CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY

Name(s)

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Project Number

J1207

Project Title

The Biomechanics of Pitching

Abstract

Objectives/Goals

The objective of this study is to determine if fully incorporating the lower body mechanics, while pitching, will affect the speed and accuracy of a pitch.

Methods/Materials

Baseball, stopwatch, pitching mound set 50 ft. from target, catcher with glove for target, and pitchers of different age, weight and height. Measured the speed and accuracy of each pitch thrown.

Results

The speed of pitches thrown utilizing full lower body mechanics in a leg kick and full stride pitch were faster, sometimes twice as fast, than pitches thrown from a slide step pitch. The accuracy of full lower body mechanic pitches was better than the slide step pitches. The heavier pitchers threw faster than the lighter weight pitchers from both pitching positions. The speed was affected much more than the accuracy with the utilization of lower body mechanics.

Conclusions/Discussion

Pitching utilizing the full lower body mechanics will increase the speed and accuracy of a pitch. As a pitcher, my coaches tell me to, "use your lower half," and in doing this project, I found that they are correct and it really makes a difference. This will help me make sure to utilize my lower body mechanics with every pitch.

Summary Statement

I showed that the speed and accuracy of a pitch is increased by incorporating lower body mechanics.

Help Received

I received help from the pitchers in the Kings Baseball program, my baseball academy, and collected the data myself.