

The CFES Weight Training Instructor Course Resource Manual



- ## National Certification Program



The CFES Weight Training Instructor Course

8th Edition, Canadian Fitness Education Services Ltd. (CFES) January 2014®

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National Library of Canada ISBN Data:	The CFES Weight Training Instructor Course Resource Manual ISBN 0-9731320-4-3
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Graphic Design:	Promet Canada
Publisher:	Canadian Fitness Education Services Ltd.
CFES Certification Programs:	The CFES Fitness Knowledge Course The CFES Fitness Knowledge Home Study Course The CFES Aquafit Instructor Course The CFES Group Fitness Instructor Course The CFES Weight Training Instructor Course The CFES Personal Trainer Course



WTI RM Cover 13/12/09 v 8.0

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CFES — Advancing the Standard in Fitness Leadership Training Since 1980

The CFES Weight Training Instructor Course

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Chapter 1

An Introduction to Resistance Training
and Resistance Training Instruction

In this chapter you will learn about:

- Understand the Opportunities and Challenges Facing Today's Fitness Leaders
- Learn the Physiological and Psychological Effects of Resistance Training
- Understand the Barriers to Physical Activity
- Learn the Myths Associated with Resistance Training and be Competent in Clarifying These Myths to the Participant
- Review Training Terminology and Master Training Principles
- Understand the Various Types of Equipment Currently on the Market and Their Advantages and Disadvantages



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Master Training Principles

A sound training program should be based on the following training principles. These principles provide the framework for designing fitness programs which are both safe and effective.

Specific Adaptation to Imposed Demand (S.A.I.D.)

The body will react and respond to the specific type of stress imposed on it. Steady-state exercise will improve cardiorespiratory fitness, resistance training will improve muscular strength and/or endurance, stretching will improve flexibility, etc.

Specificity

It is important to make the training program specific to the goals of the participant. For example, a client whose goals include improving upper body strength would not focus the majority of their resistance training efforts on performing lower body exercises. One must therefore take into consideration:

- the muscles involved the range of motion and movement patterns
- the speed of movements
- the energy system involved
- the neuromuscular pathways (muscles and nerves required)
- the structure of the participant's overall training program

Progressive Overload

To improve physical function the body must be placed under an increased workload until it adapts. With resistance training, the workload can be increased with greater resistance, more reps and more sets. If the intensity of the workload is gradually increased, consistently and with adequate rest, the body adapts in a positive way. If the intensity is increased too abruptly the body will react negatively and tissue damage or injury may occur (too much too soon). Increases should be gradual, involving only one variable at a time (intensity, duration, or load) (Heyward, 2010).

Recuperation

When exercising, the body experiences a catabolic (breakdown) effect. When resting, the body experiences an anabolic (building) effect, such as the repair and strengthening of the muscle fibres. For best results, therefore, a satisfactory amount of rest time is necessary. The more intense the work-outs, the greater the amount of rest required. ACSM 2012 recommends the following guidelines for resting each component of fitness:

<u>Component</u>	<u>Hours of Rest</u>
Cardiorespiratory Endurance	12 - 24 hrs
Muscular Endurance	48 hrs (per muscle group)
Muscular Strength	48 hrs (per muscle group)
Flexibility	Unknown

Threshold of Training

This is the minimal amount of exercise or intensity of exercise required to cause a training effect. This will vary between individuals and will constantly change depending on the individual's fitness level and nutritional

Hand and Ankle Weights

Characteristics:

- various designs for wrist weights including those that must be gripped (e.g. dumbbells, *heavy hands*, etc.), those strapped on the wrists (e.g. *soft weights*, sand-filled vinyl weights, etc.) and those that fit over and around hands.
- soft wrist and ankle weights are generally wrap around, sand-filled weights secured with Velcro straps

Advantages:

- allow sufficient overload to increase muscle tone, strength and endurance
- weights don't have to be very heavy to be effective as they are attached to the long lever arms of the body
- hand-held weights can increase the aerobic capacity and upper body strength/endurance when used during aerobic exercise such as walking as they increase the workload on the muscles, including the heart.
- portable and inexpensive
- easy to use

Disadvantages:

- resistance may not be enough for stronger individuals
- exercise may be done too fast if weight is too light
- excessive repetitions may be required to achieve fatigue if the weight is too light. Combined with excessive speed, this may result in joint injury over time.
- continuous grip may cause fatigue/discomfort in the forearm muscles and can result in over-use type injuries if this is the only mode of resistance used by an individual
- wrist weights should not be worn during aerobic or resistance training. Rather, they should be held in the hands to ensure all movements are controlled. The best way to add overload during aerobic exercise is to wear a properly fitted weight vest.

