Chapter 1 – Introduction to the Fitness Profession

Key Terms-all key terms including

Deconditioned

Muscle imbalance

Musculoskeletal system

Obesity

Scope of practice

Key Concepts

- *The Modern State of Health and Fitness*
- *The History of the Fitness Industry and Personal Training*

Highlights

Whereas this chapter primarily serves to outline and introduce the major concepts that will be covered throughout the CPT program including the statistics surrounding obesity, as well as the the history and current state of the fitness industry and personal training.

Chapter 2 – Career Directions in Sport, Health, and Fitness

Key Terms-all key terms including

Best practices

Continuing education.

Continuing education unit (CEU)

Mentor

Special population

Key Concepts

- *Fitness Employment Opportunities*
- *Adjacent Careers*
- *Educational Responsibilities*
- *Mentors and Networking*
- *Referring Clients*

Highlights

It is important to have a thorough understanding of the scope of practice for the fitness professional, and also understand the continuing education requirements that come along with being a NASM Certified Personal Trainer.

Chapter 3 – Disciplines of Functional Biomechanics

Key Terms-all key terms including

Adduction

Anatomic position

Biomechanics

Concentric activation

Corrective exercise

Eccentric function

Extension

Flexion

Integrated function

Internal rotation

Isolated function

Isometric activation

Kinesiology

Multiplanar

Neuromuscular efficiency

Overactive

Prone

Shoulder Impingement

Static posture

Supine

Tempo

Underactive

Key Concepts

- *Anatomic Locations, Planes of Motion, and Joint Movements***Application of**
- *Common Gym Movements*
- *Exercise Naming*
- *The Muscle Action Spectrum and Muscle Functions*
- *Kinetics*
- *Tempo*
- *Location and Naming of Muscles*
- *Common Muscle Imbalances*
- *Observing and Reversing Kinetic Chain Dysfunction*
- *Neuromuscular Efficiency*

Highlights

Knowing the naming conventions for the anatomic locations, planes and axes of movement, and joint movements will allow for direct application of that knowledge to almost every fitness concept presented later in the program. Rote memorization of the entire human anatomy is not a requirement; however, a detailed knowledge of the specific muscles that are identified as commonly overactive or underactive is essential for the professional. Further, the concepts of kinetic chain disruption, and the solutions for reversing them, will be greatly integrated into the later chapters of study.

Chapter 4 – The Human Movement System in Fitness

Key Terms-all key terms including

Agonist

Altered reciprocal inhibition

Antagonists

Cardiorespiratory system

Cardiovascular system

Cumulative injury cycle

Golgi tendon organs (GTOs

Kinetic chain

Mechanoreceptors

Motor behavior

Motor control

Muscle spindles

Nervous system

Neuromuscular efficiency

Pattern overload

Posture

Proprioception

Reciprocal inhibition

Respiratory system

Stabilizers

Structural efficiency

Synergistic dominance

Synergists

Key Concepts

- *Kinetic Chain Interaction*
- *Neurons*
- *Muscle Types*
- *Muscles as Movers*
- *Subdivisions of the Skeleton*
- *Types of Bones*
- *Joints*
- *Integrated Muscle Systems*
- *Interrelationships of Muscles*
- *Contributors of Kinetic Chain Dysfunction*
- *Scientific Concepts of Movement Dysfunction*
- *Common Areas of Movement Dysfunction*
- *The Cardiorespiratory System*
- *The Endocrine System*
- *The Digestive System*

Highlights

A thorough understanding of the kinetic chain, its interactions within the body, and the various sites and causes of dysfunction that can occur is required. Furthermore, a detailed knowledge of the components and functions of the cardiorespiratory system is of equal importance. This includes, but is not limited to, the structure of the heart, stroke volume and cardiac output, the interrelated functions of blood, and the presented concepts and involved muscles for breathing. The functions and general concepts of the endocrine system and skeletal system will also need to be understood as they relate to movement and exercise.

Chapter 5 – Client-Based Nutrition Sciences

Key Terms-all key terms including

Adenosine triphosphate (ATP

Aerobic metabolism

Amino acids

Anaerobic metabolism

Blood glucose

Calorie

Chronic disease

Dietary Reference Intakes (DRIs)

Electrolytes

Ergogenic aids

First law of thermodynamics

Kilocalorie

Lipids

Macronutrients

Metabolism

Protein

Recommended Dietary Allowance (RDA

Key Concepts

- *Macronutrients*
- *Bioenergetics*
- *Hydration*
- *Informed Dieting*
- *Strategies for Better Eating*

- *Food Intake Recommendations*
- *Supplement Types*

Highlights

The two most important concepts to understand are bioenergetics and macronutrients. How the body converts carbohydrates, proteins, and fats to energy, and then stores and uses that energy, is of high importance. To best inform future clients, standard recommendations for macronutrient intakes should be known as well. Knowledge of how to translate government intake recommendations and food labels should be solidified, as well as a base of understanding for the safest forms of supplementation.

