Pitcher performance training readiness:

Exercise programs for developing posture control for Pitchers

Brad Krieg MS, ATC, CSCS, CES, PES,
TPI level 2 juniors

Is this how you have built your programs?

@EricCressey

CRESSEY SPORTS PERFORMANCE

Youth and High school pitchers most common issues

- Body control and balance
- Stiff and tight
- Very mobile
- Avoid getting low
- Poor hip shoulder separation
- Lack of deceleration in all planes
- Athletic but not skeletally matured yet or over/under development of upper or lower body
- Speed sequencing / Timing
- Posture control with head and side-bending
- Overall lack of competence and confidence of athletic movement

Mike Reinhold/Dr James Andrews Group research: 3 things baseball players need to develop to be elite pitchers

First they had to look at the following things.

1. What elite level pitching mechanics look like?
2. What faults are most common in youth baseball?
3. How does youth pitching mechanics change as they age?

What did they find?

1. Stride length shorter vs elite pitchers
2. Open landing vs elite pitchers
3. Land with too much ER (layback early in delivery when foot plant occurred compared to elite pitchers
4. Trunk separation - Less separation of their hip shoulder then elite pitchers

- Studies have proved correlation between trunk separation and stride length increases velocity
    - However stride length can also create issues. It has been developed through leg drive not just striding out further.

How do you fix these problems to get better performance..

1. Hip shoulder separation
   a. Helps transfer the force from legs to arm
      i. Must have the mobility of hips and spine with core control

2. Linear and rotational power
   1. Must train moving forward and backward with confidence and competent.

3. Lower body drive and intent
   a. This is the last part. It should increase stride length and help landing in correct position. Intent should be taught as well but sometimes there is a lack of mobility, strength , stability to drive down the mound.

Lower body develops the power, Core transfers it and upper body dissipates it.

We focus on scapular and shoulder exercises but so many kids still fail or do not peak at their full potential due to this issues listed above.

We must make athletes not just baseball players.

Quick tests used in large groups

- Single leg wall deadlift
  - Add rotation to leg on ground
- Overhead wall push with single leg lowering
- Push up hold with leg drive with foot on the wall
- Tests look at mobility and stability of many segments of the body with functional strength
  - Can they hold correct position and how long and how easy or hard does it look.

Push up hold with leg drive with foot on the wall
Add in pelvic rotation to add more of a challenge

Overhead wall push with single leg lowering

Lower one leg down and see if they can maintain the one leg in the air

Single leg wall deadlift

Add in upper body rotation to the leg on ground for more of a challenge

Where do I start in finding the best path?

- Screenings
  - FMS/ Y balance/ core assessment checklist/ ETC.
  - Takes time
  - Obrien's test – good self test
  - Tricep strength test – good partner test
  - Ball hold test

Getting the right warm up

Must be sweating, dynamic, moving in a lot of different directions with change of direction