Core Stability / Balance Training Equipment

(stability balls, BOSU™, wobble boards, foam rollers)

Characteristics:

- Equipment reduces the external stability, causing the user to stabilize internally
- Variety of different products for different purposes



Advantages:

- facilitate development of core strength and stability
- can be used with traditional resistance training equipment
- some products are relatively inexpensive and portable
-

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Chapter 2

Establishing Your Personal, Professional Profile

In this chapter you will learn about:

- Effective Communication and Feedback
- Your Personal Positive Profile
- Your Personal and Professional Checklist
- Identify Your Personality Type
- Setting SMART Goals

Establishing Your Personal Professional Profile

Becoming a certified fitness leader brings with it the responsibility to learn how to communicate effectively. In fact, effective communication is at the very heart of fitness leadership. The importance of a clients' ability to clearly understand instructions related to physically carrying out individualized fitness programs cannot be overstated. It can mean the difference between clients exercising safely or being at risk of harm and directly impacts whether or not their efforts result in the health outcomes they strive for. As fitness leaders, we must remember that we work with the 'whole person' and as such, we must be aware of the impact our words, actions and mannerisms have on the attitudes, knowledge and skills our clients will learn from us. Our position is a powerful one. As fitness leaders, we are also instructors and educators. We must do everything we can to ensure that the information and instructions we give to our clients is, to the best of our knowledge, credible, current and safe.

Effective Communication

Weight Training Instructors (WTIs) will communicate with clients either verbally or non-verbally. Verbal communication would involve speaking to the client to provide information and instructions and will be the dominant form of communication between the client and the WTI. The tone of voice and words used are both key considerations for communicating verbal information effectively. Non-verbal communication will involve written instructions but will also include body language, appearance and facial expressions (Finlay & Frank, 2007).

When speaking with clients, the WTI needs to be mindful of the tone of voice used to deliver the message they are sending. For example, the WTI may say the correct words to the client, *"I'm 'X' and I will be taking you through your facility orientation today."* However, if the tone of voice that accompanies this statement is more monotone and less than enthusiastic, the words become less important. Clients will be more influenced by the tone of voice than the words that are spoken (Finlay & Frank, 2007). Building on this example, it is important to consider how appearance, body language and facial expression would also influence how the client receives this statement. A WTI who is dressed appropriately, portrays an open/confident persona (looks the client in the eye and offers a firm handshake) and smiles would completely change how the client 'hears' the statement (Finlay & Frank, 2007).

The following chapter will assist you with an honest assessment of yourself, personally, and your role as fitness professional.

Communication Do's and Don'ts

Communication is a two-way process of giving and receiving information. Giving information effectively requires forming ideas into clear, concise and timely messages while receiving information effectively requires active listening, questioning and processing of the information. Table 2.1 provides some important considerations for effective communication.

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Chapter 3

Teaching Adult Exercise Programs

In this chapter you will learn about:

- Focus on Adults
- Age Group Characteristics
- The Adult Learner
- The Participant Centred Approach to Teaching Fitness
- Exercise Adherence

