COMMON TRAINING

PROFICIENCY LEVEL FIVE

INSTRUCTIONAL GUIDE

SECTION 1

EO C504.01 – REFLECT ON PERSONAL FITNESS AND HEALTHY LIVING

Total Time:	One session (3 periods) = 90 min

PREPARATION

PRE-LESSON INSTRUCTIONS

This self-study package supports EO C504.01 (Reflect on Personal Fitness and Healthy Living) located in A-CR-CCP-805/PG-001, *Royal Canadian Air Cadets Proficiency Level Five Qualification Standard and Plan*, Chapter 4.

Self-study packages are intended to be completed by the cadet independently. More information about self-study packages can be found in the forward and preface.

Photocopy the self-study package located at Annex A for the cadet.

Photocopy the answer key located at Annex B but **do not** provide it to the cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

A self study was chosen for this lesson as it allows the cadet to reflect on and examine in greater detail the key concepts related to physical fitness and healthy living, at their own learning pace. This encourages the cadet to become more self-reliant and independent by focusing on their own learning instead of learning directed by the instructor.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall have reflected on and examined in greater detail the key concepts related to physical fitness and healthy living.

IMPORTANCE

It is important for cadets to have a solid understanding of the components of healthy living as they move into further life stages.

SELF-STUDY PACKAGE INSTRUCTIONS

OBJECTIVE

The objective of this self-study package is to have the cadet reflect on and examine in greater detail the key concepts of physical fitness and healthy living.

RESOURCES

- Self-study package, and
- Pen / pencil.

ACTIVITIY LAYOUT

Provide the cadet with a classroom or training area suitable to complete the self-study package.

ACTIVITY INSTRUCTIONS

1. Provide the cadet with a copy of the self-study package located at Annex A, the results of their Cadet Fitness Assessments (CFA) from Years 1 to current, and a pen / pencil.
2. Allow the cadet 90 minutes to complete the self-study package.
3. Provide assistance as required to the cadet.
4. Collect the self-study package once the cadet has finished.
5. Correct the self-study package with the self-study package answer key located at Annex B.
6. Provide feedback to the cadet and indicate whether or not they have completed the Enabling Objective (EO).
7. Return the completed self-study package to the cadet for their future reference.
8. Record the result in the cadet's logbook and Cadet Training Record.

SAFETY

Nil.

END OF LESSON CONFIRMATION

The cadet's participation in reflecting on and examining in greater detail the key concepts of physical fitness and healthy living will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

As cadets move from organized activities provided by cadet training to future education / work, the awareness of and actions related to healthy lifestyles become the individual's responsibility. With the greater examination of key concepts related to physical fitness and healthy living reviewed in the self-study package, cadets can be better prepared to pursue life-long habits of healthy living.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

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REFLECT ON PERSONAL FITNESS AND HEALTHY LIVING

Section 1: Physical Fitness
Section 2: Nutritional Fitness
Section 3: Mental Fitness

SECTION 1
PHYSICAL FITNESS

According to CATO 11-03, *Cadet Program Mandate*, the Cadet Program aims to promote physical well-being. Cadets develop an understanding of the benefits of fitness and a healthy lifestyle. This understanding combined with on-going participation in fitness activities, aids in the development of positive attitudes and behaviours that build resiliency within cadets and enables them to meet challenges.

Throughout your participation in the Cadet Program, you have regularly participated in the Cadet Fitness Assessment (CFA), which has provided you with feedback on your level of fitness, allowing you to set goals to improve your fitness levels based on the results. In setting your goals, you used the SMART principles:

S	Specific	What specific activity can you do to help you reach your goal?
M	Measureable	How often will you do this? How much will you do? What will you track and how?
A	Achievable	What behaviour will you change and is the goal related to it achievable? What might hinder you as you progress towards the goal?
R	Relevant	What will you get out of this?
T	Timed	How long will it take you to reach your goal?

Example **Goal:** To be more active.	This goal will be hard to measure (what do you mean by “more”?) and needs a time frame (when will you start and finish?).
SMART Goal: To do vigorous physical activity for 60 minutes, 3 times a week for the next month.	This goal is specific, measureable and has a specific timeframe. This will help determine if you have reached your goal.

You have also used physical activity trackers for periods of time, to determine if you were meeting the *Canadian Physical Activity Guidelines* and the *Canadian Sedentary Behaviour Guidelines*.

You will recall that vigorous-intensity physical activities will cause teens to sweat and be ‘out of breath’. (eg, activities like running and rollerblading), while moderate-intensity physical activities will cause teens to sweat a little and to breathe harder (eg, activities like skating and bike riding).

Sedentary behaviour is time when you are doing very little movement. Some examples include: sitting for long periods, using motorized transportation, watching television, playing passive video games, and playing on the computer.

COMPONENTS OF PHYSICAL FITNESS

You have learned that there are 3 components of physical fitness, and that being physically fit requires you to include activities in each of the components on a regular basis. The three components of physical fitness are:

- cardiovascular endurance,
- muscular strength, and
- muscular flexibility.



Review your Cadet Fitness Assessments, from the first one to the current one. Based on your results, what changes can you observe in each of the 3 components of fitness?

Component	Decrease	No Change	Some Improvement	Substantial Improvement
Cardiovascular endurance				
Muscular strength				
Muscular flexibility				



List the physical activities you currently participate in under the correct component of physical fitness.

Cardiovascular Endurance	Muscular Strength	Muscular Flexibility

Are you participating in activities involving each of the components of physical fitness?

If your answer is YES – keep up the involvement!
If your answer is NO – what can you do to balance your physical activity?

ACTIVITY GUIDELINES FOR YOUTH

Examine the *Canadian Physical Activity Guidelines* and *Canadian Sedentary Behaviour Guidelines* located at Appendix 1 to answer the following questions:



Q1. What are the physical activity guidelines for Youth ages 12–17years?

_____



List the physical activities you participated in to meet this guideline requirement, indicating (√) if they were moderate or vigorous intensity activities.

Activity	**Moderate**	**Vogorous**



Q2. What are the sedentary behaviour guidelines for youth ages 12–17 years?

_____



List the sedentary activities you have reduced in order to meet these guidelines.

_____

_____

Remember that being active for at least 60 minutes daily can help teens:

- Improve their health
- Do better in school
- Improve their fitness
- Grow stronger
- Have fun playing with friends
- Feel happier
- Maintain a healthy body weight
- Improve their self-confidence
- Learn new skills

ACTIVITY GUIDELINE CHANGES FROM YOUTH TO ADULT

Overall, strong evidence demonstrates that compared to less active adult men and women, individuals who are more active:

- have lower rates of all-cause mortality, coronary heart disease, high blood pressure, stroke, type 2 diabetes, metabolic syndrome, colon and breast cancer, and depression;
- are likely to have less risk of a hip or vertebral fracture;
- exhibit a higher level of cardio respiratory and muscular fitness; and
- are more likely to achieve weight maintenance, have a healthier body mass and composition.