Chapter 6 – Concepts of Integrated Training

Key Terms-all key terms including

Active-isolated stretching

Acute variables

Agility

Autogenic inhibition

Balance

Dynamic stretching.

Function

General adaptation syndrome (GAS)

Hypertrophy

Integrated performance paradigm (stretch–shortening cycle)

Integrated training

Maximal strength

Overload principle

Power

Principle of variation

Proprioceptively enriched environments

Reactive training

Repetition

Set

Specific adaptation to imposed demands (SAID) principle

Strength

V̇O2max

Key Concepts

- *Modes of Training*
- *Scientific Principles of Exercise*
- *Reasons to Utilize Integrated Fitness Programs*
- *The OPT Model*
- *The Importance of Flexibility*
- *The Integrate Flexibility Continuum*
- *Cardiorespiratory Assessments*
- *Interval and Zone Training*
- *The LPHC*
- *Activating the Core*
- *The Importance and Science of Balance*
- *The Importance and Science of Reactive Training*
- *The Importance and Science of SAQ*
- *The Anatomy and Function of Muscles*
- *Strength Adaptations*
- *Programming Methods for Strength Training*

Highlights

Integrated training is the core of the OPT model and progressive program design. As the information presented in this chapter is interwoven throughout every aspect of OPT model, it is essential to have a thorough understanding of all concepts and terminology involved. Furthermore, one should be able to critically integrate that knowledge with the exercise science and program design concepts presented throughout the entire CPT program.

Chapter 7 – Navigating the Professional Fitness Environment

Key Terms-all key terms including

Ancillary revenue

Demographics

Driver of sales

Operations

Profit center

Psychographics

Top-line

Turn-key

Key Concepts

- *Facility Types*
- *Getting Hired*
- *Independent Professionals*

Highlights

Whereas this chapter serves primarily as a career resource for new fitness professionals, the main characteristics of the different facility types, as well as the chapter's key terms should be understood for professional application.

Chapter 8 – Client Acquisition and Consultations

Key Terms-all key terms including

Body composition

Body mass index (BMI

Carotid pulse

Commitment

Complementary goods and services

Diastolic pressure

Forecasting

Leads

New business

Objective assessments

Open-ended question

Point-of-sale client

Prospecting

Pulse

Radial pulse

Rapport

Re-sign

Subjective assessment

Systolic pressure

Key Concepts

- *Prospecting Activities*
- *Following Up and Resigning Clients*
- *Independent Marketing and Promotion*

- *Building Rapport*
- *Formal Consultation Sessions*
- *Presenting Service Offerings and Price*
- *Overcoming Objections*

Highlights

The most important aspect of this chapter is the various objective assessments that are commonly performed at a client's initial session. A detailed understanding of each assessment and its corresponding calculations are required for the fitness professional. There should also be considerable familiarity with the subjective lifestyle questionnaire and PAR-Q. Furthermore, the sales process from start to finish, as well as the various techniques for overcoming objections to making a sale are of high importance.

Chapter 9 – Executing Formal Fitness Assessments

Key Terms-all key terms including

Altered arthrokinematics

Altered neuromuscular efficiency

Functional efficiency

Knee valgus

Kyphotic curve

Lower crossed syndrome

Overhead squat assessment

Postural distortion patterns

Pronation distortion syndrome

Relative flexibility

Relaxin

Scapular winging

Single-leg squat assessment

Symmetry

Transitional movement assessment

Upper crossed syndrome

Key Concepts

- *Posture and Muscle Imbalances*
- *Causes of Incorrect Posture*
- *Static Postural Assessments*
- *Dynamic Postural Assessments*
- *Strength and Skill Tests*
- *Athletic Assessments*

- *Cardiorespiratory Assessments*
- *Common Compensations*

Highlights

Postural and performance assessments are the foundation for all integrated program design. The postural assessment concepts, both static and dynamic, will need to be integrated with other aspects of the course, in order to design effective programs. All muscles that are identified as overactive and underactive for each movement assessment will need to be understood, so that the appropriate exercises and techniques can be chosen to correct the imbalances. This also applies to the performance assessments and the calculation methods that are associated with each.

Chapter 10 – Initializing Program Design

Key Terms-all key terms including

Competitive season

Exercise selection

Fitness coaching

Hypertrophy training

Linear periodization

Load

Off-season

Periodization

Preseason

Progressive resistance exercise (PRE)

Rest period

Training intensity

Training volume

Undulating periodization

Key Concepts

- *Manipulation of Acute Variables*
- *Periodization*
- *Templates and Recordkeeping*
- *Homework*
- *Exercise and Modality Selection*
- *Using OPT for Different Goals*
- *Training vs. Coaching*
- *Session Types*

Highlights

As with postural and performance assessments, the concepts of program design are highly important to assisting clients in reaching their goals. The ability to analyze the results of an assessment to determine muscle imbalances will need to be partnered with the correct exercise selection and manipulation of the acute variables, in order to correctly select the best options for program design.

