



Cookin' up Fitness™

Cultivate, Coach, Cook & Connect

Welcome to Week 2 **Carb SMART**

Introduction:

It's time to cut the confusion and get **Carb SMART**. Carbohydrates (CHO) are the primary source of fuel for athletes. The amount of carbohydrate needed to fuel performance varies according to the type of sport and duration of activity. In this module, participants learn how much carbohydrate they need to fuel their individual sport/activity and the kinds of carbohydrates recommended to fuel optimal performance.

Background:

All carbs are **NOT EQUAL** and do not respond the same when consumed and metabolized in the body. **Simple sugars** (mono/disaccharides) are found in both natural and processed foods. Simple sugars found in whole fruit contain a multitude of vitamins, minerals, antioxidants and phytonutrients which are vital to health and physical fitness. However, simple sugar found in processed foods can have a negative effect on athletic performance. Additionally, “*added*” simple sugars are metabolized fast, convert to triglycerides (a fancy name for fat), cause inflammation, increase the risk of disease, injury and promote weight gain. According to Sugar Science, the Unsweetened Truth, 74% of ALL processed foods contain *added* sugar. Thus, consuming an abundance of processed food is detrimental to both health and athletic performance.

Complex carbohydrates (polysaccharides) are rich in starch, fiber and digest much more slowly. Complex carbohydrates contain vitamins, minerals, antioxidants and promote health. They are found in grains (pasta, rice, quinoa, barley, and oats), vegetables (carrots, broccoli, spinach, sweet potatoes, squash, and peas), legumes (lentils, beans) and cereals (granola, bran). While these sources promote health and fitness it is important to read ingredient labels for *added* sugar.

Week 2 Focus:

1. Review carbohydrate, dietary fiber and *added* sugar intake results from week 1 food log (*We encourage participants to continue to log food into the USDA SuperTracker 3 to 4 days each week to evaluate changes and make adjustments*)
2. Calculate carbohydrate fueling needs based on individual sport/activity
3. Learn about high quality carbohydrate food sources

Week 2 Challenge: Meet carbohydrate goal within 5 to 10% of recommended range

Connect: To connect with us, follow us on [Instagram](#). Direct message (DM) us for general questions about the Nutrition Basic Training program.

Coach: Individual coaching is available upon completion of this Nutrition Basic Training Program. Please [eMail](#) a brief note regarding the coaching or culinary service you are requesting.



Week 2 Instructions: This week each participant will complete 4 steps. First you will detect imbalances in **CHO (g)**, dietary fiber and **added sugar** intake, then you will begin to modify diet based on **SportFit** recommendations. See below for those step-by-step instructions.

Week 2 Tip: Use the information in this module to improve your nutritional fitness. You may discover your dietary practices are close to our recommendations or far off. Determine where you are, what you need to work on, then begin to modify your diet *one step at a time*.

Step 1: Go to USDA SuperTracker, pull the Nutrients Report and Review Results for CHO (g), dietary fiber and added sugar intakes.

Instructions: Go to the **USDA SuperTracker**, select “My Reports, Nutrients Report” and enter the date range of the food and beverage intake recorded from last week. Then select create report. You will see a report that looks similar to that shown below.

You are here: Home > My Reports > Nutrients Reports

Nutrients Report

Get your average intake of nutrients (for example, calcium, sodium, vitamin D) for any time period you choose. See which of your food selections were highest or lowest in a nutrient by clicking the heading.

Export Report As: PDF Excel Word
You will need the free Adobe Acrobat Reader plug-in to view and print the exported PDF files.

View Report from: 01/05/17 thru 01/05/17 Create Report

KCSnyder's Nutrients Report 01/05/17 - 01/05/17

Your plan is based on a 2000 Calorie allowance.

