

The CFES Personal Trainer Course Resource Manual

2ND EDITION



- Lifestyle Behavioural Changes
- Disease Prevention & Health Promotion



Canadian Fitness
Education Services

Advancing the Standards in Fitness Leadership Training Since 1980

CFES Personal Trainer Course

Resource Manual (2ND EDITION)

Canadian Fitness Education Services Ltd. September 2018®

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The CFES Personal Trainer Course

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Chapter 1

Introduction to Personal Training

In this chapter you will learn about:

-  The Personal Training Industry
-  Qualities and Skills of Successful Trainers
-  Career Paths for Personal Trainers
-  Scope of Practice for Personal Trainers
-  Code of Ethics for Personal Trainers
-  Networking with Community and Professional Resources
-  Professional Registration and Continuing Education



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CFES Personal Trainer Core Competencies

Rationale:

It is important for CFES Personal Trainers to understand what their Scope of Practice is and to have the Core Competencies of that scope clearly enunciated. Core Competencies represent the knowledge and skills that CFES Personal Trainers must possess in order to ensure that they have what is necessary to assess and prescribe physical activity and healthy eating which will enable them to assist clients in meeting their lifestyle change goals and objectives.

CFES Personal Trainers' Core Competencies:

CFES Personal Trainers must demonstrate an understanding of basic knowledge and skills in the following areas covered exclusively in the CFES Personal Trainer's Manual:







1. Human Anatomy and Physiology of the Musculo-Skeletal Systems
2. Biomechanics - Laws of the Lever as applied to the Human Body during physical activities
3. Nutrition – Healthy Eating Utilizing Canada's Food Guide
4. Exercise Prescription for Improving Lifestyle Fitness
5. Counselling:
 - Motivational Techniques Utilizing Stages of Change Model
 - Setting Measureable Goals and Objectives
 - Weight Loss Utilizing ACSM Guidelines
 - Physical Activity Prescription to Improve Lifestyles
6. Client Safety and Emergency Procedures:
 - Client Health and Medical Screening using the Get Active Questionnaire, or similar approved health screening tools
 - Safe Spotting Techniques
 - Signs and Symptoms of Exercise Intolerance
 - CPR and First-Aid
 - Procedures for non-life threatening and life threatening emergencies
 - Appropriate Referral Techniques
7. Documentation and Professionalism
 - Documentation of prescription and progress
 - Confidentiality and Appropriate dress and decorum

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Chapter 2

Enhancing the Success of the Client

In this chapter you will learn about:

-  Dimensions of Health and Wellness
-  The Benefits of Regular Physical Fitness
-  Promoting Healthy Lifestyle – Behavioural Changes
-  Exercise Motivation
-  Participant-Centred Leadership
-  Daily Goal and Action Plan for Fitness



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All these myths need to be dispelled through accurate information, appropriate training programs and instruction, safe skill development, and success in activity. This should be experienced at an early age to inspire healthy, active living throughout the life-span; however, it is never too late to get

started! Studies show that sedentary men who become physically active in their 40's to 60's cut their risk of death from cardiovascular disease by 45 percent compared to those who remain inactive. ⁴

It is helpful for personal trainers to understand these common barriers and to take the necessary steps to ensure their clients are successful in achieving a consistent, active lifestyle.

Promoting Healthy Lifestyle – Behavioural Changes

Personal trainers are in a position to help people develop healthier lifestyle habits and skills. This involves reviewing the individual's current habits and identifying changes to make, then supporting these changes with the right kinds of self-management practices.

Healthy Lifestyle Habits

Each individual, no matter what age or stage, is capable of learning and practicing healthy habits which would include:

- Managing daily stress
- Communicating assertively
- Setting goals
- Learning about how the body functions
- Exercising Regularly
- Eating Healthy
- Getting enough rest

Promoting Lifestyle Change

It is difficult, however, for people to make significant changes to their lifestyle. Change requires the desire to change, the inspiration to take the initial steps and support from others and the environment. According to Corbin and Lindsey the following factors can help make behaviour change more likely to occur ⁶.