Avoid static stretches for those who are hypermobile

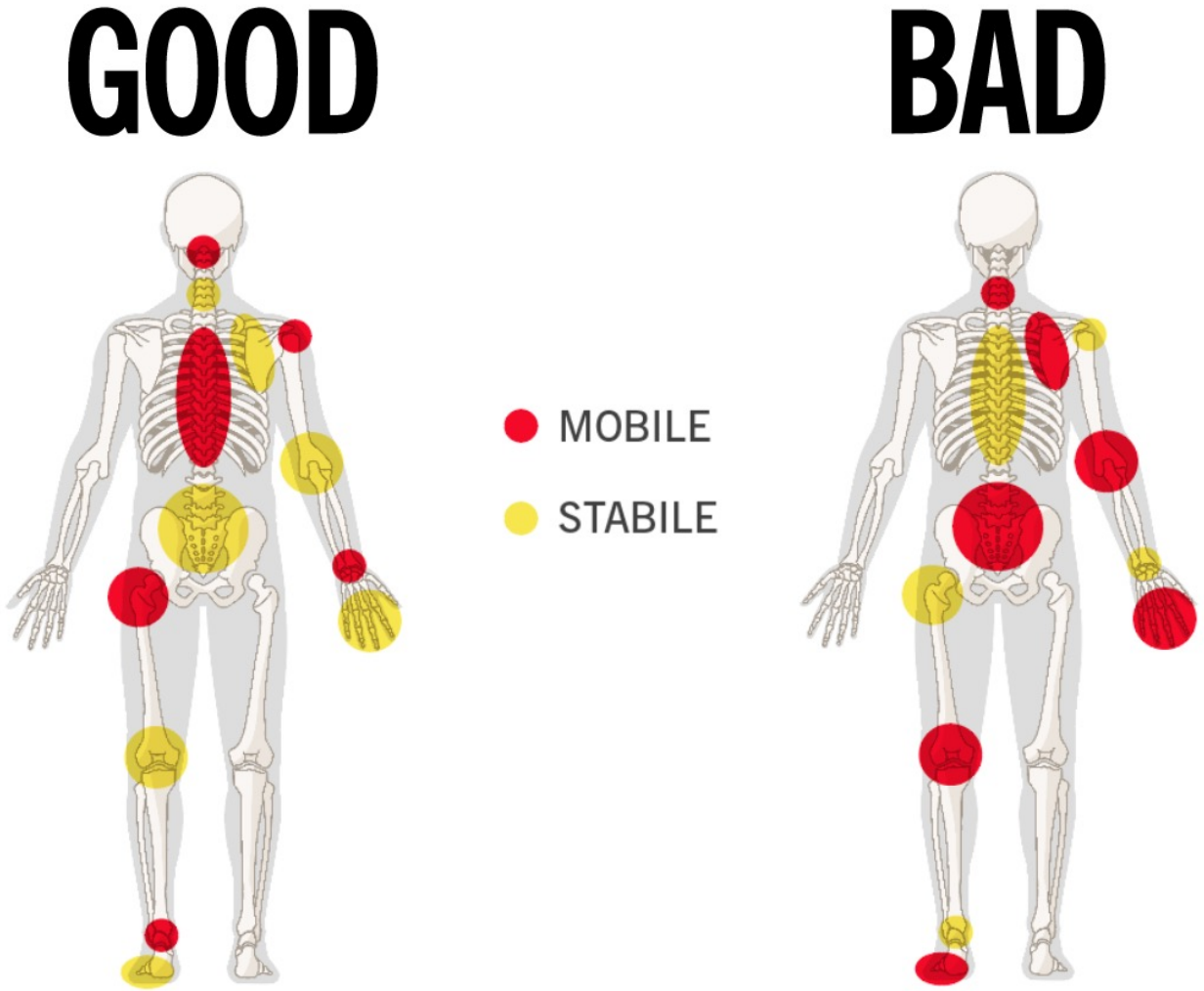
If failed the previous tests try them again.

Warm up for posture control

- Separation
  - Hip twist in standing
  - Push up hip twist
  - Cross overs and cross behinds
  - Kneeling separation from knees

  - Speed and change of direction with head control
    - Run forward/ back
    - Side shuffle with intent
    - Speed Vine
    - Push up sequencing
    - Kneeling jumps

Stability & Mobility



Mobility & Stability

WHEN?
Growing
5-8 years old & 12-15 Years old
This is the same window for Speed work.

- Groin stretch with arms overhead
- Separation stretch ½ kneeling at the wall
- Childs pose arm lifts & with sidebending
- Side prop (when to use?)
- Prone prop with reach and with rotation
- Pike push ups
- Prone arm/leg lifts with elongation

Lower body oriented

- Overhead lunge with arms up with resistance
- Lateral lunge with sliders
- Hip wall sit with ball push
- Lunge with band or resistance in hand
- Lawnmower lunge reaches with push back
- Deadlift landmine bar drops and Rows