Age Group Characteristics

Young Adults (ages 20 - 34) Characteristics	Facilitative Approach
Expect quick results	Encourage to proceed gradually and look at long term
Progress at individual rate	Provide emphasis on individual potential rather than comparison
May not recognize or cope well with stress	Offer stress management techniques and strategies
Learning may be impaired by fear or past experience	Make learning environment supportive implementing their suggestions
Accept need for structure, rules and regulations that are clear and fair	Communicate structure clearly, implementing their suggestions
Capable of problem solving and abstract learning	Provide challenges of this type
Willing to assume responsibility for their actions and decisions	Clarify this expectation in terms of learning experience
Experiencing a period of decision making regarding education, career, lifestyle	Avoid creating conflicts of loyalty
Mid Adults (ages 35 - 54) Characteristics	Facilitative Approach
Intrinsically motivated	Recognize individual needs
Investment of time often difficult due to other demands in their lives	Encourage realistic expectations and the development of a supportive social network
May fear failure or injury based on past experiences	Establish a non-threatening environment that promotes success. Ensure safety practices are followed
Some physical skills are more difficult to learn than for younger adults	Allow longer learning period for physical skills encouraging individual pacing
Recovery time from physical activity increases with age	Offer explanation of physiological changes with aging and encourage individual pacing
Many are motivated to participate in physical activity in order to lose or maintain body weight	Provide information on the types of physical activities most suitable for this goal and help them set realistic personal goals
Heart attacks and other health problems become more common in this age group	Encourage medical pre-screening and help participants devise a suitable program for their needs
Mature Adults (ages 55 years +) Characteristics	Facilitative Approach
Need to be recognized as an individual	Allow for individuality
Appreciates having control over involvement	Encourage participation in planning program
Social interaction is important	Provide atmosphere that includes and fosters social interaction
Past experiences affect decision-making and learning ability	Make learning environment comfortable and trusting
Motor skill learning is slower than for younger adults	Foster expectation of improvement based on gradual progressions
Will sometimes ignore signs of fatigue	Avoid competitive situations that can mask fatigue
Physical limitations can become very obvious	Create a supportive atmosphere that focuses on achievement rather than limitations
Heart attacks and other health problems become more common in this age group	Encourage medical pre-screening and help participants devise a suitable program for their needs

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Chapter 4

Program Planning and Design

In this chapter you will learn about:

- General Overview
- Components of a Workout
- Program Design and Delivery
- Health Screening
- Consultation and Clearance
- Planning a Balanced Fitness Program
- Program design, implementation and evaluation
- Sample Programs

Program Planning and Design

General Overview

The fitness industry is wrought with a variety of fitness leadership designations and certifications dedicated to individual fitness program planning and design; each with their own scope of practice. Some are geared to prescriptions for physical activity based on detailed physical assessments of clients (CFES Personal Trainer, CSEP-CPT); others cater to individuals with chronic disease and other health concerns (CSEP-CEP), to name but a few. The CFES Certified Weight Training Instructor (WTI) designation falls into the broad category of individualized fitness program planning and design, however the types of programs the WTI will plan and design for clients and the circumstances in which these programs will be delivered and monitored differ from that of certified personal trainers. For example, the WTI will most likely be introduced to clients as part of a facility/membership orientation whereby the WTI will be responsible for an individual's first experience with a new facility, a new type of fitness program, or both.

The WTI is not a personal trainer however they are often the first step in a client's movement toward acquiring a personal trainer and as such, have a responsibility and an opportunity to help clients develop a strong foundation for safe, effective, fun, satisfying experiences with physical activity. The WTI may be asked to simply orient a new member to the facility and the equipment available without providing any type of program. This would be requested by the client, although some memberships may include an initial consultation and generalized program. On the other hand, the WTI may be asked to provide more detailed information and assistance with a basic full body program for clients who would like to work out safely but who do not wish, at that time, to engage the services of a personal trainer. Regardless of the individual circumstances, it is important that the WTI is able to provide excellent instruction for safe, effective basic fitness programs for their clients. In order to accomplish this, the WTI must have knowledge and skills related to the planning, design and implementation of such programs. The following chapter provides the information necessary to accomplish this.

Components of a Workout

There are many 'workout' design options available for the fitness leader to choose from. Fitness trends often influence workout design which can include anything from high intensity interval training to endurance training. For the purposes of this course, program design will focus on the foundation of health-related components of fitness as all programs should be grounded in these. To be safe and effective, any well-rounded workout session will always include the following components:

1. **Warm up**
2. **Exercise Session**
 - The focus may be cardio-respiratory endurance, resistance training, flexibility or a combination
 - Workout sessions should be based on the principles of training, the current fitness level of the participant and the participant's fitness goals.
3. **Cool Down and Stretch** (may also be referred to as the cool down phase of the workout session).

