be covered in dust and cobwebs in about 2 weeks.

We signed our player up for baseball to have fun and it's our job to reinforce that point constantly. Sure, winning is great, but remember, kids learn more from their failures than they do from their successes. Failure is the biggest driver there is. It is 100% okay to fail on the mound, so long as you learn and improve from it

Avoid Comparisons

An 8-year-old should not be comparing their game to a Major Leaguer. An 8-year-old shouldn't even be comparing their game to other 8-year-olds! Your player may have picked up a tennis ball with his left hand at age two and whipped it across the house like Steve Carlton, but that doesn't mean they'll be the next "Lefty." All kids develop and mature at a different pace. The process of becoming a pitcher is much more enjoyable for player and parent alike if you move at an appropriate pace and take pleasure in the small, personal gains.

Some 8-year-olds look like they're 6 and some look like they're 15. Some players have the functional strength to throw hard, some do not. The years where players are first starting to take the mound are the exact same years their bodies start to mature. When muscles are starting to build, but perhaps not at the same rate.

Make sure your player appreciates their individual process of learning how to pitch more than the results themselves.

How to Care for Your Pitcher?

The importance of Arm Care for a young, developing pitcher cannot be overstated. It's a simple concept to understand, but often both parents and coaches overlook warning signs and push for one more batter, or one more inning. It's up to all of us to weigh the long-term health of our players over the short-term desire to win a game.

Risk Factors for Young Pitchers Include:

- Improper Warmup – pitchers who do not stretch their arms out properly and thoroughly are far more likely to experience injury or fatigue.
- Overuse – excessive innings and long innings are equally damaging
- Pitcher/Catcher Athletes – playing catcher on a "rest" day is often just as strenuous on the arm
- Excessive Velocity – too much focus on throwing hard without understanding proper throwing mechanics
- Pitching Distance – many young pitchers are incapable of controlling their body at the distance their league requires.
- Single Sport Specialization – athletes who compete in multiple sports are more likely to work and develop all parts of their body

What to Look for in a Warmup

Science tells us that body temperature, blood circulation, lactic acid build-up, and nerve patterning are all developed during a pre-game warmup. Common Sense tells us that stretching our muscles leads to flexibility which is good for our health. All the above is true. A warmup needs to be adequate in duration and address a wide variety of motions. As stated earlier, proper pitching mechanics involve the entire body so a pitcher's warmup should do the same. Picking up a ball to toss with a partner 10 minutes before first pitch is NOT a proper warmup.

A proper warmup should not make you fatigued but should instead gradually build the body for what it's about to experience on the field. One of the simplest ways to do this is through throwing progressions.

- Ten Toes Throwing (5 minutes)
    - In this warmup drill, players face one another with all ten toes pointing to their partner in an athletic stance with knees slightly bent.
    - Keeping head centered, rotate hips and shoulders back and then through the ball to our partner.
    - Focus on release of the baseball out front, proper rotation of shoulders, hitting partner in chest
- Rocker Drill (5 minutes)
    - In this drill we stand perpendicular to our partner and rock body weight back, then forward to throw making sure we use our lower half, hips, and core to deliver the upper half.
    - Focus on weight transfer throughout body while still hitting partner with accurate throw.
- Shuffle Throw Drill (5 minutes)
    - This drill incorporates feet and a forward movement into the same upper half movements.
    - Focus on keeping heels and hips in straight line to target with a shuffle step and finish
- Long Toss (5 minutes)
    - Incorporate entire body with stronger throws to build comfort with acceleration and deceleration action in arm muscles.
    - Focus on extending the body and moving fast, forward

Preventing Arm Fatigue

The one thing that every parent and coach can absolutely control is pitch count. Exceeding a pitch count is the number one cause of arm soreness and injury in youth baseball. Pitch Smart, a joint effort between Major League Baseball and USA Baseball, worked with top researchers and doctors throughout the country in coming up with the following chart for youth pitchers:

AGE	DAILY MAX PITCHES	REQUIRED REST (PITCHES)				
		0 Days	1 Day	2 Days	3 Days	4 Days
7-8	50	1-20	21-35	36-50	N/A	N/A
9-10	75	1-20	21-35	36-50	51-65	66+
11-12	85	1-20	21-35	36-50	51-65	66+
13-14	95	1-20	21-35	36-50	51-65	66+
15-16	95	1-20	31-45	46-60	61-75	76+
17-18	105	1-20	31-45	46-60	61-75	

Pitch Smart also recommends the following in terms of excessive pitching:

- Do not exceed 60 combined innings pitched in a 12-month period
- Avoid playing catcher while not pitching
- Players should not pitch in multiple games in the same day
- Pitchers should not appear in a game as a pitcher for three consecutive days (regardless of pitch count)

Think about what we ask of Major League Baseball players… pitching once every five days for around 100 pitches max. Why would we ask more of our children than we do out of grown adults? Sadly, current data from the American Journal of Sports Medicine indicates that the number of youth baseball pitchers with elbow injuries appears to be increasing:

> *"Research points to overuse as the principle risk factor. The risk of elbow pain in youth pitchers is correlated with the number of pitches thrown in a game and in a season. Adolescents who*

competitively pitch more than 85 pitches per game, more than 8 months out of a year, or with arm fatigue are several times more likely to require elbow surgery."

Parents and coaches also need to consider types of pitches players are throwing at a young age. In the same study by the American Journal of Sports Medicine, the curveball was associated with a 52% increased risk of shoulder pain and the slider was associated with an 86% increased risk of elbow pain.

Monitoring signs of arm tiredness is a collective responsibility among coaches and parents. The first sign of fatigue is loss of control. Players can be tired while still throwing hard, but they will lose their command. We have to resist the urge to ask a pitcher to "bear down" or "push through" when control is lost. Just because your player is bigger and stronger and better at throwing strikes than the others does not mean that their pitch count should be abused. No one will remember that extra inning you pitched at age 8, but everyone will remember if you blow out your elbow! Biomechanics and functional strength are difficult subjects to understand, but every parent can count pitches.

How to Recover

Short term recovery is all about hydration, nutrition, and sleep. But let's be honest… these are young players we're talking about. We can shoot for a diet of complex carbohydrates and proteins but chances are most of us are more likely going to grab a quick bite from the snack stand and try to get to bed before 10pm on a school night.

In the same way we build a warmup routine, we should also build a cool down routine. The body needs to transition from high intensity activity to a more relaxed state. Take a light jog: sweat increases blood flow which circulates oxygenated blood to tired muscles. Develop a post-game flexibility program where the forearms, shoulders, torso, and lower body are stretched loosely with kinetic bands or other devices.

But also, take time off from pitching. Again, we don't ask Major Leaguers to pitch year-round so why should we ask our children to do so? Pitch Smart recommends that players aged 8-12 take at least 4 months off from throwing every year with at least 2 of those months being continuous. Enroll your child in an activity that uses different muscle groups. Try something new. The best athletes in the game today all played multiple sports.

We hope that you've found something useful to help with physical skills, mental strength, and health of your young player. You can't throw the ball for them while they're on the mound, but you can encourage and support them both on and off the field. We're happy to answer any questions you might have about this guide, and we look forward to helping you boost your pitcher's development for years to come!