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Chapter 3

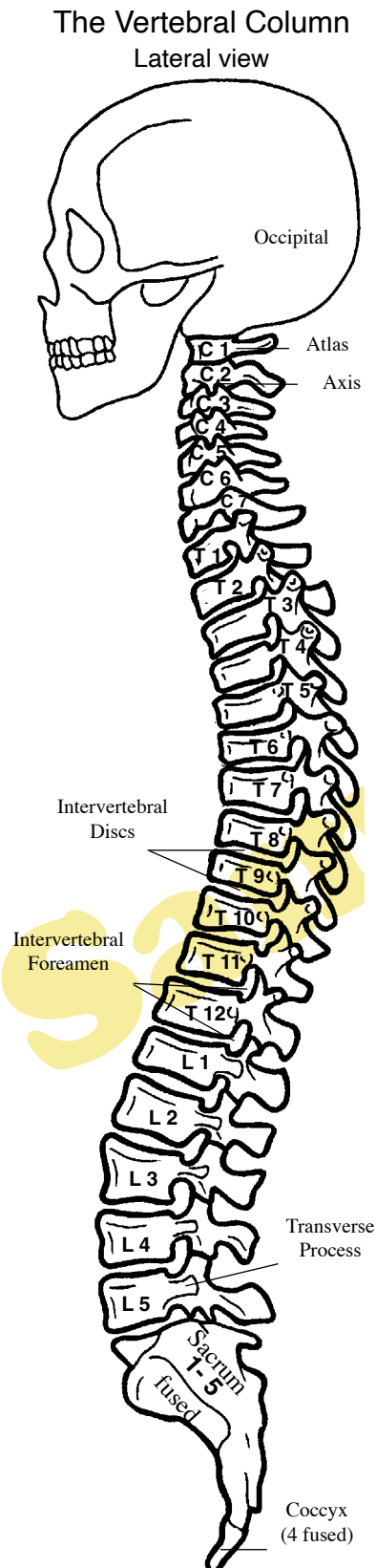
Anatomy of the Skeletal System: Bones, Articulations, and Connective Tissue

In this chapter you will learn about:

- 1 Joints or Articulations**
 - k Types of Joints
 - k Anatomical Planes of Movement
 - k Connective Tissue: Tendons and Ligaments
 - k The Axial Skeleton
 - Vertebral Body
 - Cervical Spine
 - Thoracic Spine
 - Lumbar Spine
 - Sacrum and Coccyx
 - Thorax
 - k The Appendicular Skeleton
 - Shoulder Girdle
 - Glenohumeral Joint (shoulder)
 - Elbow Joint
 - Wrist Joint
 - Coxal Bones, Pelvic Girdle, and Pelvis
 - Coxal Joint (hip)
 - Genual Joint (knee)
 - Subtalar Joint (ankle)



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As review, ligaments attach bone to bone and provide integrity and strength both inside and outside the synovial joint. Ligaments are strong and less elastic than tendons, and they are less likely to return to their normal resting length when overstretched. Because they are less elastic, ligaments are more prone to tearing than tendons. It is of special interest to trainers that ligaments can be permanently lengthened if kept in a lengthened or stretched position for sustained periods of time. For example, poor posture, poor body mechanics, and overstretching can lead to permanently lengthened ligaments ¹.

As review, tendons are fibrous tissue that connects skeletal muscle to the periosteum of the bone, cartilage or other muscle. Tendons can be ruptured, however they are much stronger than the muscle and the periosteum of the bone, therefore under high forces, the muscle or bone tends to be injured first ¹.

The Axial Skeleton

The vertebral column or spine is comprised of five main sections of bones called vertebrae. These 24 vertebrae are arranged in the cervical, thoracic, and lumbar regions. The sacrum contains five fused bones and the coccyx contains four fused bones. The vertebrae are numbered by region in order of superior to inferior. For example the cervical spine has seven (7) vertebrae. The most superior vertebrae closest to the skull is labeled C1.

The level of curve in the vertebral column is exaggerated by posture, level and type of activity, obesity, pregnancy, disease, and trauma. There is also typically a slight lateral curve to the spine dependant on the dominant handedness. A significant lateral curve (scoliosis) may occur for many reasons.

The Typical Vertebrae

The vertebrae of the spine differ depending on the region of the spine, however they all have some commonalities.

The Body (centrum)

The anterior portion of the vertebrae is thick and shaped like the disc. Its main function is weight bearing.







The Vertebral Arch (neural arch)

Extending posteriorly from the vertebral body, the space that lies between the vertebral body and the vertebral arch surrounds the spinal cord. This space is called the vertebral foramen. Foramen (singular is foramina) are openings in bones for the passage of

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Chapter 4 Anatomy and Physiology of the Muscles

In this chapter you will learn about:

-  Muscle Physiology
-  The Nervous System and Skeletal Muscle
-  Types of Muscle Fibers
-  Muscles of the Axial Skeleton
-  Muscles of the Appendicular Skeleton – The Upper Extremities
-  Muscles of the Appendicular Skeleton – The Lower Extremities



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The Biceps Brachii

The biceps brachii has a long and short head that cross the shoulder joint at different places. As long as the shoulder is not in external rotation, the long head of the bicep crosses the joint anteriorly and assists to flex the humerus. If the shoulder is externally rotated, the long head of the bicep is in a superior, lateral position. Therefore it assists with abduction.