Chapter 5

The CFES Weight Training Instructor Course

Program Instruction and Exercise Techniques

In this chapter you will learn about:

- The Three D's
 - o Describe, Demonstrate, Do
- Instructional Considerations
 - o Know your role
 - o Know your client
 - o Know your facility
 - o Know your equipment
 - o Be patient
- Teaching the Program
 - o The Orientation
 - o Pre-Screening Prior to Teaching the Warm-Up and Cardio Sessions
 - o Teaching the Warm-Up
 - o Teaching the Cardio
 - o Teaching the Resistance Training
 - o Teaching the Flexibility

Program Instruction and Exercise Techniques

The Three D's

The main goal of the CFES Weight Training Instructor is to empower clients with the knowledge necessary to take responsibility for their own physical wellbeing and to educate them on how to safely and effectively perform weight training exercises on their own. Consistency with verbal instructions and cues by the instructor when teaching all components of the workout will improve the client's ability to eventually retain and apply what they have learned with minimal assistance. To achieve this, CFES instructors should always apply the "3-D's" when educating their clients.

The Three D's are: Describe – Demonstrate – Do

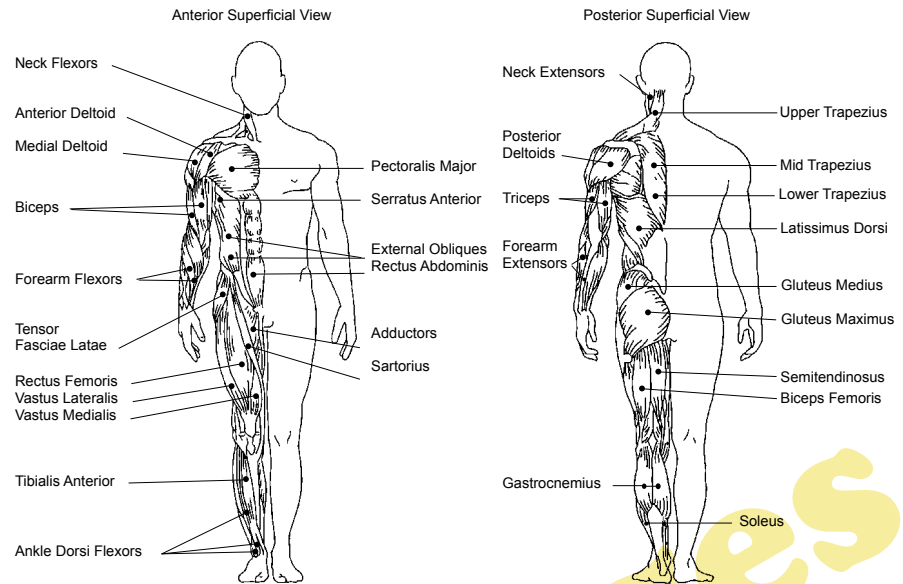
1. First, briefly **describe** the equipment, the exercise, and the primary muscle group(s) that will be targeted; whether strengthening or stretching. This should take the least amount of time of the 3-D's.

Example: "This is the leg press machine. You sit on this seat, with your feet against the pad and extend your legs. This exercise will primarily focus on strengthening the front of the thighs (quadriceps) and your seat (gluteus maximus). This is how you move the seat forward and back and this is how you adjust the amount of weight. These pictures will help you remember how to use the machine if you forget and I will make a note of the number of the machine (if applicable), your seat adjustment and the amount of weight you will be lifting on your workout card. Do you have any questions?"

2. Next, physically **demonstrate** the exercise. Layer the information you will provide to clients by re-enforcing what has already been said and then adding new information.

Example: "I will pull out the pin here and adjust the seat for my leg length and then adjust the amount of weight I will be lifting. This is what a leg press looks like. My seat is firmly on the seat cushion and my feet are hip width apart on the pad. I am sitting tall with my back firmly against the back of the seat and my abdominal muscles are contracted to support me. I press into the pad with my feet and lengthen my legs slowly, with control. Then, I return back to the start position. Do you have any questions?"