The World Health Organization publishes interesting research and documents that can provide you with facts and statistics: http://www.who.int

The Mayo Clinic is an excellent source for many of the questions you may have related to exercise and adulthood: http://www.mayoclinic.com

There are many changes and challenges that you can look forward to as you move into your adult life. Such things as education, living conditions, relationships, children, finances, and career will all affect your ability to maintain your level of physical fitness.

Use the *Canadian Physical Activity Guidelines* and *Canadian Sedentary Behaviour Guidelines* to answer the following question:



Q3. What are the physical activity requirements for adults (18–64 years)?

Compare this answer to your answer for Question 1 (Youth guidelines).

_____

_____

In adults aged 18–64, physical activity includes leisure time physical activity (eg, walking, dancing, gardening, hiking, swimming), transportation (eg, walking or cycling), occupational (eg, work), household chores, play, games, sports or planned exercise, in the context of daily, family, and community activities. Keep in mind that levels of intensity (moderate to vigorous) are still important components to consider as an adult.



List activities in which you would like to participate to meet the requirements of the adult category, indicating (√) if they would be moderate- or vigorous-intensity activities.

Activity	Moderate	Vigorous

CHALLENGES TO YOUR FUTURE PHYSICAL ACTIVITY OPPORTUNITIES

Information and available data from the Public Health Agency of Canada show that many Canadians get less than the recommended amount of physical activity for their age group. It is suggested that, in addition to an obesity epidemic, there is also an epidemic of lack of cardio-respiratory fitness.



Did you know?

The Canadian Health Measures Survey of 2007–2009 showed that the proportion of adults whose aerobic fitness was categorized as “fair” or “in need of improvement” increased with age, from 32% of males and 20% of females aged 15 to 19 years to 59% of males and 92% of females aged 60 to 69 years.

There are several reasons why the activities you participate in to achieve the recommended guidelines may change as you get older. These include, but are not limited to, such things as:

- finishing high school where team sports are readily available;
- your focus on new living arrangements depending on your post high school pursuits (college, university, employment);
- the financial costs of joining clubs, teams, fitness facilities;
- your ability to manage your time; or
- your motivation level.

Getting and staying in shape doesn’t need to be expensive. You don’t need a gym or special equipment for an aerobic workout. Even such activities as taking a brisk walk every day or making a full workout of using stairs can become part of your fitness routine. Don’t get caught up in gym memberships or equipment purchases

you can't afford. Instead, concentrate on your fitness goals and brainstorm ways you can meet them without breaking your budget. Here are a few ideas:

- check out your local recreation department;
- consider where you can buy used equipment (eg, dumbbells, exercise DVDs and apps, fitness balls, jump ropes, resistance tubing, hoola hoops); and
- share costs with a friend.



What challenges do you think you may face to meet the activity guidelines in the future?

_____

_____



List strategies that would help you overcome the challenges you have identified?

_____

_____

_____

Practice setting a SMART goal by completing the following activity.



Q4. Set a SMART goal for one of the strategies you have listed above.

_____

_____

SELECTING YOUR PHYSICAL ACTIVITIES



Did you know?

High caloric intake and low physical activity are recognized as key contributors of obesity, diabetes and other chronic health conditions.

In selecting your method of physical activity, being aware that different activities result in different expenditures of energy will help you make better choices when you are managing your time.

For example: A 69 kg man (who is 177 cm tall) will use up about the number of calories listed doing each activity below. Generally, those who weigh more will use more calories, and those who weigh less will use fewer. The calorie values listed include both calories used by the activity and the calories used for normal body functioning.

Approximate calories used by a 69 Kg man	
Moderate physical activities:	**In 1 hour**
Hiking	370
Light gardening/yard work	330
Dancing	330
Golf (walking and carrying clubs)	330
Bicycling (less than 16 kms per hour)	290
Walking (5.6 kms per hour)	280
Weight training (general light workout)	220
Stretching	180
Vigorous physical activities:	**In 1 hour**
Running/jogging (8 kms per hour)	590
Bicycling (more than 16 kms per hour)	590
Swimming (slow freestyle laps)	510
Aerobics	480
Walking (7.2 kms per hour)	460
Heavy yard work (chopping wood)	440
Weight lifting (vigorous effort)	440
Basketball (vigorous)	440

Figure A-1 Calories Used by a 69 Kg Man During Physical Activity



Q5. Based on the example above, if the time frame available for an activity was 60 minutes, and if this person's goal was to exercise at a vigorous intensity by bicycling, how fast would he have to bicycle? Circle the correct answer.

a. Less than 16 kms per hour

b. More than 16 kms per hour

c. 8 kms per hour

d. 7.2 kms per hour



Use the chart below to determine approximately how much energy (calories) you use up with your favourite activity.

Type of Exercise	Calories/hour
Housework	160
Golf	240
Gardening	250
Walking, 4.8kph	280
Tennis	350
Swimming	400
Rollerblading/Skating	420
Aerobic Dance	420
Aerobics	450
Bicycling	450
Jogging, 8kph	500
Swimming	500
Cross Country skiing	500
Hiking	500
Step Aerobics	550
Rowing	550
Power Walking	600
Stationary Bike	650
Jumping Rope	700
Running	700

Figure A-2 Energy expenditure of different exercises



There are energy values for over 500 different activities available at your fingertips simply by doing a google.com search or by visiting http://www.health-and-fitness-source.com/burning-calories.html

SELECTING YOUR EXERCISE EQUIPMENT

While moderate- to vigorous-intensity physical activity can be readily practiced without the use of extra equipment (eg, walking, running, etc), there are alternate activities involving equipment for indoor use in the form of full-size machines. To intensify the workout, most of these machines come with electronic controls and built-in exercise programs that vary speed and intensity during a workout.

Treadmill	• Most natural form of exercise as it allows you to walk or run at your own pace. • Provides low to intense workouts. • More versatile for home gyms as some can be folded for storage.
Elliptical trainer	• Provides exercise workouts similar to combining biking, stair-climbing and cross-country skiing workouts. • Provides moderate to intense low-impact workouts for your legs and to a lesser degree, your arms. • If the machine has reverse motion, you then exercise your buttock muscles.

Exercise bike	• Popular form of exercise as they are simple to operate. • Comes with preprogrammed biking routines to provide various workouts. • Some bikes can be plugged into televisions and video games to let you interactively pedal through the visual courses.
Rowing machine	• Machine allows you to burn calories in a low-impact workout. • Areas exercised include arms, legs, and torso. • Can have a built-in PC interface to support software accessories.



For calorie-burning workouts, the treadmill and elliptical trainer are your best choices.

SELECTING PERSONAL DEVICES

Personal devices can be small, such as pedometers, accelerometers and multi-sensor activity tracking devices.

