

THE EFFECTS OF THERABANDS ON COLLEGIATE PITCHERS ROTATOR CUFF

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ABSTRACT

This study looks at the effects that therabands have on the strength and mobility in the dominant rotator cuff of a collegiate pitcher. Collegiate pitchers should strengthen their rotator cuff muscles in order to prevent injuries. Injuries to the rotator cuff could be season-ending and require surgery for repair. In order to prevent a pitchers chances of getting surgery, they need to find a way to strengthen those muscles and make them more mobile. Therabands are a great way to increase strength and mobility in the rotator cuff.

INTRODUCTION

- Collegiate pitchers need strong shoulder muscles along with a total range of motion of 180 degrees in their internal and external motions.
- When range of motion is less than 180 degrees, there is an increase in risk of injury.
- Pitchers have a very demanding season and it can be hard on the shoulder.
- Therabands are what collegiate pitchers need in order to prevent injury.



OPERATIONAL DEFINITIONS

- **Therabands**- Elastic resistance bands that differentiate in pounds of resistance by color.
- **Rotator cuff**- Infraspinatus, supraspinatus, teres minor, and subscapularis muscles make up the rotator cuff in the shoulder.
- **Glenohumeral**- Shoulder joint.
- **Isokinetic**- A constant rate of movement in the muscles.
- **Goniometer**- A tool to measure the total range of motion in the muscle and joints.

PURPOSE STATEMENT

- The purpose of this study is to determine if therabands have an effect on rotator cuff strength and mobility.
- The hypothesis for this research is that therabands will increase strength and mobility in the rotator cuff and decrease the chances of shoulder injury in collegiate pitchers.

METHODS

Referral

- Attend Gardner-Webb University
- Actively on the baseball team

Criteria

- Collegiate pitcher
- Informed consent from each pitcher

Pre-test

- Maximum voluntary isometric dynamometer
 - Strength and Pain Survey
- Goniometer to measure range of motion

Research Design

- Mixed Methods: Assessment and Survey
- 6-week, three times a week, exercise routine
- Everyone is tested before and after 6 weeks.

Post-test

- Same protocol as pre-test
- Compare results to pre-test

Data Analysis

- T-test for shoulder strength and mobility results
- Survey for participant perception of self strength

DISCUSSION

- Some limitations to this study were that all athletes were from Gardner-Webb University, the sample size is small, and the participation in this study could have been done under maximum concentration.
- It was assumed that therabands strengthen the muscles in collegiate pitchers and creates no arm injuries.
- Further research could be done due to small sample size and level of player experience.

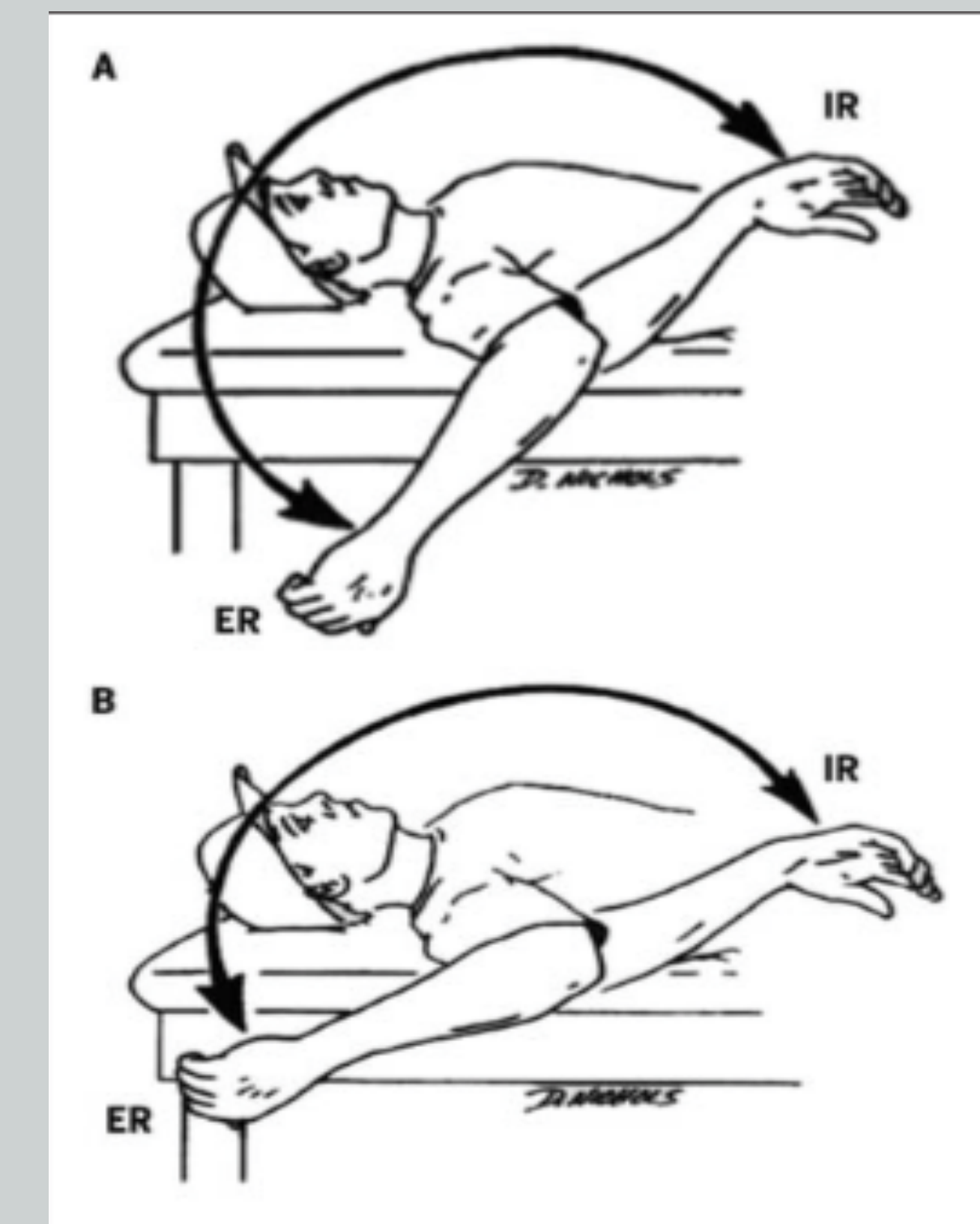


Figure 1. Shows the total range of motion a pitcher should have.

- Theraband exercises effectively increase internal and external range of motion.

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