3. Then, have the client **do** the exercise immediately following the demonstration. This is when the instructor will provide the most education to the client. Providing the majority of information at this time will be most meaningful to the client as they will be physically engaging in the actions they are learning. At this time, the instructor is able to break the exercise down into smaller parts, if necessary, giving more detail about which muscles are working, how to properly perform the exercise (including body position, grip position, breathing, speed of movement, etc) and specific precautions for avoiding injury. The instructor should provide "corrective feedback" as necessary. This means giving the client specific information on how to improve his/



Upper Body Resistance Training Exercises

Wide Grip Lat Pulldown

Prime Mover: Latissimus Dorsi, Middle Trapezius, Rhomboids

Synergist: Biceps Brachii, Brachialis, Brachioradialis Posterior Deltoid, Teres Major

Stabilizers: Rotator Cuff, Core Muscles



Starting Posture for the Body Position Shown:

- Abdominals contracted for support, spine in a neutral position
- Lengthen across the chest
- Shoulder blades retracted and depressed, shoulders pulled back
- Look straight ahead; chin drawn in slightly, remaining level with the floor so that ears are over the shoulders (neck in line with the spine)
- Top of the head lifted toward the ceiling

The CFES Weight Training Instructor Course

Chapter 6 Exercise Safety

In this chapter you will learn about:

- Causes and Mechanisms of Injury
- Contraindicated Exercises
- Guidelines for Joint Safety
- Classification and Treatment of Injuries
- Safety in the Facility



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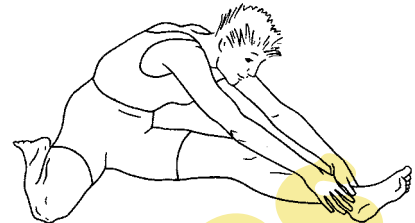
High Risk Flexibility Exercises and Safe Alternatives

Similar to resistance training exercises, stretching exercises may also pose a risk. The following flexibility exercises are considered high risk and should therefore be avoided. Safer alternatives are also recommended.

The Hurdler's Stretch

This stretch aims to target the hamstrings but causes excessive strain on the medial ligaments of the knee joint and the low back.

- ✓ A safer alternative to this exercise is the modified hurdler's stretch.



Excessive Back Hyperextension

This stretch aims to target the muscles in the abdominal region but causes excessive strain on the spine.

- ✓ A safer alternative for this stretch includes reaching above the head without an excessive backward lean; performed in a standing position or lying supine.



Standing Quadriceps Stretch

There is some research to suggest that this common stretch can cause stress on the knee joint over time. This is due to the tight angle of the knee joint while stretching (Fahey, Insol, Roth, 2010).

- ✓ A safer alternative to this stretch would be the standing lunge stretch whereby the joint angle at the knee remains open.

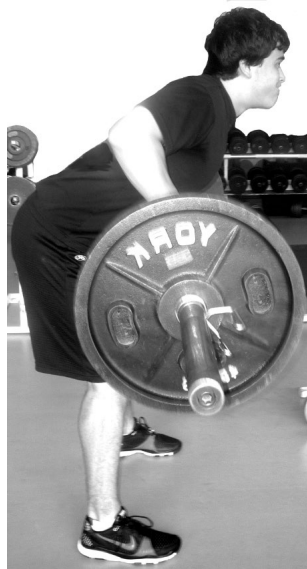


Forward Flexion Unsupported

This postural position (bending forward with no external support) is commonly used when performing

certain resistance training exercises (e.g. bent over barbell row). It is also a stretch commonly performed in yoga-type classes and has made its way to mainstream fitness. The risk associated with this stretch applies to the low back and uneven compression of the vertebral discs while weight-bearing.

- ✓ Safer resistance training positions would include a split lunge position with a hand on the thigh to support the upper body weight or placing a hand and knee on a bench.
- ✓ A safer alternative to this stretch would be the kneeling cat stretch.