Basic Pedometer	• Used to count steps while an individual walks or runs. • Works by pendulum movement as the balanced weight activates to vertical motion which records steps and shows a digital record. • Most are clipped to the belt for use during low-impact exercise (eg, walking).
Pedometer Watches	• Come in three different varieties (separate sensor, GPS, watch sensor)
Accelerometer	• Use a precision motion sensor to measure calories burned during activity. • Provides a quantitative measurement which counts steps and the force of a person's stride.



Advanced pedometers and accelerometers have been incorporated into modern cellular telephones and everyday devices including watches. These require you to stream the data to other sources.

SELECTING YOUR MONITORING METHOD

To support and encourage continuous fitness activity, you may want to continue using a form of tracker, journal or log book. Technology also provides numerous avenues to record and monitor physical activity. Multi-sensor tracking devices such as arm bands and heart rate monitors record different physiological measurements and provide a record of physical activities.

Whether you use paper and pencil, physical activity devices, or online monitoring tools that promote physical fitness, each has benefits to assist the user to achieve and maintain a level of fitness.

The exercise heart rate belt is used for an active individual to monitor the heart rate during exercise. The belt has a sensor but is not a stand-alone device. The wireless transmitter sends information to a receiver plugged into the interface box on the machine being used.

The opportunity for personal fitness training continues to grow with the development of more apps for the personal devices and DVDs. With continued development, the consumer options and needs provide more choices.



It is important to collect activity data over multiple days and even weeks to get an accurate record of your exercise program and results.



If you are planning to document and analyze your daily physical activity, first check the device you are using for online support or software compatibility with your PC.

Most equipment can be linked to online or software programs which allow you to monitor your exercise program on a PC. The end result of the exercise program depends on the program you are using. The programs come in various workouts for all fitness levels and goals including:

- cardio,
- strength training,
- circuit training,
- fitness journals, and
- activity calorie calculators.



Fitness music programs can be obtained from online suppliers such as iTunes® or cadencerevolution.com. Other sources can be found online.



Visit www.cadencerevolution.com/index.php/2009/11/weekly-workout-142/ to see a cycling workout with music.

Numerous programs are available online. Whether you want to store the information with the organization or get assistance with your fitness activity, this information is found online. Online services include:

- workout training,
- fitness training,
- weight loss training,
- calories burned training,
- fitness calculator, and
- diet tracker.



The program you want to use may vary from those discussed here. Review fitness apps online and choose the program best suited for your requirements. Some workouts are free and some require you to purchase the program.



More devices and apps are being created to allow people to exercise and record their progress on electronic devices. List devices or apps that you know of that you might be interested in using in the future.

_____ _____

_____ _____

_____ _____

_____ _____

SECTION 2
NUTRITIONAL FITNESS

CALORIES NEEDED FOR OPTIMAL HEALTH

Healthy eating is important for overall health. Your body needs a certain amount of calories (food energy) every day for optimal health and to function without gaining weight. Weight control and healthy eating is a balancing act. A lot depends on your activity level, body metabolism (the way your body converts food to energy), body size and body composition. Along with physical activity, diet is the most well-studied behavioural factor influencing body weight, and overweight and obesity risk.



Activity levels are described by Health Canada as follows:

1. Sedentary: Your typical daily routine requires little physical movement (eg, sitting for long periods, using a computer, relying primarily on motorized transportation) and you accumulate little physical activity in your leisure time.

2. Low Active: Your typical daily routine involves some physical activity (eg, walking to the bus, mowing the lawn, shoveling snow) and you accumulate some additional physical activity in your leisure time.

3. Active: Your typical daily tasks involve some physical activity and you accumulate at least 2 ½ hours of moderate- to vigorous-intensity aerobic physical activity each week. Moderate- to vigorous- physical activity will make you breathe harder and your heart beat faster.

The values in the table below are approximations calculated using Canadian median heights and weights that were derived from the median normal Basic Metabolic Index for different levels of physical activity. Your individual values may be different.

Estimated Energy Requirements						
Males (calories per day)				**Females** (calories per day)		
Sedentary	**Low Active**	**Active**	**Age**	**Sedentary**	**Low Active**	**Active**
1900	2250	2600	**12-13 y**	1700	2000	2250
2300	2700	3100	**14-16 y**	1750	2100	2350
2450	2900	3300	**17-18 y**	1750	2100	2400
2500	2700	3000	**19-30 y**	1900	2100	2350
2350	2600	2900	**31-50 y**	1800	2000	2250
2150	2350	2650	**51-70 y**	1650	1850	2100
2000	2200	2500	**71 y +**	1550	1750	2000

Figure A–3 Estimated Energy Requirements



Using the chart above, determine the estimated energy requirement for your current age and for 15 years from now, in each of the activity categories. What is the difference?

Current age		**15 years from now**
	Sedentary	
	Low active	
	Active	

QUALITY CALORIES

You obtain the calories (energy) that you require for optimal health from the food that you eat. Canada's Food Guide recommends the number of food guide servings per day, based on your age, in each of the following categories:

- vegetables and fruit,
- grain products,
- milk and alternatives, and
- meat and alternatives.



Review *Eating Well with Canada's Food Guide* located at Appendix 2 and complete the following table based on your food intake yesterday.

Category	Number of servings required	My servings yesterday
Vegetables & fruit		
Grain products		
Milk and alternatives		
Meat and alternatives		



How did you do yesterday compared to the Food Guide's recommendation? Do you need to change any of your eating habits to meet the requirements?

MAKING WISE FOOD CHOICES

While the amount of energy (calories) that your body requires for optimal health changes as you age, the quality of the calories you consume to nourish your body remains high. With proper knowledge, you can make wise choices in your food selections. Making healthy food choices can help reduce your risk of nutrition-related chronic diseases such as cancer, diabetes, heart disease and stroke.

Nutrition Facts. This table, found on food products, includes calories and 13 nutrients: fat, saturated fat, trans fat, cholesterol, sodium, carbohydrate, fibre, sugars, protein, Vitamins A and C, calcium and iron. You can use the Nutrition Facts to:

- compare products more easily;
- determine the nutritional value of foods;
- better manage special diets; and
- increase or decrease your intake of a particular nutrient.



All the information in the Nutrition Facts table is based on a specific amount of food. Be sure to compare this amount to the amount you eat.

If the Nutrition Facts table has information based on a piece of meat the size of your hand and you eat a piece of meat twice the size of your hand, then you will need to double the calories and the amount of nutrients listed in order to calculate what your intake would actually be.

% Daily Value. This is included in the Nutrition Facts table and is a benchmark for evaluating the nutrient content of foods quickly and easily. It is based on recommendations for a healthy diet and is also used to determine whether there is a lot or a little of a nutrient in a specific amount of food.



Q6. Use the Nutrition Facts table below to circle the correct answer.

