

Arizona Peace Officer Standards and Training

Basic Curriculum Lesson Plan

LESSON TITLE: PHYSICAL TRAINING - PLYOMETRICS 8.3

SUBJECT:	Section 13
AZ POST DESIGNATION:	8.3.13
HOURS:	1.5
INSTRUCTOR TO STUDENT RATIO:	
COURSE CONTENT:	Through lecture and discussion, this course of instruction covers the training concept of Plyometrics. This outline will define Plyometrics and discuss why it is important and also cover exercises and routines.
PERFORMANCE OBJECTIVES:	Upon completion of this course of instruction, students using notes, handouts and other support materials as references, within the allotted time, will be able to: 8.3.13.1. Identify the basic concept of plyometric training. 8.3.13.2. Identify 4-6 plyometric exercises. 8.3.13.3. Develop a training routine using Plyometric exercises. 8.3.13.4. Identify the safety considerations of plyometric training.

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PLYOMETRICS**

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DATE FIRST PREPARED: September, 2008
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REVIEWED – REVISED: AZPOST (DocX) DATE: April 2022
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REVIEWED – REVISED: DATE:
REVIEWED – REVISED: DATE:
AZ POST – APPROVAL: Richard Watling DATE: October 2008
AZ POST – APPROVAL: Lori Wait DATE: April 2022

LIST ANY PREREQUISITES:

LEAD INSTRUCTOR:

BACK-UP INSTRUCTOR(S):

INSTRUCTOR REFERENCES: Physical Fitness Specialist Course Manual compiled by the Cooper Institute of Aerobic Research, Dallas, Texas. Revised 2002.
Sport-Fitness-Advisor.com

CLASS LEVEL: Instructor

TRAINING AIDS: Computer-aided slides on PowerPoint software and computer and projector or overhead projector.

INSTRUCTIONAL STRATEGY: Instructional objectives will be obtained through the use of lecture, reading assignments and group discussion.

SUCCESS CRITERIA: Success in this functional area will be demonstrated through the attainment of a 100% passing grade on a written objective examination comprised of multiple-choice, true/false, and/or short-answer questions.

COMPUTER FILE NAME: 8.3.13 Sec 13 Plyometrics

DATE RELEASED TO THE SHARE FILE: August 2023

I. INTRODUCTION

- A. Instructor(s) – (self) introduction.
- B. Preview of performance objectives.

II. WHAT IS PLYOMETRICS?

A. Definition

- 1. A form of training that develops explosive power. It consists of performing hops, bounds, and jumps so that maximum effort is expended while a muscle group is lengthening. During plyometrics, a concentric muscle action (shortening) is immediately followed by an eccentric action (lengthening). **P. O. 8.3.13.1**
- 2. This combination of dynamic muscle action is believed to use the stretch reflex in such a way that more than the usual number of motor units are recruited.

B. Benefits.

- 1. Plyometric training improves explosive power and bridges the gap between strength and speed.
- 2. Plyometrics are used to increase the speed or force of muscular contraction with goals of improving the height of a jump or the speed of a punch or throw.
- 3. Studies show that plyometric training can improve performance in vertical jumping, long jumping, sprinting, throwing, climbing and explosive movement.
- 4. Plyometric training conditions the neurons to contract with a single powerful surge rather than several disorganized contractions. The result is a stronger, faster contraction allowing a heavy load (such as the body) to be moved quickly and forcefully.

III. PLYOMETRIC EXERCISES

A. High Intensity Exercises.

- 1. Upper body movements w/ Medicine ball.
 - a. Med ball-Over the back throws. **P. O. 8.3.13.2**
 - b. Med ball slams.
 - c. Med ball Explosive start throws.

- d. Single arm overhead throws.
- e. Squat ball toss.
- f. Med ball plyo push ups.
- g. Med ball Power-overs.
- 2. Lower body movements w/ body weight.
 - a. Squat jumps.
 - b. Box jumps.
 - c. Lateral box jumps.
 - d. Split squat jumps.
 - e. High knee tucks.
 - f. One leg box push off.
- B. Lower intensity Exercises.
 - 1. Bounding.
 - 2. Hopping. (using rings, ladder, cones)
 - 3. Lateral hurdle step overs.
 - 4. Zigzag hops.
 - 5. Depth jumps. (off plyo-box)
 - 6. Single leg hops.
 - 7. Jumping rope.
- C. Training routines. **P. O. 8.3.13.3**
- D. A relatively small amount of plyometric training is required to improve performance.
 - 1. Adding plyometric training.
 - a. Do 1 or 2 types of plyometric movements.

- b. Do 1 to 3 times a week with your other training routines.
 - c. Do 2 to 4 sets of 8-10 repetitions.
 - d. Do this for 6-12 weeks.
2. Do not exceed 100-110 foot falls during any one routine.

IV. SAFETY CONSIDERATIONS

P. O. 8.3.13.4

- A. Plyometric exercises carry increased risk of injury due to the powerful forces generated during training and performance, and should only be performed by well-conditioned individuals who are under supervision.
- B. Good levels of strength, flexibility and overall fitness should be achieved before beginning any intense plyometric routine.
- C. Further safety considerations should be:
 1. Age: Lower intensity for those under 13 or over 60.
 2. Surface: Some degree of softness is needed; i.e. grass, mats, padded track. Never use hard concrete surfaces.
 3. Footwear: Should have adequate cushioning. Do not do it barefoot.
 4. Bodyweight: Those over 240 pounds should be cautious and perform lower intensity plyometrics.
 5. Technique: Should be taught proper technique and be injury free.
- D. Plyometrics is not dangerous, but the potential for high intensity and stress on joints and musculo-tendonous units makes safety a strong prerequisite to this particular method of exercise.
- E. Low-intensity variations of plyometrics are frequently performed in various stages of injury rehabilitation, indicating that correct performance is valuable and safe for increasing muscular power in all populations.

V. CONCLUSION

- A. Review of performance objectives.
- B. Final questions and answers.

C. Instructor closing comment(s).