

AN EVALUATIVE STUDY OF THE EFFECTS OF A WEIGHT TRAINING
PROGRAM, USING A CIRCUIT TRAINING MACHINE, ON THE SIZE,
SPEED, AND STRENGTH OF HIGH SCHOOL ATHLETES

by 4589

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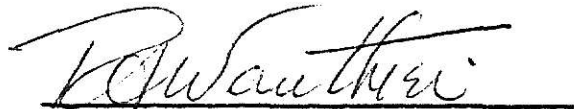
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INTRODUCTION

At the present time there is greater emphasis being placed on weight training as an integral part of our high school athletic programs. So much has this emphasis increased the past few years that many high schools have invested two to three thousand dollars in self-contained weight training machines or circuit trainers, the most common name, and the name I will use when referring to the machine used in this study. Circuit trainers provide a very effective, safe, and efficient means of conditioning the athletes body through weight training.

During the fall of 1969, Manhattan High School, Manhattan, Kansas, purchased a circuit trainer to be used as a part of their physical education program and varsity athletics. The coaches wanted to initiate a weight training program, using a circuit trainer, to develop the size, speed, and strength of high school athletes.

Statement of Problem

The study was designed to deal with an evaluation of the results obtained from a concientious weight training program using a circuit trainer. More particularly, the purpose of this study was to examine the changes in size, speed, and strength for those boys who participated in the weight training program at Manhattan High School.

Scope of the Study

Ten high school athletes at Manhattan High School, Manhattan, Kansas, participated as subjects in this investigation. All the subjects were selected on a voluntary basis. They met five days a week for approximately forty minutes per day throughout the testing period which lasted six months. At the beginning of the program, each subject's height and weight, along with chest (expanded), upper arm, waist, neck, thigh and calf measurements were recorded. Each subject was timed on a forty yard dash and was also tested on four major power lifts to determine their strength. These lifts were: (1) three-quarter squat, (2) bench press, (3) military press, and (4) dead lift. Their maximum lift for each exercise was recorded. The same measurements were taken and tests given at the conclusion of the program in order to evaluate the difference in the results of the two tests.

Limitations of the Study

It was impossible to control the outside exercise activities of the subjects, as it was also impossible to ascertain the natural growth, speed, and strength gains that would be made during this same period of time without a weight training program. It is safe to assume, however, that the gains shown in this study would overshadow any normal gains over the same period of time.

Equipment

All of the weight training equipment necessary for the study was included in the Marcy Circuit Trainer* as it was received from the manufacturer.

REVIEW OF RELATED LITERATURE

A search was conducted in the local and university library to find material concerning this subject. No articles on this subject were found other than those offered by the manufacturer in the form of advertisements.

METHODS AND PROCEDURES

Description of the Subjects

The subjects chosen for the study were selected from the varsity football squad. They were chosen because they were not participating in a winter sport, and had expressed a desire to participate in the program. All of the subjects were juniors with one year of high school varsity football remaining. Each of the subjects had previous experience with weight training; however, most of this experience was gained through informal training at home.

* Marcy Circuit Trainer: Marcy Gymnasium Equipment Company, 1736 Standard Avenue, Glendale, California, 91201.