1. What is the serving size of the bread?	1 slice	2 slices	3 slices
2. How many calories are there in one slice of bread?	64	70	140
3. What is the % of sodium in the serving size?	12%	6%	24%
4. How many grams of sugar is in each slice of bread?	1g	2g	4g

Whole Wheat Bread Nutrition Facts Per 2 slices (64 g)			
Amount		**% Daily Value**	
Calories 140			
Fat 1.5 g		**2 %**	
Saturated 0.3 g + Trans 0.5 g		**4 %**	
Cholesterol 0 mg			
Sodium 290 mg		**12 %**	
Carbohydrate 26 g		**9 %**	
Fibre 3 g		**12 %**	
Sugars 2 g			
Protein 5 g			
Vitamin A	0 %	Vitamin C	0 %
Calcium	4 %	Iron	1 0%

Figure A-4 Whole Wheat Bread Nutrition Facts



Use the Nutrition Facts tables below to compare a sirloin burger and a chicken burger, then check (√) the correct answer.

	Higher in the sirloin burger	Higher in the chicken burger	Same in both
1. The specific amount of food is			
2. The % Daily Value of iron is			
3. The sugar content is			
4. The % Daily Value of fat is			
5. The % Daily Value of salt is			

Sirloin Burger Nutrition Facts Per 1 burger (130 g)				**Chicken Burger Nutrition Facts Per 1 burger (130 g)**			
Amount		**% Daily Value**		**Amount**		**% Daily Value**	
Calories 340				**Calories** 200			
Fat 27 g		**42 %**		**Fat** 9 g		**14 %**	
Saturated 12 g + Trans 2 g		**70 %**		Saturated 2 g + Trans 1 g		**15 %**	
Cholesterol 70 mg				**Cholesterol** 70 mg			
Sodium 330 mg		**14 %**		**Sodium** 800 mg		**33 %**	
Carbohydrate 3 g		**1%**		**Carbohydrate** 4 g		**1 %**	
Fibre 0 g		**0 %**		Fibre 0 g		**0 %**	
Sugars 3 g				Sugars 0 g			
Protein 24 g				**Protein** 25 g			
Vitamin A	0 %	Vitamin C	0 %	Vitamin A	0 %	Vitamin C	0 %
Calcium	2 %	Iron	30 %	Calcium	4 %	Iron	2 %

Figure A-5 Nutrition Facts Table



The % Daily Value is best used as a comparative benchmark when deciding between two food products.

Nutrition Claims. The Government has rules in place that must be met before a nutrition claim can be made on a label or advertisement. The rules for nutrition claims apply to all foods, prepackaged and not prepackaged, no matter where they are sold. There is no current requirement to include nutrition claims on the label or in advertisements, and many nutrition claims highlight a feature of interest to try to get consumers to purchase the product.

In the chart below, there are several examples of Nutrition Claims and what the claim means related to the amount of food specified in the Nutrition Facts table on the food packaging.

Nutrition Claim	What it means
Source of fibre	The food contains at least 2 grams of dietary fibre.
Low fat	The food contains no more than 3 grams of fat.
Cholesterol-free	The product has a negligible amount (less than 2 mg) of cholesterol and it is also low in saturated fat and trans fat.
Sodium-free	Contains less than 5 mg of sodium.
Reduced in calories	Has at least 25% less energy (calories) than the food it is being compared to.
Light	Only allowed on foods that are either reduced in fat or reduced in energy (calories). Can also be used to describe sensory characteristics of a food, provided that the characteristic is clearly identified with the claim (eg, light tasting, light coloured).



Did you know?

- Most Canadians get more salt than they need. It's best to limit your sodium intake.
- Most sodium comes from sodium chloride better known as table salt or sea salt.
- Salt is a common ingredient in processed and prepared foods, such as canned soups and processed meats.
- Sodium, without chloride, may also be added to foods through additives such as disodium phosphate, sodium nitrate, or sodium gluconate.

Health Canada's recommendation for people aged 14 and over is to not eat more than 2300 mg sodium per day. If you want to know more about sodium intake, visit: http://www.hc-sc.gc.ca/fn-an/nutrition/sodium/index-eng.php

The next time you are in the grocery store, challenge yourself to see how many different kinds of canned soup you can find, where the sodium content is less than 15% of the recommended daily value of sodium.



Now that you know what Nutrition Claims are, write down 2 reasons why you think food manufacturers would want to put claims on their food labels.

1. _____

2. _____

List of Ingredients – this is a mandatory list on food product packages. All the ingredients have to be listed in descending order by weight, with the greatest amount in a product listed first.



Q7. In the example given below, which ingredient is present in the greatest amount?

_____

Bran cereal: Ingredients: Whole wheat, wheat bran, sugar / glucose-fructose, salt, malt (corn flour, malted barley), vitamins (thiamine hydrochloride, pyridoxine hydrochloride, folic acid, d-calcium pantothenate), minerals (iron, zinc oxide).



Did you know?

To pick the healthiest breakfast cereals, you need to look at the sugar, fiber, sodium and fat content on the box.

Next time you are at the store, check out the breakfast cereals to see which one has the lowest sugar content.



For more information about Food and Nutrition, check out Health Canada www.hc-sc.gc.ca/fn-an/index-eng.php

THE BALANCING ACT

Eating too much and not getting enough physical activity will result in weight gain. Likewise, eating too little and being very physically active will result in a poorly nourished body and the potential for weight loss. Setting SMART goals related to nutrition is a very positive way to develop and maintain good eating habits throughout your life.

Goal: To start eating more fruit.	This goal would be hard to measure (what do you mean by "more" fruit?) and needs a time frame (when will you start and finish?).
SMART Goal: To eat 1 fruit with lunch 4 times this week.	This goal is specific, measureable and has a specific timeframe. You will be able to determine if you have reached your goal.



Q8. Fill in the box to make the following nutritional goal a SMART nutritional goal.

Goal: To balance my food intake.	**SMART Goal:** _____ _____

BUDGET SHOPPING FOR FOOD



Budget Shopping for Food

There are steps that you can take to stay within your budget when you are shopping for groceries.

- Buy only what you need – plan a menu first then make a shopping list.
- Keep a list in your kitchen – jot down items as you need them.
- Pay with cash if you can – spend only the money you have allocated.
- Try not to shop when hungry – it helps keep you from buying food you don't need.
- Buy fewer convenience foods.
- Buy fewer prepared foods – these items usually cost more and are higher in sugar, salt and fat.
- Look for best buys – check store flyers, use coupons, buy store or no-name brands.
- Look at the top and bottom of shelves – higher priced items are usually placed at eye level.
- Compare unit prices – to compare similar foods of different sizes.

COMPARING RECIPES

A great way to fuel your body with higher quality food is to check out the differences in recipe ingredients and select the most nutrient-dense foods. Using the same principles as when you were looking at Nutrition Fact Tables, you would analyze recipes and make informed decisions.



There are many great resources available online to help you plan menus, compare recipes and track your food and activity patterns. Check out provincial and federal government resources.