Chapter 11 – The OPT Model: Applying Stabilization

Key Terms-all key terms including

Acidosis

Center of gravity (CoG)

Davis' law

Fascia

Horizontal loading

Movement preparation

Muscular endurance

Proprioception

Time under tension (TUT)

Timed hold

Training duration

Training frequency

Vertical loading

Key Concepts

- *Primary Adaptations*
- *Scientific Principles*
- *Cardio Programming*
- *Flexibility Protocols*
- *Core Protocols*
- *Balance Protocols*
- *Reactive Protocols*
- *SAQ Protocols*
- *Resistance Protocols*

- *Underutilized Assessments*
- *Programming Mistakes*

Highlights

This chapter revolves around the acute variables for the Stabilization Level and how to properly manipulate them to progress a client. The professional will learn how to incorporate many aspects of program design into critical thinking tasks that combine multiple components of the OPT model, fitness assessments, and exercise science.

Chapter 12 – The OPT Model: Applying Strength

Key Terms-all key terms including

Concurrent training

Diminishing returns

Exercise tolerance

Maintenance

Metabolic conditioning

Motor unit activation

Muscle coordination

Muscular failure

Neural drive

Strength endurance

Key Concepts

- *Primary Adaptations*
- *Scientific Principles*
- *Tracking Progress*
- *Cardio Programming*
- *Flexibility Protocols*
- *Core Protocols*
- *Balance Protocols*
- *Reactive Protocols*
- *SAQ Protocols*
- *Resistance Protocols*
- *Common Mistakes*

Highlights

This chapter revolves around the acute variables for the Strength Level and its different phases, and how to properly manipulate them to progress a client. The professional will incorporate many aspects of program design into critical thinking tasks that combine multiple components of the OPT model, fitness assessments, and exercise science.

Chapter 13 – The OPT Model: Applying Power

Key Terms-all key terms including

Bone mineral density (BMD)

Drop jump

Eccentric strength

Formative assessment

Henneman's size principle

Metabolic conditioning circuit

Open-chain exercises

Parasympathetic nervous system

Proprioceptors

Superset

Training age

Key Concepts

- *Primary Adaptations*
- *Scientific Principles*
- *Notes of Caution for Power Level Training*
- *Benefits of the Power Level*
- *Cardio Programming*
- *Flexibility Protocols*
- *Core Protocols*
- *Balance Protocols*
- *Reactive Protocols*
- *SAQ Protocols*
- *Resistance Protocols*

- *Programming Mistakes*

Highlights

This chapter revolves around the acute variables for the Power Level, and how to properly manipulate them to progress a client. The professional will incorporate many aspects of program design into critical thinking tasks that combine multiple components of the OPT model, fitness assessments, and exercise science.

Chapter 14 – The OPT Model: Every Day

Key Terms-all key terms including

Barbells

Bodyweight exercise

Cable resistance machines

Calisthenics

Cardiac rehabilitation

Corporate fitness

Cueing

Dumbbells

Dyspnea

Extended healthcare providers

Fixed-isolated machines

Free weights

Functional movements

Heart palpitations

Heart rate variability

Kettlebell

Medicine ball

Modality

Post rehab

Special population

Suspension training

Valsalva maneuver.

Vibration exercise

Key Concepts

- *Modality Types*
- *Programming for Group Training*
- *Common Mistakes*
- *Populations to Consider*
- *Extended Healthcare Providers*
- *Workplace Fitness*
- *Lifestyle Considerations*
- *Connected Technologies*

Highlights

The considerations and programming requirement for special populations will be a key area of understanding for the fitness professional to develop safe programs for these client types. The function of different modalities and their implementation within the OPT model is also of importance, along with the ins and outs of group personal training. What is of the highest significance will be the ability to integrate knowledge of these every day considerations into the overall program design protocols for clients.

Chapter 15 – Exercise Technique

Highlights

The areas of focus in this chapter are the correct performance and selection of exercises, and knowing the force-couples involved with their performance. Contraindications and considerations for special populations should also be noted, along with how to properly progress and regress an exercise if prompted.

Chapter 16 – Behavior Change Strategies for Client Results

Key Terms-all key terms including

Action stage

Active listening

Behavior influences

Confidence

Contemplation stage

Goal proximity

Interpersonal influences

Intervention

Intrinsic approach

Long-term goal

Maintenance stage

Motivational interviewing

Objective goal

Outcome goal

Performance

Precontemplation stage

Preparation stage

Process goals

Self-confidence

Self-efficacy

Short-term goal

Subjective goal

Transtheoretical Model

Key Concepts

- *Stages of Change*
- *Influences That Affect People*
- *Behavioral Self Help*
- *Communication Techniques*
- *Emphasizing Self-Improvement*
- *Direct Coaching Techniques*
- *Approaches Clients Can Self-Implement*
- *Goal Setting Techniques*
- *Record Keeping*

Highlights

It will be important to understand the various concepts of goal setting and progress evaluation to integrate with the concepts of program design and the OPT model. The science of behavior change, specifically the Transtheoretical Model, will be of great importance to understand, as well as the various techniques for communicating and coaching clients to their highest potential.