

4 Phrases to Pitch By

January 4, 2010

Phrase #1: "The Quicker You Go, the Harder You Throw"

I wrote a newsletter on [10 ways to increase velocity](#) based on [this 2008 study](#):

Relationships between ball velocity and throwing mechanics in collegiate baseball pitchers

The **#1 factor affecting velocity was body mass:**

Average body mass for the 54 baseball pitchers was 83 ± 9 kg. Pitchers with larger body mass tended to throw the ball faster than those who weighed less.

[Momentum = Mass x Velocity](#). As your momentum increases, so will your velocity.

So...USE YOUR HIPS!!!!



Phrase #2: "Keep Your Head Straight to Get Closer to The Plate."

[The National Pitching Association](#) states that every inch your head drops during the pitch costs you 2 inches of release point.

Why? When your head drops, you decrease your momentum and shorten your stride.

According to [this 2004 study](#):

THE RELATIONSHIP BETWEEN BALANCE AND PITCHING ERROR IN COLLEGE BASEBALL PITCHERS

Head drop **ALSO** decreases both accuracy and velocity and this was seen most in pitchers with balance points, causing the researchers to conclude:

Based on the results of this study, we cannot recommend the indiscriminate practice of the balance-point position by college baseball pitchers to reduce pitching error. How-

Phrase #3: "Don't Tilt and Bend. Rotate and Extend."

Many coaches still use the following phrases

"Follow through" / "Finish your pitch" / "Grab some dirt"
"Throw over the top" / "Get on top of the ball"

But this leads many kids to pitch like this:



This causes the **back to bend too early and the shoulders to tilt** and [increase elbow strain](#).

[The 2008 study](#) also found **quicker shoulder turn to increased velocity** ("increased upper trunk rotation velocity"):

REL, and forward trunk tilt at REL. Ball velocity would be increased by: (1) larger body mass; (2) a shorter interval from SFC to MER; (3) increased knee flexion at SFC; (4) increased elbow flexion at SFC; (5) the later the head moved forward relative to the hips; (6) increased maximum shoulder external rotation; (7) increased elbow flexion angular velocity; (8) increased upper trunk rotation angular velocity; (9) in-

Turn the shoulders (DO NOT tilt them) and extend the back helps maximize velocity:



Phrase #4: "Hit the Wall' to have control of the ball."

Just as hitters have a strong front leg when hitting:



Pitchers MUST have a strong front leg when they pitch. [This 2012 study:](#)

Lower-Extremity Ground Reaction Forces in Collegiate Baseball Pitchers

Showed that pitchers put TWICE their body weight on their front leg:

by the stride limb. Ground reaction forces in excess of 2 times body weight are generated in an extremely short period of time. Strength and conditioning specialists can replicate

and pitchers with stronger front legs had higher velocities:

other words, pitchers with the highest ball velocity also demonstrated higher breaking GRF. Although there was a strong correlation between shoulder kinematics, shoulder

Have A Question About This Newsletter?

Call (631-352-7654) or Email (PitchingDoc@msn.com) Dr. Arnold!