SECTION 3
MENTAL FITNESS

Mental fitness is an important component of a healthy lifestyle. Just as physical and nutritional fitness helps your body to stay strong, mental fitness helps you achieve and sustain a state of good mental health. Being mentally healthy means striking a healthy balance in all areas of your life:

- social,
- physical,
- spiritual,
- economic, and
- mental.

The benefits of being mentally fit include:

- enjoyment of life, the environment and people in it;
- being creative, learn, try new things and take risks;
- better able to cope with difficult times in your personal and professional life; and
- able to feel strong emotions (sadness, anger) and then get on with and enjoy life once again.

Reaching a balance is a learning process that comes with experience and lots of practice. Sometimes you may tip the balance in one direction more than another and you will need to rebalance yourself. At times you may be able to rebalance on your own while at other times you may need to ask for assistance in getting yourself back on track. Good mental health helps you enjoy life and cope with problems. You have to work to keep your mind healthy.

Stress and how you respond to it will be one of the biggest factors contributing to your mental fitness balancing abilities. It comes from both the good (positive) and bad (negative) things that happen to you and becomes a problem when you are not sure how to handle a situation or are unable to. That's when worry steps in and makes you feel stressed. Stress that is not dealt with properly may result in anxiety, depression or panic attacks.

Along with pressures for you to succeed at school, at home and in social circumstances, there may be many new challenges coming up for you such as:

- leaving home,
- employment,
- education,
- balancing work or school with healthy relationships,
- eating properly, or

- ill family members.



Write down challenges that you think you could face in the future.

_____

_____

_____

Good mental health depends on several things:

- the food you eat – can have a direct effect on your energy level, physical health and mood;
- regular physical activity – your body makes certain chemicals before and after you work out, called endorphins, which relieve stress and improve your mood;
- sleep – your body needs time every day to rest and heal; and
- mental health tools – ways and means that you have to cope with difficult times, stress and challenges.

SELF-ESTEEM



Self-esteem is the value you place on yourself. It is the feeling that you have about all the things you see yourself to be. It is the knowledge that you are loveable, you are capable and you are unique.

Good self-esteem means:

- having a healthy view of yourself;
- having a quiet sense of self worth;
- having a positive outlook;
- feeling satisfied with yourself most of the time; and
- setting realistic goals.

Your self-esteem can be affected by others around you who are feeling down, negative and dissatisfied with school, relationships or life in general. Being aware of conditions or behaviours affecting mental fitness can be of significant help to you or to a friend in need.

	What is it?	Warning Signs	What can you do?
Self-injury	Also known as self-harm and self-abuse it refers to deliberate acts that cause harm to one's body or spirit. Person may be troubled by frequent intense, painful emotions. Missing ways to cope with handling emotions	Unexplained frequent injuries, such as cuts and burns; hair pulling; scratching or picking scabs preventing wounds from healing. Wearing long pants and long sleeved shirts in warm weather.	If it's yourself – begin talking to someone you trust; your doctor may be able to recommend a therapist or psychologist who can help; look for a support group in your area. If it's someone else – listen; offer support without judging

	What is it?	Warning Signs	What can you do?
	effectively. This bottleneck of emotions is released by cutting, burning or otherwise hurting themselves. Short term solution with serious consequences.	Low self esteem. Problems handling emotions. Problems with relationships.	or criticizing; try not to blame or react as though their behaviour is impossible to understand. In both instances, treatment by a mental health professional is recommended.
Psychosis	A treatable medical condition that affects the brain and can result in some loss of contact with reality. Ongoing changes in behaviour, personality and day to day functioning. Affects 3% of the population at some point in their lives.	Early on - withdrawn; sullen; won't get out of bed, get dressed or showered; lashes out for no apparent reason; walks around showing no emotion. Person may appear anxious, suspicious, disorientated. If not treated, more serious symptoms develop.	If it's yourself - be aware of the early symptoms; don't ignore the warning signs or take a wait and see attitude; talk to someone you trust. If it's someone else – be aware of the symptoms; be supportive; encourage the person to seek professional help.
Suicide	The intentional taking of one's own life.	Sudden change in behaviour (positive or negative). Apathy, withdrawal, change in eating patterns Unusual preoccupation with death and dying. Giving away valued personal possessions Signs of depression, moodiness, hopelessness. One or more previous suicide attempts. Suicidal thoughts.	If it's you – talk to someone you trust and who can help (parent, teacher, residence supervisor). Call a crisis centre hotline. If it's someone else – talking calmly about suicide, without showing fear or making judgments, can bring relief to someone who is feeling terribly isolated. Don't promise not to tell. Tell someone in a position to help (teacher, parent, a residence supervisor). Encourage the person to call a crisis centre hotline.
Depression	It's common to experience depressed moods or "the blues" at some point in life. Depression is when feelings persist and result in significant distress or dysfunction in daily activities.	Depressed mood. Marked loss of interest or pleasure in things that used to give pleasure. Significant weight loss or gain, or pain. Difficulty falling asleep or staying asleep or sleeping too much.	If it's yourself – talk to someone you trust and who can help; seek professional help; take good care of yourself through positive lifestyle choices; find time to socialize; manage your stress. If it's someone else – be supportive; suggest they

	What is it?	Warning Signs	What can you do?
		Feelings of apathy or agitation. Loss of energy. Feelings of worthlessness or guilt. Inability to concentrate or make decisions.	seek professional help; listen; support.
Alcohol Poisoning	A serious, potential consequence of binge drinking. Binge drinking is considered to be five drinks or more in a row for a man and four drinks or more for a woman – having a six pack or a bottle of wine in one session.	Confusion Vomiting Problems breathing Clammy skin and low body temperature Loss of bladder control Unconsciousness	If it's you – get help. Drinking isn't necessary to fit in with your peers; select positive ways to reduce stress and anxiety. If it's someone else –get help. If there isn't a trusted adult nearby, call 911 or emergency services immediately.



The Canadian Public Health Association has a good site with more information, including an interesting scenario: http://www.cpha.ca/en/portals/substance/article02.aspx

HOW TO PRACTICE MENTAL FITNESS

There are many ways for you to practice mental fitness. You can develop your own tools and practices to ensure that your responses to stress, challenges and difficult situations result in a strong, positive outcome.



Beside each of the following suggestions for practicing mental fitness, check off any of the items you think you could do or incorporate into your lifestyle in the future.

