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 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.
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
VO2max
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 arthrokinimatics
- 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 everyday 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.