Preacher Curl



There are several ways to make a traditional bicep curl more challenging, making it more difficult to lift the same external resistance. Starting in a pronated position and ending in a supinated position is more challenging than completing the curl maintaining a neutral wrist position. In addition, supporting the shoulder joint in a flexed position while completing the curl also makes the exercise more difficult.

There are several different muscles that cross the elbow joint anteriorly. Each muscle is thought to be specifically targeted with specific exercises.










Concentration Curl

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Chapter 5 Biomechanics and Applied Kinesiology

In this chapter you will learn about:

-  Basic Biomechanics
-  Types of Muscle Contractions
-  Advanced Movement Analysis
-  Human Movement Terminology
-  Back Squat
 - The Technique
 - Basic Movement Analysis
 - Applied Kinesiology
-  Wide Grip Bench Press
 - The Technique
 - Basic Movement Analysis
 - Applied Kinesiology
-  Wide and Narrow Grip Pull-up or Assisted Pull-up
 - The Technique
 - Basic Movement Analysis
 - Applied Kinesiology



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Biomechanics and Applied Kinesiology

In order for the Personal Trainer to appropriately prescribe exercises, they must have a clear understanding of movement mechanics in sport, exercise and active daily living tasks. In this section we will look at biomechanics. Biomechanics is the science of how to put everything we learned in the previous chapters together to create movement. The knowledge of biomechanics is paramount because it enhances the trainer's ability to effectively choose exercises that are tailored to the client's goals but also exercises that minimize the risk of injury. Applied kinesiology is simply the science of human movement.

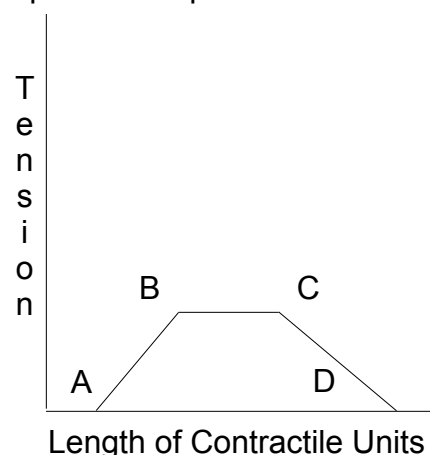
Basic Biomechanics

There are certain biomechanical principles that govern human movement. Knowledge of these principles can be helpful when learning new skills, teaching new skills, analyzing movement or improving efficiency in movement.

If we understand the biomechanics of the exercise we can: appropriately choose the most suitable starting posture and starting position for the exercise, choose the appropriate speed of movement, correctly position the joints in order to isolate specific muscles, apply the correct line of pull to appropriately overload the muscle, and modify the leverage to improve muscular force.

Length-Tension Relationship

The amount of force a muscle can produce depends on the length of the sarcomeres within the muscle before the contraction begins. A muscle produces its greatest force when it is in the mid range of its sarcomere length. It is weakest at both the inner and outer ranges of the length of the sarcomere. The length-tension relationship demonstrates that a muscle generates maximal force when it begins its contraction at 1.2 times its resting length.



A = shortened muscle, less force.

B & C = mid-length muscle, greatest force.





D = overstretched muscle, less force

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Chapter 6

Muscle Balance, Posture and Spinal Stability

In this chapter you will learn about:

-  The Importance of Muscle Balance
-  The Structures that Make Up the Core
-  The Role of Core Muscles
-  Designing Core Stability Exercise Programs



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Core Stability

Core stabilization, often referred to as spinal stabilization, has become a critical component in athletic conditioning and functional exercise. It is based on scientific research into the anatomy and mechanics of the spine, pelvis, and supporting muscles.

Core stability is the ability of the head, neck, shoulder girdle, and pelvic girdle to maintain neutral posture, prevent buckling and to return to equilibrium after body movement. It can also be thought of as the interaction of strength and coordination of our core muscles during activity. Although static elements like bone and soft tissue contribute to some degree, core stability is predominantly maintained by the dynamic function of our muscles.

Spinal stability is a major component of nearly every gross motor activity, and will adapt our posture and muscle activity to ensure the spine is stabilized and provides a firm base to support both very basic and powerful complex movement of the extremities. This translates into better movement and function of the limbs, decreased risk of injury, and improved athletic performance.