	Which activity can you do to practice mental fitness?	√
1	Wake up each day and be grateful for another lovely day.	
2	TTSP – This Too Shall Pass – with experience, you will come to know that rough times will pass. When something sad or negative happens, remind yourself that you will feel better soon and that will help you get through those difficult first days.	
3	Participate in some form of exercise early in the day, to get you going for the rest of the day.	
4	Sit back, take a few deep breaths and watch the clouds go by.	
5	Join a local league or college group of some sort (hockey, badminton, walking, book club, etc) to keep yourself active and socially connected.	
6	Curl up with a good book.	
7	Take a dog for a walk and watch how they love to run and play.	
8	Listen to your favorite music and sing your heart out.	
9	Spend some time enjoying the great outdoors – enjoy the sunshine; splash in some puddles; hike your favorite trail.	
10	Use motivational quotes – post your favorite motivational quote where you can see it daily.	
11	Take a short break from what you are doing (studying, cleaning, etc), to do the things you enjoy doing. You'll come back refreshed and ready to carry on.	
12	Meditation practice – helps develop perspective, have realistic expectations of others and develop strategies to reduce stress.	
13	Get together with friends for coffee dates, potlucks or gab sessions.	
14	Do something creative like knitting, painting, drawing, carving, or music lessons.	
15	Bring humor into your life by engaging in funny activities, laughing uncontrollably, telling a funny joke, watching your favorite comedy show, playing a funny joke on a friend.	
16	Practice Pilates or yoga with a group or on your own.	
17	Cook or bake - this can be soothing, creative and productive, plus you get something yummy to eat!	
18	Do something just for you – this can bring much needed balance in your life.	
19	Go for a massage.	
20	Take a power nap.	

How many √ marks do you have? _____

You may be surprised to see that there are many activities that you have identified that you can use to promote your mental fitness.



Q9. True or False? Self-esteem means:

1	Having a healthy view of yourself	
2	Having a quiet sense of self worth	
3	Having a negative outlook	
4	Feeling dissatisfied with yourself most of the time	
5	Setting realistic goals	



For more information on mental health tips, go to the Canadian Mental Health Association http://www.cmha.ca/mental_health/mental-fitness-tips/

MOTIVATIONAL QUOTES

One of the mental fitness activities above (#10) involves the use of motivational quotes. Your outlook can be inspired and charged by having your favorite quote(s) available at your fingertips as positive reminders of goals you have set for yourself.



Read the following motivational quotes and highlight the ones that you like.

"Act as if what you do makes a difference. It does." William James	"I can therefore I am." Simone Weil
Life can only be understood backwards; but it must be lived forwards." Soren Kierkegaard	"Experience is not what happens to you; it's what you do with what happens to you." Aldous Huxley
"Optimism is the faith that leads to achievement. Nothing can be done without hope and confidence." Helen Keller	"If you want to conquer your fear, don't sit home and think about it. Go out and get busy." Dale Carnegie
"Problems are not stop signs, they are guidelines." Robert h. Schuller	"I'd rather do something great and fail than attempt to do nothing and succeed." Robert H. Schuller
"The person who has lived the most is not the one with the most years but the one with the richest experiences." Jean-Jacques Rousseau	"What you get by achieving your goals is not as important as what you become by achieving your goals." Henry David Thoreau

“I think everything is possible if you put your mind to it and you put the work and time into it. I think your mind really controls everything.” Michael Phelps	“I don’t measure a man’s success by how high he climbs but by how high he bounces when he hits the bottom.” George S. Patton
“Life is a journey not a destination.” Ralph Waldo Emerson	“If you can dream it, you can do it.” Walt Disney
“Even if you fall on your face, you’re still moving forward.” Victor Kiam	“Don’t cry because it’s over, smile because it happened.” Dr. Seuss
“You are never too old to set a new goal, or to dream a new dream.” C.S. Lewis	“In order to succeed, we must first believe that we can.” Nikos Kazantzakis



Write your favourite motivational quote on a large piece of paper and post it at your corps/ squadron. Select from the ones above or use another one that really motivates you.



Promise Yourself
To be so strong that nothing
can disturb your peace of mind.
To talk health, happiness, and prosperity
to every person you meet.

To make all your friends feel
that there is something in them
To look at the sunny side of everything
and make your optimism come true.

To think only the best, to work only for the best,
and to expect only the best.
To be just as enthusiastic about the success of others
as you are about your own.

To forget the mistakes of the past
and press on to the greater achievements of the future.
To wear a cheerful countenance at all times
and give every living creature you meet a smile.

To give so much time to the improvement of yourself
that you have no time to criticize others.
To be too large for worry, too noble for anger, too strong for fear,
and too happy to permit the presence of trouble.

To think well of yourself and to proclaim this fact to the world,
not in loud words but great deeds.
To live in faith that the whole world is on your side
so long as you are true to the best that is in you."

Figure A-6 The Promise, by Christian Larson

CONCLUSION

As you move to future education / work from organized activities provided by cadet training, the planning and scheduling of leisure time for physical fitness, nutritional and mental fitness activities becomes your responsibility. The information, challenges and strategies reviewed in this self-study package have provided you the resources to continue to sustain a healthy lifestyle.

Whether you use exercise equipment, small devices, online programs, individual or group support, it is your responsibility to participate in and adopt a healthy lifestyle. A plethora of resources may be used to address physical, nutritional and mental fitness.

As you progress into future training and education, the benefits of physical, nutritional and mental fitness will help you maintain a healthy lifestyle.



Congratulations, you have completed your self-study package on EO C504.01 (Reflect on Personal Fitness and Healthy Living). Hand your completed package to the Training Officer / Course Officer who will record its completion in your Proficiency Level Five logbook.

Canadian Physical Activity Guidelines

FOR YOUTH - 12 – 17 YEARS

Guidelines

For health benefits, youth aged 12-17 years should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. This should include:

Vigorous-intensity activities at least 3 days per week.

Activities that strengthen muscle and bone at least 3 days per week.

More daily physical activity provides greater health benefits.

Let's Talk Intensity!

Moderate-intensity physical activities will cause teens to sweat a little and to breathe harder. Activities like:

- Skating
- Bike riding

Vigorous-intensity physical activities will cause teens to sweat and be 'out of breath'. Activities like:

- Running
- Rollerblading

Being active for at least **60 minutes** daily can help teens:

- Improve their health
- Do better in school
- Improve their fitness
- Grow stronger
- Have fun playing with friends
- Feel happier
- Maintain a healthy body weight
- Improve their self-confidence
- Learn new skills

Parents and caregivers can help to plan their teen's daily activity. Teens can:

- ☑ Walk, bike, rollerblade or skateboard to school.
- ☑ Go to a gym on the weekend.
- ☑ Do a fitness class after school.
- ☑ Get the neighbours together for a game of pick-up basketball, or hockey after dinner.
- ☑ Play a sport such as basketball, hockey, soccer, martial arts, swimming, tennis, golf, skiing, snowboarding…

Now is the time. 60 minutes a day can make a difference.

PARTICIPACTION

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THE GOLD STANDARD IN EXERCISE SCIENCE AND PERSONAL TRAINING
www.csep.ca/guidelines

Canadian Sedentary Behaviour Guidelines

FOR YOUTH - 12 – 17 YEARS

Guidelines

For health benefits, youth aged 12–17 years should minimize the time they spend being sedentary each day. This may be achieved by

- Limiting recreational screen time to no more than 2 hours per day; lower levels are associated with additional health benefits.
- Limiting sedentary (motorized) transport, extended sitting and time spent indoors throughout the day.

