

The Crow-Hop

Helping Make Flat-Ground Throwing Safer For Pitchers

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When discussing long toss with my pitching students, I strongly emphasize the use of a crow-hop to improve quickness, build momentum, and perfect timing in the transfer of energy from the lower body to the upper body.

Now a 2014 study in the American Journal of Sports Medicine shows the benefits of the crow-hop on minimizing arm stress:

**Biomechanical Comparison
of the Interval Throwing Program
and Baseball Pitching**
Upper Extremity Loads in Training and Rehabilitation

Specifically:

Pitchers throwing 60 feet on flat ground from a stationary position had similar arm stress as throwing off the mound BUT produced much less velocity:

Throwing from even the shortest flat-ground distances demonstrated essentially identical biomechanical loads compared with pitching at full effort from the mound.

While throwing with a crow-hop at 120 and 180 feet produced lower arm strain than either throwing 60 feet off the mound or 60 feet in a stationary position on flat ground:

The use of the entire body, or kinetic chain, with a crow hop while throwing on flat ground appears to be less stressful on the upper extremity and should be emphasized for even the shortest rehabilitation throws.

This led the researchers to conclude:

during the recovery and rehabilitation process. Also, the mechanical advantage of throwing from an incline or by facilitating flat-ground throws using crow hop footwork is likely protective during rehabilitation and training throws. It may be beneficial to include both of these strategies earlier in the rehabilitation process.

To watch a video on proper long toss and a proper throwing drills for long toss, [you can subscribe to my Baseball Video Library by clicking here](#)

Have A Question About This Newsletter?

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