What is the “Core”

The *core* refers, in the most general of terms, to the body minus the legs and arms. The major muscles of the core reside in the trunk or midsection, specifically including the abdominal muscles, the deep lateral stabilizing muscles, and the spinal extensor muscles.

The stabilizing muscles of the core include the pelvic floor muscles, transversus abdominus, spinal multifidus, quadratus lumborum, internal and external obliques, rectus abdominus, erector spinae, mid and lower trapezius, rhomboids, serratus anterior, deep neck flexors, and the diaphragm.

Core/spinal stabilizers are the deepest layer of muscles, lying closest to the spine, pelvis, ribs, and shoulder girdle. The roles of these muscles include postural support, postural maintenance and resisting the downward force of gravity; they play a vital role in dynamic balance and are required to keep not only the spine stable, but control movement of the extremities to prevent excessive motion. The primary focus of this section will be the core muscles responsible for stabilizing the lumbar spine and pelvis.

The deep stabilizers acting on the lower back are comprised of:








- Transversus Abdominus
- Spinal Multifidus
- Pelvic Floor complex
- Diaphragm

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Chapter 7

Reducing the Incident and Likelihood of Injury

In this chapter you will learn about:

-  **Health Screening and Scope of Practice**
-  **The Occurrence of an Acute Injury**
-  **Causes and Mechanisms of Injury**
 - Overtraining
 - High Expectations and Unrealistic Goals
 - Predisposing Factors
 - Poor Training Habits
 - Poor Exercise Technique
 - Breathing
 - Postural Positioning
 - Speed of Motion
 - Range of Motion
 - Resistance
 - Poor Choice of Exercise –
contraindicated and high risk exercises
-  **The Personal Trainer's Role as a Spotter**
 - Exercises where a Load is on the Back or Front of the Shoulders
 - Supine exercises where the Load is held above the Face, Neck or Chest
 - Exercises where the Load is held Overhead
-  **Faulty Program Design**
-  **Common Injuries associated with Exercise**
 - Iliotibial Band (ITB) Syndrome or Runner's Knee
 - Tibial Stress Syndrome (Shin Splints)
 - Achilles Tendinitis
 - Plantar Fasciitis
 - Blisters
-  **Prevention of Common
Overuse Injuries associated
with the Introduction of Running**



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<h2>Risk Management Accident Flow Chart</h2>	
Non-Life Threatening Situations	Life Threatening Situations
<p>1. Minor accident occurs (no ambulance or medical treatment required) Contact supervisor:</p>	<p>Serious incident occurs (e.g., major fracture, neck or back injury, or death) Emergency Phone is located:</p> <p>Ambulance required - Call EMS (911) or instruct a bystander to call EMS</p>
<p>2. Locate the First Aid Equipment First Aid Equipment is located:</p>	<p>Locate the First Aid Equipment First Aid Equipment is located:</p> <p>EAD is located:</p>
<p>3. Administer appropriate first aid (e.g. Rest, Immobilize, Cold, Elevate)</p> <p>Encourage the client to follow up with their general practitioner if symptoms do not cease in 24 hours</p>	<p>Assess casualty responsiveness</p> <p>Perform Primary Survey (Airway, Breathing, Circulation)</p> <p>Give First Aid for life threatening conditions</p> <p>Secondary Survey (check vital signs and do a head-to-toe exam)</p>
<p>4. Interview witnesses and record the events</p>	<p>Interview as many witnesses as possible and record the events Interview the casualty (allergies, meds, med history, last meal, what happened, pain)</p> <p>On-going Casualty Care (monitor casualty's condition – vital signs, loss of consciousness (LOC))</p> <p>When EMS arrives – provide them with client data, what has happened and your actions to date</p>
<p>5. Accident report prepared by Personal Trainer</p>	<p>Report on what happened Compile full documentation (e.g. accident report, first aid reports)</p>
<p>6. Submit report to supervisor or if working in someone's home – keep the report in confidential, secure place</p>	<p>Reports submitted to supervisor within 24 hours of incident If working in someone's home – keep the report in confidential, secure place</p>

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Chapter 8

Fitness Assessment Protocols and Practical Skills

In this chapter you will learn about:

-  The Role of Fitness Assessment
-  Health Screening
-  Body Composition
-  Measuring Resulting Cardiovascular Fitness
-  Postural Analysis
-  Measuring Submaximal Cardiovascular Fitness
-  Measuring Lower and Upper Body Flexibility
-  Measuring Lower and Upper Body Strength and Endurance
-  Post Assessment Consultation



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Bioelectrical Impedance (BIA)

The personal trainer needs to be aware of bioelectrical impedance tools. There are several models ranging in cost from a few hundred to a few thousand dollars. Although they are a quick way to measure body composition, the personal trainer must understand the drawbacks of using the tool.