The lowdown on the slowdown: what counts as being sedentary?

Sedentary behaviour is time when teens are doing very little physical movement. Some examples are:

- Sitting for long periods
- Using motorized transportation (such as a bus or a car)
- Watching television
- Playing passive video games
- Playing on the computer

Spending less time being sedentary can help teens:

- Maintain a healthy body weight
- Improve their self-confidence
- Do better in school
- Improve their fitness
- Have more fun with their friends
- Have more time to learn new skills

Cutting down on sitting down. Help teens swap sedentary time with active time!



Active Transportation
Instead of driving or taking the bus, teens can walk or bike to school with a group of friends from the neighbourhood

Active Play
Limit after school video-gaming. Help teens to plan active time around the home or outdoors instead!

Active Family Time
Teens can visit friends instead of texting them. Go for a walk or a bike ride with mom or dad after dinner, or offer to walk the neighbour's dog.

Now is the time for teens to get up and get moving!

ParticipACTION

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Canadian Physical Activity Guidelines

FOR ADULTS - 18 – 64 YEARS

Guidelines

To achieve health benefits, adults aged 18-64 years should accumulate at least 150 minutes of moderate- to vigorous-intensity aerobic physical activity per week, in bouts of 10 minutes or more.

It is also beneficial to add muscle and bone strengthening activities using major muscle groups, at least 2 days per week.

More physical activity provides greater health benefits.

Let's Talk Intensity!

Moderate-intensity physical activities will cause adults to sweat a little and to breathe harder. Activities like:

- Brisk walking
- Bike riding

Vigorous-intensity physical activities will cause adults to sweat and be 'out of breath'. Activities like:

- Jogging
- Cross-country skiing

Being active for at least **150 minutes** per week can help reduce the risk of:

- Premature death
- Heart disease
- Stroke
- High blood pressure
- Certain types of cancer
- Type 2 diabetes
- Osteoporosis
- Overweight and obesity

And can lead to improved:

- Fitness
- Strength
- Mental health (morale and self–esteem)

Pick a time. Pick a place. Make a plan and move more!

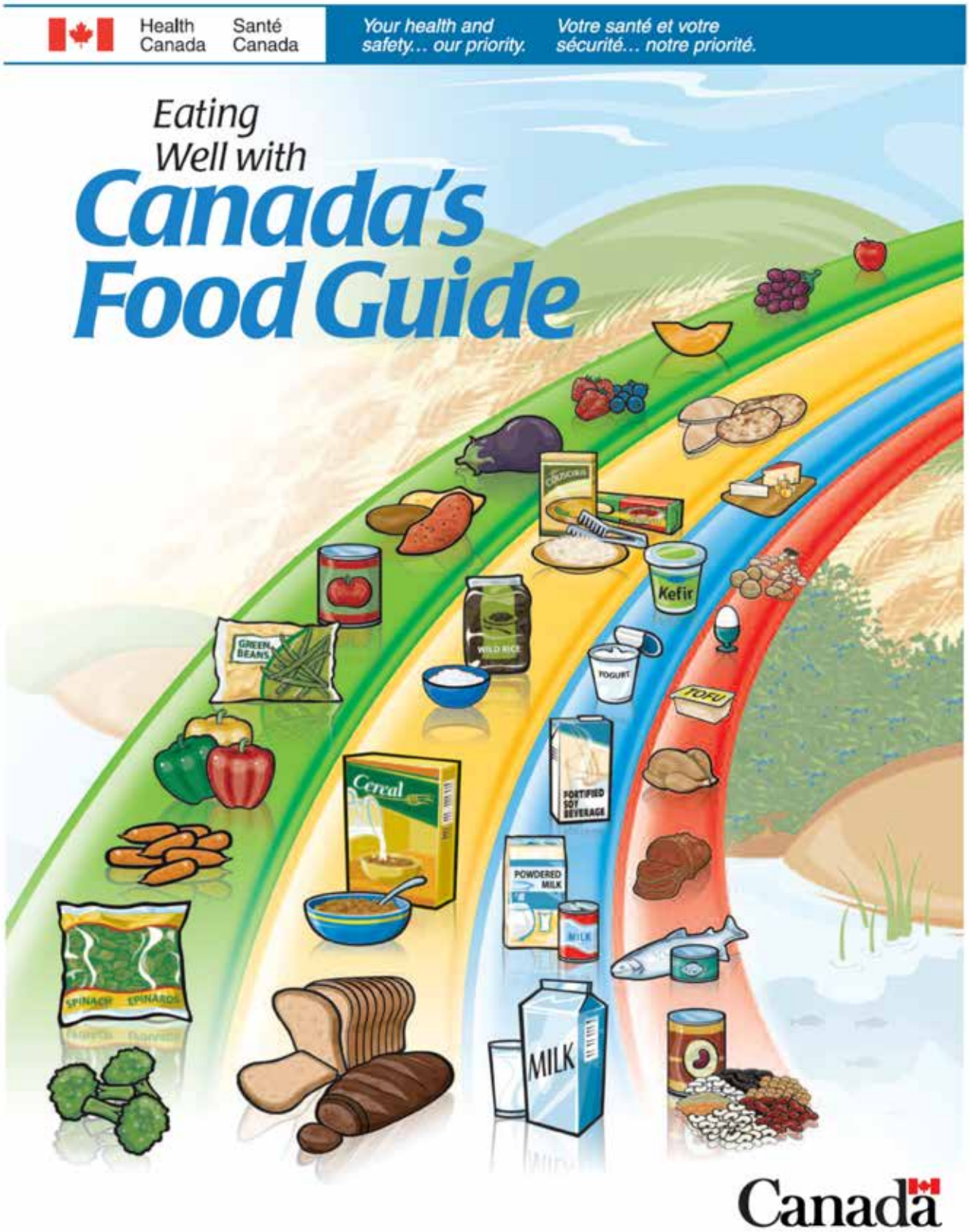
- ☑ Join a weekday community running or walking group.
- ☑ Go for a brisk walk around the block after dinner.
- ☑ Take a dance class after work.
- ☑ Bike or walk to work every day.
- ☑ Rake the lawn, and then offer to do the same for a neighbour.
- ☑ Train for and participate in a run or walk for charity!
- ☑ Take up a favourite sport again or try a new sport.
- ☑ Be active with the family on the weekend!

