

PEP 305: Resistance Training Book Writing Assignment

Project Synthesis: Using your applied kinesiology background you are going to write a 'concise' book for **Fitness Professionals and Personal Trainers** on resistance training. You can author or co-author with one other student in class. All work will be typed and double-spaced. Book must be bound in any way you choose.

Due Date is April 17: O.K. to Co-Author with 1 other student

Steps to Complete

1) Book Cover and Title: Create a book cover and title such as Effective Resistance Training by your name(s); put a photo of you and/or your co-author doing some type of exercise

1a) Include an about the author(s) Page: mention your education, professional goals, any academic achievements such as Deans list, any organizations you are a member of officer, certifications, etc.

2) Table of Contents

3) Chapter 1: How Muscles Adapt

In this section (approx. 3-4 pages) you will discuss how progressive overload of muscles leads to hypertrophy of muscle. Includes a full physiological explanation (i.e., satellite cells, growth factors, hormones, etc) of how muscles adapt.

4) Chapter 2: Myths of Resistance Exercise

In this section (approx. 3-4 pages) you will discuss the following myths of resistance exercise. a) Why everyone does NOT get big muscles from resistance training, b) Why muscles do not turn to fat when a person stops resistance training, c) Why resistance training cannot spot-reduce fat, d) Why women do not get bulky muscles from resistance training, e) Why the burn in resistance training is not due to lactic acid

5) Chapter 3: Resistance Training Guidelines

In this section (approx. 4-7 pages) you will write a complete review on periodization training. What is it? What are the different models (i.e., linear, reverse linear, undulating, block)? What are the benefits? Other findings.

6) Chapter 4) Resistance Training and Weight Loss

Discuss (approx. 2-3 pages) how resistance training has now become an integrate component of weight loss programs. Suggested content includes issues on metabolism, resting metabolic rate, post-workout fat oxidation.

7) Chapter 5) Core Training to Better Performance

In this section (approximately 3-5 pages) you will discuss how a well-trained core is essential for optimal performance and injury prevention. An anatomical overview of the core muscles should be included.

The Following Chapters will Cover an Exercise Analysis of the following exercises:

Chapter 6) One multi-joint upper body (i.e. bench press, shoulder press, latissimus dorsi pull down, etc.)

Chapter 7) One single joint upper body (i.e. biceps curl, triceps extension, etc.)

Chapter 8) One abdominal or lower back exercise (i.e. crunch, crunch rotation, back extension, etc.)

Chapter 9) One multi-joint lower body (i.e. squat, lunge, leg press, etc.)

Chapter 10) One single joint lower body (i.e. leg extension, leg curl, leg abduction, leg adduction, etc.)

Complete the Following Analysis for each Exercise in Chapters 6-10

1) Give Name of Exercise and SHOW a picture of exercise (of you, your co-author, or a friend DOING THE EXERCISE).

2) What are the target muscles for this exercise? BE SPECIFIC--don't just say quadriceps or hamstrings--list ALL the muscles!

3) What is or are the joint motions?

4) What plane is this movement going through?

5) Describe the starting position of these exercise

Write In Complete Sentences!

- 6) Describe the movement performance of this exercise (start and return to starting position)
- 7) Describe at least one exercise variation (use of different equipment, different stance, variation of motion)
- 8) Comment: What are the safety concerns with this exercise? Are there any trainer tips you can share with this exercise? Are there any specific alignment of position concerns that should be addressed (i.e. like bracing the core before going so as to protect the spine)?

NOTE: An example of an exercise analysis how this should be done is on the Teaching Exercise WEB site.

Citations within text: PLEASE CITE REFERENCES WITHIN TEXT

For within text citations, use this format: (Johnson, 2007) or (Smith, Volda, and Harfort, 2009)

For example:

This stretching method is referred to as the contract-relax agonist-contract method (Sharman, Cresswell, and Rick, 2011). OR Sharman, Cresswell and Rick (2011) recommend this type of stretching. OR Andersen (2012) suggests that the foundational determinants of flexibility are a multi-factorial cluster of elements.

References (must use at least 9 for this project): TRY TO USE REFERENCES WITHIN THE LAST 6 YEARS!

List all references at the end of the book following this format.

Articles:

Cavanagh, P.R., and LaFortune, M.A. (2017). Ground reaction forces in running. *Journal of Biomechanics*, 13, 397-406.

Books:

Brown, S.P, Miller, W.C. and Eason, J.M. (2017). *Exercise Physiology: Basis of Human Movement in Health and Disease*. Philadelphia, Lippincott Williams & Wilkins

WEB Accessed Content.

National Sporting Good Association

<http://www.nsga.org/i4a/pages/index.cfm?pageid=3482>

Accessed: January 14, 2018

ALL STUDENTS ARE WELCOME AND ENCOURAGED TO MEET WITH DR. KRAVITZ REGULARLY TO GO OVER CHAPTERS OF THEIR BOOK DURING THE SEMESTER TO GET FEEDBACK.

Grading Rubric: 35 Pts Total

(3 pts) Completeness, quality and professional presentation of the entire project

(2 pts) Book title, cover design and About the Author(s) page

(1 pts) Table of contents

(3 pts) Chapter 1: How Muscles Adapt

(3 pts) Chapter 2: Myths of Resistance Exercise

(3 pts) Chapter 3: Resistance Training Guidelines

(2 pts) Chapter 4: Resistance Training and Weight Loss

(2 pts) Chapter 5: Core Training

(3 pts) Chapter 6) One multi-joint upper body

(3 pts) Chapter 7) One single joint upper body

(3 pts) Chapter 8) One abdominal or lower back exercise

(3 pts) Chapter 9) One multi-joint lower body

(3 pts) Chapter 10) One single joint lower body

(1 pt) References: Must use at least 10 different references

End