Bioelectrical Impedance tools measure body composition by sending a safe electrical current through the body. The current passes freely through the fluids contained in muscle tissue, but encounters resistance when it passes through fat tissue. This

resistance of the fat tissue to the current is termed bioelectrical impedance.













BIA indirectly estimates fat free mass and total body water. Depending on the equations that are programmed into the computer software, percent body fat is estimated. When deciding to use this piece of equipment, the trainer must understand that there are several drawbacks to consider.

- a. Different BIA equipment manufacturers use different equations for males and females and for young and old. The best standard error of the estimate on BIA machines is 20 percent error in estimations using any of the equations;
- b. They also do not possess great test to re-test validity;
- c. They can cost a substantial amount of money;
- d. It is questionable and debatable as to whether they add anything to the health assessment.
- e. The results are even less accurate with overweight and especially obese clients.
- f. The trainer must have an understanding of the validity of the equations used in the various different BIA models.

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Chapter 9 Cardiovascular Training Program Design

In this chapter you will learn about:

-  Cardiovascular Training Goals
-  Energy Production in Cells
-  Aerobic Capacity
-  Training Principles
-  Frequency
-  Exercise Choice
- Improvement Programs and Maintenance Programs
-  Intensity
 - Target Heart Rate: Age predicted HR,
 - Heart Rate Reserve
 - Rate of Perceived Exertion
 - METs
-  Duration
-  Progressions
-  Variations
 - Continuous Training, Pace and Tempo,
 - Interval, Fartlek, Circuit, Composite Training
 - Combining Resistance and CV Goals

Goals Relating to Cardiovascular Training Programs

Cardiovascular training is essential for many clients, specifically where the goal is fat loss, enhancing the client's VO_2 max or aerobic capacity. The increase in aerobic capacity may be needed to participate in various athletic endeavours, or simply to be able to walk up a flight of stairs without fatiguing.



Combining Resistance Training Goals and CV Goals

Many clients want to achieve CV fitness goals and resistance training goals, working on both simultaneously, often within the same workout session. Empirical evidence shows that when resistance and CV training programs are combined, VO_2 increases normally, however increases in strength gains are reduced when compared to only doing resistance training.











In addition, there are reductions in overall muscle girth gains, speed, and power. On the other hand, the addition of strength

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Chapter 10

Resistance Training Program Design

In this chapter you will learn about:

-  Training Principles
-  Resistance Training and Metabolism
-  Establishing Goals
-  Frequency
 - Split Programs
 - Light, Medium, and Heavy Days
-  Exercise Choice
 - Functional Training
-  Sequencing of Exercises
-  Intensity: Load, Repetitions, Sets
-  Rest
-  Variations
-  Progressions



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Functional Training

Functional training is used by the personal trainer to expose an individual to integrated movement patterns. It is often introduced after the client has established a good foundation of muscular endurance with static exercises, demonstrates proper body mechanics, and is ready for a change in their program. It should be noted that functional activities are typically more advanced and are not to be used with beginners.

Functional movement requires the joints, muscles, and neurological system to work together in a coordinated and complex manner. This is not always true with machines in the gym. Let's look at the shoulder press machine. The client sits on a back-supported chair and presses two handles, which are attached to a lever, overhead. Normally, during a typical, day-to-day situation, if you were to press a weight overhead (e.g. putting an object up onto the top shelf of your closet), you would not be in a seated position and the object would not be supported by a lever. Furthermore, the machine moves straight up and down, whereas a free object moves in countless planes of motion. The absence of multiple planes of motion means that the rotational muscles (e.g. the rotator cuff), the stabilizing muscles (e.g. the neck), and the supporting muscles (e.g. the feet, legs, hips, torso, etc) are not being worked.







