

# **Youth Pitching Clinic**

**For Cranberry Township Athletic Association**

**Written and Presented by Thom Helisek**

**April 2008**

**Some information in this document is the property of National  
Pitching Association, Del Mar, CA.**

**[www.nationalpitching.com](http://www.nationalpitching.com)**

The durations/repetitions listed here are suggested guidelines only.  
ANY drill or routine should be done "to tolerance" - that level at which  
you can perform the drill PERFECTLY.

## **NPA Pitching Model And Timeline**

Sources: National Pitching Association, Downright Filthy Pitching by Perry Husband

### **Definitions**

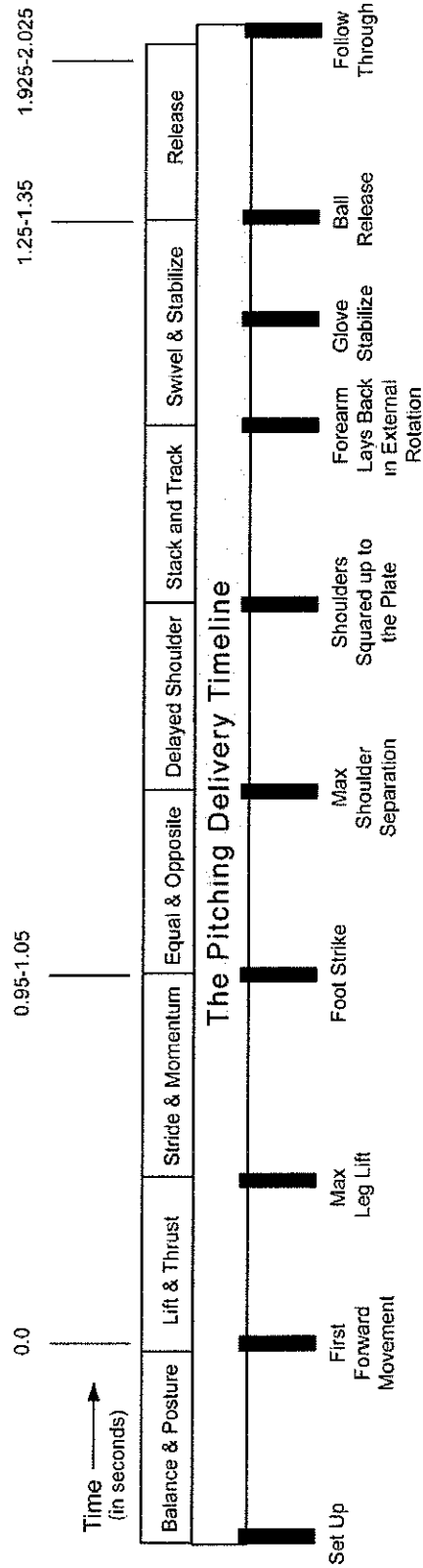
Safe/Usable velocity = Pitching without injuring your arm or body and being able to throw strikes. Premise is proper training and preparation. Do not compromise safety for velocity.

Real velocity = Velocity on the radar gun.

Perceived velocity = Speed on the radar gun +3 MPH for each linear foot released closer to plate.

Effective velocity = Real velocity + location

## Progression of Critical Events Matching Pitching Variables with the Delivery Timeline



## **Sample Pre-game / Pre-practice Routine**

Warm up to throw, don't throw to warm up.

Flexibility is more important than stretching. Flexibility is the ability to retract.

### **Dynamic Warm-up**

Jog forward

Jog backward

Karaoke left and right

Skip forward

Skip backward

Lunges forward and backward (with twist)

Shoulder, elbow and hand presses – 3 hand positions

Saws – side and front – three hand positions

### **Flexibility**

Hip Circles - Rotate hips not just shoulders, feet close, shoulder width, feet wide.

Toes forward. 3 to left, 3 to right

Pyramid Hamstring Flex – feet wider than shoulder, 10 seconds each location, middle, right, left

Adductor Flex – feet wide, toes forward, good balance, 10-15 seconds each side

Hip Flexor Lunge – good posture, move entire torso forward, 1 each leg 10-15 seconds

Squat Hold – feet about 1 inch apart. Keep heels on ground for 10-15 seconds, hold hands out front

Straight Arm Overhead Extensions – palms up and elbows straight. 3-5 reps, slight pause after twist

Shoulder circles – forward and reverse

Pinch shoulders forward, back, up – 3-5 reps

Arm rotations – arms in front of shoulders 3 hand positions, forward, back, small, med, large

Pre-game – Don't max out in bullpen. Throw 30-45 pitches or to tolerance. Only last 10-15 should be high intensity.

## **On-field Throwing Drills**

Towel and velocity towel

Flat ground vs mound work

1 knee drill

2 knee drill

Power position

Balance point

Step behinds

Cross overs – lead, lift and throw

The truth about long toss - 3-6 each distance

45ft, 60 ft, 90 ft, 120 ft, 150 ft, 180 ft, 210 ft, 240 ft, ...