The CFES Weight Training Instructor Course

Chapter 7

Providing Nutritional Information and Support

In this chapter you will learn about:

The Role of the Weight Training Instructor

- o CFES Scope of Practice
- o Providing Nutritional Information and Support

Nutrition Basics: Review of Essential Nutrients

- o Carbohydrates (CHO)
- o Proteins
- o Fats
- o Vitamins
- o Minerals
- o Water

Energy Balance and Body Weight Management

- o Determining Body Mass Index (BMI) and Waist Circumference
- o Understanding the factors associated with achieving and maintain a healthy body weight over the lifespan



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Recommended Number of Food Guide Servings per Day

Age in Years Sex	Children			Teens		Adults			
	2-3	4-8	9-13	14-18		19-50		51+	
	Girls and Boys			Females	Males	Females	Males	Females	Males
Vegetables and Fruit	4	5	6	7	8	7-8	8-10	7	7
Grain Products	3	4	6	6	7	6-7	8	6	7
Milk and Alternatives	2	2	3-4	3-4	3-4	2	2	3	3
Meat and Alternatives	1	1	1-2	2	3	2	3	2	3

The chart above shows how many Food Guide Servings you need from each of the four food groups every day.

Having the amount and type of food recommended and following the tips in *Canada's Food Guide* will help:

- Meet your needs for vitamins, minerals and other nutrients.
- Reduce your risk of obesity, type 2 diabetes, heart disease, certain types of cancer and osteoporosis.
- Contribute to your overall health and vitality.

Source: Health Canada, Eating Well with Canada's Food Guide. For more information, interactive tools, or full copies of the new guide visit Canada's Food Guide on-line at: www.healthcanada.gc.ca/foodguide

The CFES Weight Training Instructor Course

Chapter 8

Becoming a Certified Weight Training Instructor

In this chapter you will learn about:

- Becoming a Certified Weight Training Instructor
- The CFES Weight Training Instructor Scope of Practice
- The Weight Training Instructor Professional Ethics and Conduct Guidelines
- Professional Certification
- Insurance
 - o Who needs liability insurance?
 - o Procedures to Protect Against a Negligence Suit
- Professional Certification
- Liability Insurance
- Documentation
- Potential Negligence
- Professional Certification and Continuing Education



Canadian Fitness
Education Services

Becoming a Certified Weight Training Instructor

Thank you for enrolling in the Canadian Fitness Education Services (CFES) Weight Training Instructor course as your preferred method for becoming a weight training instructor.

Becoming a Certified Weight Training Instructor is a challenging and rewarding career path. Once certified, you will be responsible for providing safe and effective programs for your clients.

You will play an important role in your clients' lives by giving them the gift of physical activity and personal wellness. Your positive attitude, professionalism and education can make a real difference in people's lives. Your journey toward changing lives has begun.

The CFES Weight Training Instructor Scope of Practice

The CFES Weight Training Instructor certification is meant to provide leaders with the competencies necessary to design and implement safe, effective, and appropriate fitness programs. These fitness programs will be based on the CFES Performance Standards of a CFES Weight Training Instructor.

The CFES Weight Training Instructor will:

- ☐ Provide appropriate Weight Training programs to apparently healthy adults. Apparently healthy adults are (a) those individuals with a clear GAQ or (b) those individuals who have been cleared by a qualified health professional (e.g. medical doctor) for unrestricted physical activity using PAR Med-X, PARmed-X for Pregnancy screening tools;
- ☐ Provide Weight Training programs for participants who have been appropriately screened using the GAQ (apparently healthy adults). The GAQ must be administered each time someone registers for a new semester or program at the front desk or with the instructor;
- ☐ Fitness programs can be provided for participants that answer 'Yes' on the GAQ, as long as they have been medically cleared by a health care professional to participate in 'unrestricted physical activity';
- ☐ Provide on-going screening and monitoring of the participants for the duration of the program and provide modifications to accommodate all levels of ability.
- ☐ Design, modify, and provide instructions for a safe, effective, and appropriate program that includes — a warm-up, work-out (cardio, strength, endurance) and cool down (flexibility) components for each program;
- ☐ Provide appropriate exercises based on the needs and physical abilities of the participants;
- ☐ Incorporate use of appropriate equipment based on the participant's needs, physical abilities and personal fitness goals;
- ☐ Answer general healthy eating inquiries based on the Canada's Food Guide to Healthy Eating and Canada's Physical Activity Guide