Functional training moves away from single joint exercises executed on one plane to whole body, core, multi-joint exercises executed in a variety of planes of motion. This type of training puts the client into a controlled but unpredictable movement challenge. Therefore, they are forced to use their 'core' muscles in effort to maintain their balance. In addition, the client may be



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Chapter 11 Flexibility Training Program Design

In this chapter you will learn about:

-  Benefits of Flexibility Training
-  Factors that affect Flexibility
-  The Physiology of Stretching
 - Elastic and Plastic Properties
 - Proprioceptors
 - Muscle Spindles
 - Golgi Tendon Organs
-  Types of Flexibility Training
 - Ballistic Stretching
 - Dynamic Stretching
 - Static Stretching
 - Static Active Stretching
 - Trainer Assisted Stretching
-  Program Design
-  Flexibility for Postural Dysfunction



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Flexibility Training Program Design

The personal trainer needs to recognize the value in flexibility training as an important component of conditioning. Like all of the other components of training, the type of flexibility training must be specific to the goals of the client. Flexibility has been defined as the range of motion about a joint and its surrounding muscles during a passive movement. With proper flexibility, the joint is able to move freely through the full range of motion (ROM).

Benefits of Flexibility Training

The personal trainer may include a specific flexibility component for many reasons. The most common reason is to aid in the warm-up via dynamic stretches or to aid in the cool-down and lengthening of the muscles post workout. Some clients will require a more focused flexibility component that goes beyond simply stretching out each muscle worked that session. Increased flexibility might be required because there are movement skills that need to be enhanced in their sport or they present with postural dysfunction related to tight musculature.

Wall Stretch Achieving optimum flexibility in a joint increases the coordination and efficiency of a movement. Although it is not true for a high level athlete, improving flexibility appears to improve neuromuscular coordination, physical efficiency and the ability to perform various movement patterns and skills, especially those movements that require an elevated level of flexibility ².

Flexibility training also appears to be important in injury prevention ². It is widely accepted that tight musculature increases the risk of injury (e.g. tight Hamstrings can increase the risk of low back pain) ³.

Properly designed flexibility programs can be very effective in preparing your client for their workout, to decrease the potential risk of injury, and to increase performance. Different types of stretching are more beneficial in improving the length in the muscles, therefore it is recommended that Personal Trainers take the time to play an active and present role in their client's stretching routine. This section will take

the trainer to the level beyond simply prescribing static stretches based on the muscles worked that session.











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Chapter 12

Understanding Chronic Diseases

In this chapter you will learn about:

-  Chronic Diseases Attributed to the Lack of Daily Physical Activity
-  Obesity
-  Cardiovascular Disease
-  Hypertension
-  Diabetes Mellitus
-  Osteoporosis
-  Osteoarthritis
-  High Cholesterol



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Understanding Chronic Diseases Attributed to the Lack of Daily Physical Activity

It is very important that Personal Trainers understand chronic disease, how it is affecting the population, and the role that we play as Personal Trainers.

Chronic disease has been attributed to hypokinesia or the lack of adequate physical activity within a person's lifestyle. Such diseases may include obesity, high blood pressure, high cholesterol, osteoporosis, osteoarthritis, low back pain, and adult onset or Type II diabetes mellitus.

It makes perfect sense that chronic disease is of particular interest to Personal Trainers, however we must remember our role and our scope of practice. The role of the trainer is disease prevention and health promotion. A Personal Trainer is not a physician, a therapist, or a kinesiologist. Our scope of practice allows us to work with the apparently healthy population.

A Personal Trainer is able to work with medically cleared apparently healthy individuals. The next chapter will discuss this process at length. The bottom line is that CFES Personal Trainers work with individuals without any restriction to become physically active. In the case that there are physical restrictions, the personal trainer must refer the individual to a more qualified exercise professional like a kinesiologist who is a certified exercise physiologist.

Therefore, the Personal Trainer's role is to understand chronic disease, prevent the onset of disease, and to promote the health of the individual. We do not diagnose disease or the risk of disease and we do not treat disease. Our role is in the prevention of disease through exercise and healthy lifestyle.

Chronic Disease






Although we do not work with individuals that have chronic disease, we must understand the disease process, the prevalence of chronic disease in our society, and the trends of disease. If we understand what the risk factors are, what causes the disease, and how to avoid the onset of the disease, then we can better understand our role in disease prevention and health promotion.

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Chapter 13

Managing Movement Impairments

In this chapter you will learn about:

-  The Personal Trainer's Role in Correcting Movement Impairments
-  The Importance of Addressing Movement Impairments
-  Testing vs Non-Testing of Movement Impairments
-  Introduction to the Primal Patterns System™
-  Strategies to Deal with the Seven Main Movement Patterns of the Primal Pattern System™



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Managing Movement Impairments

As a personal trainer, most of your day encompasses teaching clients how to exercise. Many of your clients will not perform the exercises optimally. In fact, many will execute them so poorly you will need to correct their impairment before it leads to pain and injury. In order to do so you need a set of strategies to manage movement impairments. The role of the personal trainer is not to help a client deal with pain but to help them move better where aberrations exist. If the client is in pain during an exercise it is imperative you send them to a rehabilitation professional for management. This chapter will provide an introductory approach to dealing with movement impairments. As you grow in your role as a trainer you may want to consider taking more continuing education courses in this area as there is much to learn about helping the human body move better.