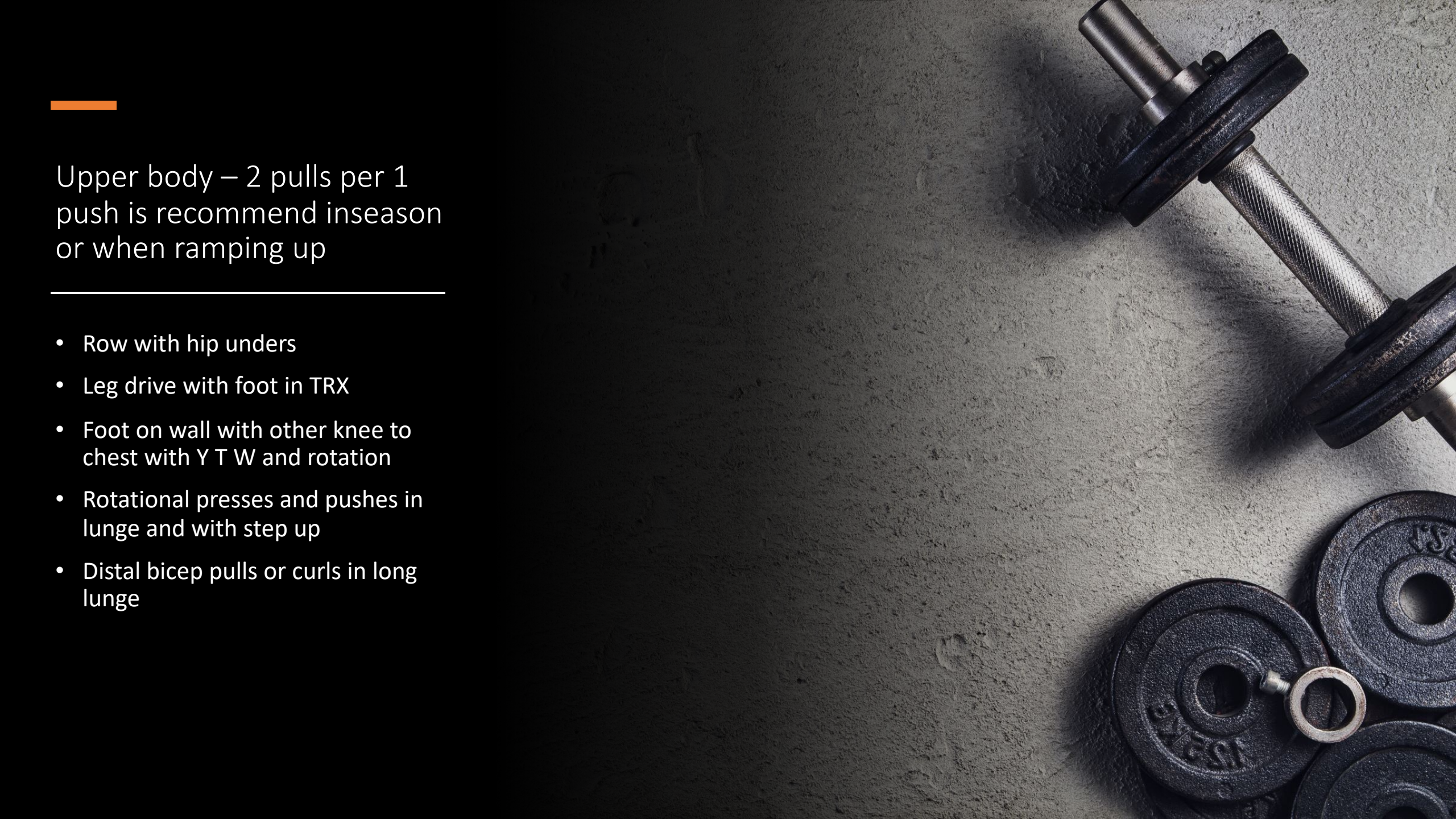
Core

Transfers the energy from lower body

- If it transfers energy we must number 1 make sure its stable then make sure it can control the end range of motion of elongation and extension. Then you can train the speed of it. I am a big fan of rotational med ball throws but you must not forget stability and end range strength.
- Plank with band around wrist with pike rockers
- Anti-rotational core stability side step and band
- Single leg lowering with Grey cook band
- Supine hip rotations with ball squeeze
- Toe touch crunches (notice differences side to side)
- 90 degree pull up hold with knees to chest with SL lowering (can also do with rotation)

Upper body – 2 pulls per 1 push is recommend inseason or when ramping up

- Row with hip unders
- Leg drive with foot in TRX
- Foot on wall with other knee to chest with Y T W and rotation
- Rotational presses and pushes in lunge and with step up
- Distal bicep pulls or curls in long lunge



Overall functional strength

- Step thru landmine presses or DB press
- Belt side step with separation with KB
- Lateral Ice skater jumps with plyometric

Scapular programming

My weighted ball program

Wall program with sliders

Peer reviewed IRB Weighted ball research

6-Week Weighted Ball Training Program on Baseball Pitchers (mikereinold.com)

The Real Reason Why Weighted Baseballs Increase Pitching Velocity, and Injury Rates - Mike Reinold

This is just for education so you know the how, why, and when to use weighted balls.

Questions???