

4-Week Program Increases Velocity in Youth Baseball Players

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A [study released in December 2010](#):

EFFECTS OF A 4-WEEK YOUTH BASEBALL CONDITIONING PROGRAM ON THROWING VELOCITY

Put 2 groups of baseball players 11-15 years of age into 2 groups:

1. No program at all
2. 75 minutes/day, 3 days/week of:
 - 10 minute warm-up (stretching, arm circles, wrist exercises)
 - **30 minutes of elastic tubing exercises** (1 set of 25 reps for 17 different exercises)
 - 30 minutes of throwing that consisted of:
 - 5-minute warm-up throwing at 50 feet
 - 15 minutes of "Pivot Throws" (5 minutes each at 60, 75, and 100 feet)
 - 10 minutes of Long Toss
 - (13-15 year old group threw no further than 150 feet)
 - (11-12 year old group threw no further than 125 feet)
 - 5 minutes of cool-down stretching

By the end of the program, **those in the conditioning group had a 4.1% increase in velocity** (56.1 to 58.4 mph) compared to a 1% decrease in the control group (54.1 to 53.7 mph)

Why Do I Believe Velocity Increased?

The best part of the tubing exercises was the emphasis on the "negative" part of each exercise, called the "**eccentric phase**":

Each resistance exercise was performed in a 3-second repetition (1 second for the concentric phase and **2 seconds for the eccentric phase**). Each subject was instructed on how

The eccentric phase is the most ignored yet perhaps most important way to train the throwing shoulder.

Of the tubing exercises showed in the study, the 5 I would most recommend are:



Figure 11. A, B) D2 diagonal pattern flexion.



Figure 8. A, B) Internal rotation with shoulder abducted 90°.



Figure 1. A, B) Elbow extension.



Figure 5. A, B) Internal rotation with shoulder flexed 90°.



Figure 4. A, B) Rowing.

Have A Question With This Newsletter?

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