Why is it important to address movement impairments? Research shows that musculoskeletal pain is more common now than 40 plus years ago (Clark & Lucett, 2011). Modern sedentary environments bring with it a host of orthopedic issues such as low back pain, neck pain, and shoulder difficulties. Client's bodies become molded to the furniture they use and screens they utilize. This contributes to many postural issues that may manifest as movement impairments if not dealt with within the fitness programming process. The clients today cannot be trained the same as the clients from even 20 years ago. How well will a client bring their arm overhead if they have rounded shoulder posture coupled with thoracic kyphosis? Try this experiment, sitting on a chair round your shoulders forward and slump into a thoracic kyphosis. Now raise your arm overhead and note the level difficulty to do this and the range of motion. Now straighten your posture and repeat. Different, isn't it? This is why many client's need an observing personal trainer to help with these things.

2. Squat with Mini Band

Purpose: This strategy will help the client build knee control by utilizing the gluteal muscles in the squat pattern.

1. Have the client assume the best stance as determined by the quadruped rock back test.
2. Teach the squat as outlined in the CFES weight training module.
3. Place a mini-band just above the knees and instruct the client to maintain tension on the band throughout the entire squat range of motion. This will increase gluteal activation teaching the knees to stay over the 2nd and 3rd toes.
4. The client will immediately notice the effort executed by the gluteals.



Squat with Mini Band

(JD Fitness)

3. Wall Ankle Drill

Purpose: This strategy will help build joint mobility in the ankle joint. The more mobile the ankle is the less the shoulders have to pitch forward in the squat. If the ankles can't move forward in the squat pattern as the buttocks moves back then the shoulders have to pitch forward to balance this posterior displacement. To test if this is indeed the case place the client's heels on a couple of 10lb plates and have them squat. If their shoulders are now more vertical (behind the toes) then you know this was the factor. If not, then try the goblet squat. If this does not help you may need to send them to a qualified Kinesiologist or CSEP Exercise Physiologist for further evaluation.



A. Knee over big toe



B. Knee over little toe. (JD Fitness)

1. Have the client stand with one foot in front of the wall at a distance as determined by the closed chain ankle dorsiflexion test. The back leg can be comfortably placed behind the other leg at a comfortable hip width.
2. Keeping all body weight on the hands which are placed against the wall in a push up position move the knee towards the wall touching the knee cap to the wall over the foot. Repeat this 5-10 times.
3. Then move the knee just outside the big toe. Repeat this 5-10 times.
4. Then move the knee just outside the little toe. Repeat this 5-10 times.

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Sample Pages

The CFES Personal Trainer Course

Chapter 14

Healthy Eating Habits

In this chapter you will learn about:

-  The CFES current scope of practice relating to nutrition
-  Everyday Nutrition: Foods and Fluid
-  Eating Well with Canada's Food Guide
-  Nutrients
-  Energy Metabolism
-  Carbohydrates, Protein, Fats
-  Energy Requirements for Adults
-  Estimating Resting Metabolic Rate
-  Estimating Total Energy Expenditure
-  Nutrition and Exercise
-  Exercise and Water
-  Weight Loss Strategies
-  Weight Gain Strategies
-  Supplements



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Everyday Nutrition: Foods and Fluid

Making healthy food choices and putting them all together into a healthy eating plan as part of the training program takes organizing, planning, education, time commitment and motivation. Without attention to the nutritional intake, the client may be unable to achieve their fitness goals.