Do it with perfect mechanics only!

Throw CH from 90 ft

Weighted baseballs – underload and overload – 4-5-6 oz baseballs ONLY.

Pick-off moves -- you must at least be able to hold runners close

Throw 3 off-speed pitches in a row and then a fastball.

## **Body Training**

Can be done after game, in-season, off-season

### **Isometric –for core – front, back, side**

Prone hold – plank – elbows under shoulder

Side hold – point toes, elbow under shoulder

Bent knee back hold – knees and feet together – 30 seconds

Horse

Back bridge

### **Core movement**

Side up 5- 20 reps – move hips up

Side up at 45 degrees – move hips up

Side up with rotation – maintain hip

Bent knee back press – elevate, squeeze glutes

### **Medicine ball**

Alternating leg lift – meet ball with each foot, don't just move arms

Russian twists – engage abs, toes up, 10-15 reps, rotate torso, not arms

Supermans – elevate legs from hips and med ball 10-15

### **Joint integrity**

Push ups - pinch shoulder blades 3 grips, 5 reps, go down to 90 degrees only

Cords and dumb bells

Fence press - face forward, keep shoulders straight, pinch shoulder blades 10-15 seconds, 2 hand positions. Face away.

## **Functional Training In The Weight Room**

### **Medicine ball workout**

Medicine ball throws

Clocks

Overheads

Elbows up, one arm at a time

### **General information about weight training**

Use dumb bells for isolating each arm

Use 3 hand positions

Keep arms in front of shoulder

Don't go past 90 degrees

Squats, deadlifts, abductor, adductor

Machines provide stable movements

Free weights provide additional stability work

Lunges – front, back, side, with weight, twist

### **Bands or tubes and light (2-3 lbs) dumbbells**

Helps promote healthy joints by recruiting ligaments, tendons and not muscles.

You can these every day.

### **Physio balls**

An excellent way to engage abs and lower back on all exercises.

### **Hand Gripper**

Can build a stronger grip for more stable pitches and more control of hand, wrist and forearm.

## **Important Points To Remember**

### **Post-game routine**

Always do aerobic activity to move blood out of arm. If you ice, you should jog immediately after icing. 10 minutes of ice = 20 minutes of aerobic exercise  
You can also ride stationary bike while icing.

You have no more than 40 minutes after an outing to start the recovery process.

Keep a pitching journal that includes your goals, pitching improvements, progress, game statistics and other notes.

Keep pitching chart and review it after the game.

### **Nutrition**

You are a full-time athlete and need to fuel your body.

Eat lots of fruit and vegetables.

Soda is bad

Drink lots of water.

Pick your supplements wisely and consult with your doctor before taking them.

Great training without proper nutrition and mental preparation will compromise your performance.

### **Sample routine between starts**

A 6-day throwing program is in order, but it should involve steps like long toss one day, flat ground work one day, bullpen one day, rest day, scrimmage day, rest day. Lift heavy the day after outing with light throwing. Play long toss on day 2. Work in cardio, weights, bands, flat ground. Rest the day before next start.

A good routine could look like this:

Day 0 = Game day. After outing, if you like to ice, fine, but it shouldn't be more than 10-20 minutes and you should at least match that amount of time with aerobic work. Ride the bike or jog for 20-40 minutes.

Day 1 = This is usually a good day to do heavy weight training if you're on a program for that, and to do some VERY light throwing. However, since you're feeling a bit overtaxed, cut back on the weights and the throwing. Do some more aerobic work this day.

Day 2 = Aerobics and throwing, but again in your current state, keep the throwing somewhat light. Aerobics should come afterward.



## **Important Points To Remember (continued)**

Day 3 = Much the same as day 2. If you usually throw a bullpen between starts around this time, you might want to think about doing it on flat ground, which is much less stressful on your arm. It's not necessary to get on the mound between starts. May be a good day for long toss.

Day 4 = Good day for light skill work (towel drill, etc.) but no heavy throwing or lifting. Get ready for the start tomorrow.

Day 5 = Pitch in game. After game, ice if you want and make sure to do long aerobic work afterward.

### **Miscellaneous Items**

The swing or throw you just took lasts only 15 seconds in your muscle memory system before it starts to fade. This is called a "trace". You need many traces to create muscle memory.

It takes 30 days to learn a new habit.

## **Pitch Counts GUIDELINES From ASMI and NPA**

Source: American Sports Medicine Institute and NPA

### **11-12 year old pitchers**

75 pitches per game

100 pitches per week or in any 7 consecutive days

1000 pitches per season

### **13-14 year old pitchers**

75 pitches per game

125 pitches per week or in any 7 consecutive days

1000 pitches per season

### **15-18 year old pitchers**

105 pitches per game – MAX

130 pitches per week of in any 7 consecutive days

1250 pitches per season

Pitch only to the point of fatigue and not past it.

Take 2-3 months off per year from throwing in late fall and winter.