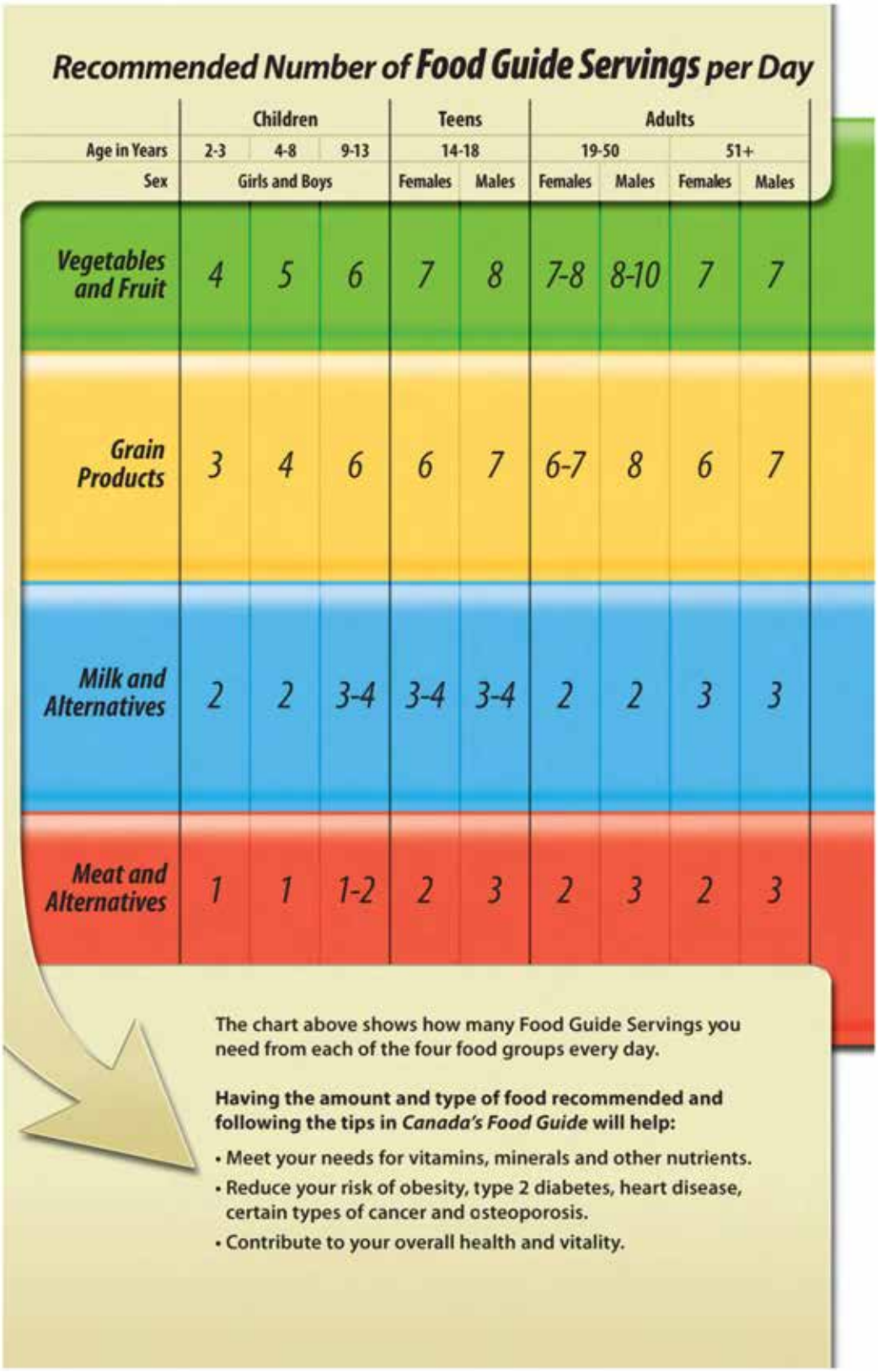
Now is the time. Walk, run, or wheel, and embrace life.

PARTICIPACTION

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www.csep.ca/guidelines

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Health Canada
Santé Canada
Your health and safety… our priority.
Votre santé et votre sécurité… notre priorité.
Eating Well with
Canada's Food Guide
Kefir
YOGURT
TOFU
GREEN BEANS
WILD RICE
Cereal
FORTIFIED SOY BEVERAGE
POWDERED MILK
MILK
SPINACH
ÉPINARDS
MILK
Canada



Recommended Number of Food Guide Servings per Day

	Children			Teens		Adults			
Age in Years	2-3	4-8	9-13	14-18		19-50		51+	
Sex	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.

What is One Food Guide Serving?

Look at the examples below.



Oils and Fats

- Include a small amount – 30 to 45 mL (2 to 3 Tbsp) – of unsaturated fat each day. This includes oil used for cooking, salad dressings, margarine and mayonnaise.
- Use vegetable oils such as canola, olive and soybean.
- Choose soft margarines that are low in saturated and trans fats.
- Limit butter, hard margarine, lard and shortening.

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SOLUTIONS



Q1. What are the physical activity guidelines for youth ages 12–17 years?

A1. At least 60 minutes of moderate to vigorous activity daily. This should include: vigorous intensity activities at least 3 days per week and activities that strengthen muscle and bone at least 3 days per week.



Q2. What are the sedentary behaviour guidelines for youth ages 12–17 years?

A2. Minimize the time they spend being sedentary each day. This may be achieved by limiting recreational screen time to no more than 2 hours per day; limit sedentary (motorized) transport, extended sitting time and time spent indoors throughout the day.



Q3. What are the physical activity requirements for adults (18–64 years)?

Compare this answer to your answer for Question 1 (Youth Guidelines).

A3. Accumulate at least 150 minutes of moderate-to-vigorous-intensity aerobic physical activity per week, in bouts of 10 minutes or more. Add muscle and bone strengthening activities using major muscle groups, at least 2 days per week. The moderate-to-vigorous activity requirements are less for adults, the sessions shorter, strengthening activities go from3 days to 2 days.



Q4. Set a SMART goal for one of the strategies you have listed above.

A4. Answers will vary. Goal should include SMART principles.



Q5. Based on the example above, if the time frame available for an activity was 60 minutes, and if this person's goal was to exercise at a vigorous intensity by bicycling, how fast would he have to bicycle? Circle the correct answer.

a. Less than 16 kms per hour

b. **More than 16 kms per hour**

c. 8 kms per hour

d. 7.2 kms per hour



Q6. Use the Nutrition Facts table below to circle the correct answer.

1. What is the serving size of the bread?	1 slice	**2 slices**	3 slices
2. How many calories are there in one slice of bread?	64	**70**	140
3. What is the % of sodium in the serving size?	**12%**	6%	24%
4. How many grams of sugar is in each slice of bread?	**1g**	2g	4g



Q7. In the example given below, which ingredient is present in the greatest amount?
A7. Whole wheat.



Q8. Fill in the box to make the following nutritional goal a SMART nutritional goal.

Goal:	**SMART Goal:**
To balance my food intake.	Answers will vary but should meet SMART goal principles.



Q9. True or False? Self-esteem means:

1	Having a healthy view of yourself	True
2	Having a quiet sense of self worth	True
3	Having a negative outlook	False
4	Feeling dissatisfied with yourself most of the time	False
5	Setting realistic goals	True