For everyday nutrition there are a number of guidelines to consider:

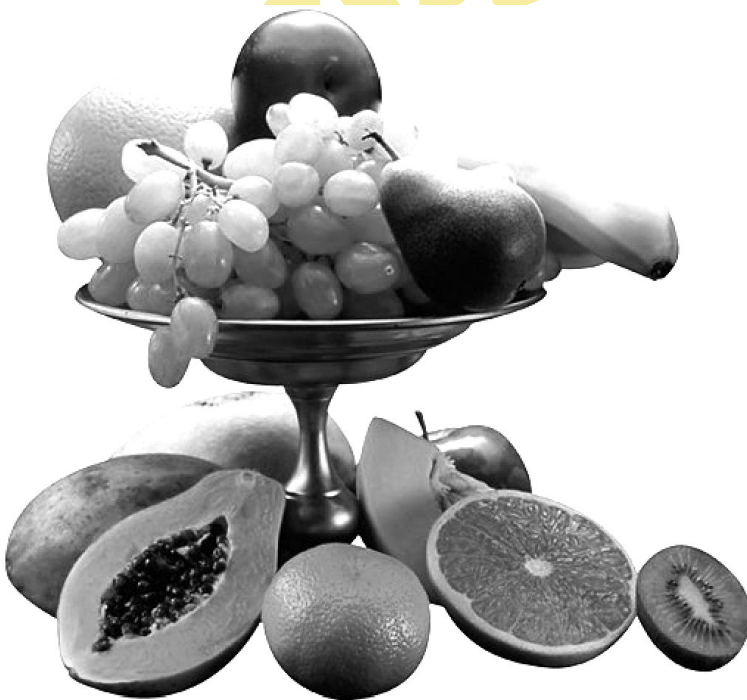
- Eating Well with Canada's Food Guide ¹;
- Enjoying a variety of foods;
- Choosing plant based fats and oils in appropriate amounts;
- Choosing more complex carbohydrate sources which also provide fiber
- Adequate fluid intake, before, during and after workouts;
- Having adequate protein intake;
- Maintaining energy balance.

Heavier training loads place increased demands on the body's requirements for carbohydrates, protein, vitamins/minerals, and fluids, which need to be met by increasing the intake of healthy foods and fluids. The difficulty arises for the busy client trying to juggle exercise, work/school, family, travel and everyday life. Canada's Food Guide to Healthy Eating provides a very useful tool to assist active people and athletes in achieving a healthy training diet.

Eating Well with Canada's Food Guide

Canada's Food Guide to Healthy Eating is the basis for a healthy training diet which can be modified based on the individual's fitness level, gender and personal goals. There is no one food or food group that supplies all the carbohydrates, fats, protein, vitamins and minerals required on a daily basis. Having the proper number of servings from each food group helps ensure the body is well fuelled for the demands of training.

Canada's Food Guide consists of four food groups: vegetables and fruit, grain products, dairy and alternatives, meat and meat alternatives, and fats and oils. The food groups are based on the nutrient categories they provide. Of the four groups, the first three provide











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Chapter 15

Setting Up Your Personal Trainer Business

In this chapter you will learn about:

-  What to Consider Before You Set Out on the Entrepreneurial Path
-  The Implications and Responsibilities of Operating Your Own Business
-  Business Planning
-  Types of Business Entities and Corporate Identity
-  Business Practices
-  Marketing and Sales
-  Risk Management and Liability
-  Role of the Personal Trainer



Setting Up Your Personal Trainer Business

Personal Trainer Business Practices

Starting up and managing a personal trainer business is no different than establishing any other successful venture. Research, planning, organizational, marketing and communications skills, as well as discipline and hard work are all required. This chapter will help you prepare the groundwork to set up a successful personal trainer business.

Assess Your Readiness

Before you begin it is critical to do some self-evaluation to assess why you want to start your own personal trainer business and examine the advantages and disadvantages of working for yourself.

In self-analysis you must take account your own personal strengths and weaknesses? Do you have the confidence, discipline and motivation needed to stay the course? What technical skills, qualifications and special knowledge do you have that can build your business?

The obvious benefits of self-employment include: doing what you really want to do; being your own boss; trying out your own ideas; setting your own work hours and fee structure; and working with the types of clients you really want to work with. All this and the seemingly unlimited potential you feel in creating your own destiny, or building your own company or business, really fuels the spirit. But with each benefit there are other realities to consider – ones that affect the bottom line and ultimate long-term viability of your personal trainer business.

It is important to recognize that while you are self-employed, each client of yours is really your employer. And with a group of employers comes multiple demands and expectations of your services. How you treat each client will determine whether or not you get repeat business (client retention) or attract new clientele. And while you may want to try out your own ideas and set your work hours and client fees, ultimately it is the client who decides when they want your services, how much they want to pay and what expectations they have of a personal trainer.

Patience, maturity and business acumen (and how fast you can learn all of these) play a key role in how you will handle the challenges you face in everyday business. You must be willing and prepared to take full responsibility for your actions and decisions. You must also be willing to ask others to help you in your efforts to build your business. It is critically important to continue learning about your business and your specific market; to seek out mentors and to network with others in the fitness industry.