## **When to learn pitches**

9-10 year olds – fastball

11-12 year olds – changeup

14-16 year olds – curveball

17- and older - slider

## **Grips**

The most important points to remember about grips are:

Always make sure the thumb and middle finger "cut the ball in half"

Break on the ball is determined by position of wrist and forearm

Position of wrist and forearm also determine speed

You can throw all pitches with the same grip

FB is force thru the ball

CB, CH is rotation around the ball.

Slider is half a karate chop

### **Fastball**

4 seam – fastest – middle finger and thumb cutting ball in half. Across 4 seams, horseshoe on inside.

2 seam traditional – sinks and runs to arm side. Middle finger and thumb cut in half, middle finger on seam

2 seam transition grip – cross seam, thumb not on seam. Less control. May sink or cut.

### **Off-speed**

Off-speed pitches are a great tool with which a pitcher can upset a batter's tempo or timing. They are especially effective when thrown just like a fastball as it makes them more challenging for a batter to identify as an off-speed pitch - thus causing him to swing early.

Change-up – easiest grip is 4 seam FB, but turn palm and forearm out. Circle change is FB, but do not move middle finger. Problem is when you move middle finger. The more your palm goes out, the slower the ball goes

Split – where 2 seams come closest together, that is North Pole, split fingers on equator put thumb in middle the V is like middle finger. Then throw your FB. The wider the split, the slower it goes.

### **Curveball**

The most important points to remember about the breaking ball grip are:

Always make sure the thumb and middle finger "cut the ball in half"

Bury the ball into your hand and squeeze the ball tightly

Wrist and forearm in "karate chop" position create change in speed

Breaking ball grip takes more strength to maintain

There is no "flip" or "snap of the fingers" when throwing a breaking balls

Hand positions = Cutter, slider, slurve, curve

No standard grip, but grip with middle finger on upside-down horseshoe, buried in hand.

Create karate chop in glove. Don't thumb the ball.

Throw with FB mechanics

## **NPA Guidelines**

**Control** = Being able to pitch around the strike zone and not walk batters.

**Command** = Throwing the pitch you want, for a strike, or to a location, regardless of count, inning, score, situation.

The most important pitch in baseball is \_\_\_\_\_.

The best pitch in baseball is \_\_\_\_\_.

### **Ratios**

60-65% fastball

20-25% curveball/slider

15-20% change-up/split

The successful pitcher must have 3 good pitches. To win, you must be able to command 3 pitches more than 50% of the time.

3:1 strike:ball ratio

3:1 strike-out:walk ratio

### **Counts**

Most important count = 1-1 (throw a command pitch)

Throw fastball on any count (with proper location)

Once you establish your fastball, throw change-up/split any time a fastball is in order. 3-1, 2-1, 2-0

Location is not as important as change of speeds.

Throw curveball in 0-0. When put into play by hitter, = .078 BA.

## Resources And Websites

### Resources:

1. [www.nationalpitching.com](http://www.nationalpitching.com) – subscription, \$50.00/yr
2. [www.hsbbaseballweb.com](http://www.hsbbaseballweb.com)
  - a. Message boards
  - b. Timelines
  - c. Other information
3. [www.wpabaseball.com](http://www.wpabaseball.com) and profile
4. [www.perfectgame.org](http://www.perfectgame.org) – showcases and player rankings
5. [www.playheadfirst.com](http://www.playheadfirst.com) - showcases
6. [www.effectivevelocity.com](http://www.effectivevelocity.com) - book
7. [www.areacodebaseball.com](http://www.areacodebaseball.com) – invitation only
8. [www.collegeboard.com](http://www.collegeboard.com) – important college info
9. [www.selectfestbaseball.org](http://www.selectfestbaseball.org) – well attended showcase in northeast
10. [www.ncaaclearinghouse.com](http://www.ncaaclearinghouse.com) – must register here before playing D-1 or D-2
11. <http://roundthird.blogspot.com/>
12. Beaver County Sports Zone, All American Baseball Academy
13. All college team and coach contact information available on www

### “Other” showcases/camps

1. Blue-Gray
2. TPX Top 96
3. Baseball Factory

### “Other Resources”

Recruiting services and companies.

## Pitching Chart

Pitcher: \_\_\_\_\_

Opponent: \_\_\_\_\_

Date: \_\_\_\_\_

	B																		
	S																		
	B																		
	S																		
	B																		
	S																		
	B																		
	S																		
	B																		
	S																		
	B																		
	S																		
	B																		
	S																		
	B																		
	S																		

Pitches: \_\_\_\_\_ Strikes: \_\_\_\_\_ Balls: \_\_\_\_\_ Innings: \_\_\_\_\_ Pitches/Inning: \_\_\_\_\_

Pitches per inning: 1st: \_\_\_\_\_ 2nd \_\_\_\_\_ 3rd \_\_\_\_\_ 4th \_\_\_\_\_ 5th \_\_\_\_\_ 6th \_\_\_\_\_ 7th \_\_\_\_\_