Nutrients	Target	Average Eaten	Status
Total Calories	2000 Calories	1789 Calories	OK
Protein (g)***	46 g	86 g	OK
Protein (% Calories)***	10-35% Calories	19% Calories	OK
Carbohydrate (g)***	130 g	191 g	OK
Carbohydrate (% Calories)***	45-65% Calories	43% Calories	Under
Dietary Fiber	25 g	36 g	OK
Total Sugars	No Daily Target or Limit	62 g	No Daily Target or Limit
Added Sugars	< 50 g	11 g	OK

- Review the average amount of **CHO (g)** consumed over the 3 to 4 day period. You will compare this number to your personalized CHO (g) goal calculated in **Step 2** shown below.
- Review the average **dietary fiber** intake listed on your report. Did you meet the minimum goal of 25g/day?
- Review the average **added** sugar intake listed on your report. Did you meet the goal of less than 10% of total calories from added sugar or less than 50 g/day? (*The optimal goal for added sugar is no more than 6 tsp or 25 grams per day.*)

NOTE: The USDA Super Tracker calculation provides the **MINIMUM** intake of CHO to prevent malnutrition. The CHO target shown above is **NOT APPROPRIATE FOR ATHLETES**. Please ignore this **target** column. Go to **Step 2** to calculate your personalized CHO (g) goal.



Step 2: Calculate CHO (g) Goal

Table 1: Select Sport/Exercise	CHO Factor (CF)
General Activity/Training: 60 minutes/3 to 5 days/wk.	3 to 5g CHO/kg/day
Moderate - High Intensity Sports (MHIS): soccer, hockey, tennis, basketball, swimming, sprinters (runners, cyclists, swimmers) Low Endurance/High Precision: baseball, golf	5 to 7g CHO/kg/day
Endurance Sports: tri-athletes, distance runners/swimmers, road cyclists, ultra-athletes	7 to 10g CHO/kg/day
Weight/Body Focused Sports: weight lifting, wrestling, martial arts, gymnastics, and figure skating	No less than 5g CHO/kg/day

Note: Adapted from: Sports Nutrition, A Practice Manual for Professional 4th Ed. Dunford, 2006. 2015-2020 USDA Dietary Guidelines

Part 1: Calculate your individualized CHO (g) goal using the table above

Step 1: Convert pounds to kilograms (take your body weight (lbs.) / 2.2) = kg body weight

Step 2: Kg body weight x **CF** (select from Table 1) = CHO/g goal

(NOTE: Transfer this number to the CHO (g) section of your SportFit Nutrition Plan)

Example: Female 125 lb. Field Hockey Player

Calculation 1: 125 lbs. / 2.2 = 56.8 kg

Calculation 2: 56.8 kg body weight x **MHIS CF (5 to 7g)** = 284 to 397g/day

→ Use 5g CHO for typical training days, 6 to 7g for pregame/game day

Part 2: Calculate your individual dietary fiber goal. Use 14g fiber per 1000 kcal consumed.

Example: 1500 kcal (14 x 1.5) = 21 g fiber/day or 3000 kcals (14 x 3) = 42 g/day

(NOTE: Transfer this number to the dietary fiber section of your SportFit Nutrition Plan)

Part 3: Added sugar target range is no more than 25 to 50g total per day

(NOTE: Transfer this number to the added sugar section of your SportFit Nutrition Plan)

NEW LABEL / WHAT'S DIFFERENT	
Servings: larger, bolder type	Nutrition Facts
	8 servings per container
	Serving size 2/3 cup (55g)
	Amount per serving
	Calories 230
	% Daily Value*
	Total Fat 8g 10%
	Saturated Fat 1g 5%
	Trans Fat 0g
	Cholesterol 0mg 0%
	Sodium 150mg 7%
	Total Carbohydrate 37g 13%
	Dietary Fiber 4g 8%
	Total Sugars 12g 24%
	Includes 10g Added Sugars 20%
	Protein 10g 20%
	Vitamin D 2mcg 10%
	Calcium 260mg 20%
	Iron 8mg 45%
	Potassium 235mg 6%
	*The % Daily Value (DV) tells you how much is nutrient in a serving of food compared to a daily diet. 2,000 calories a day is used for general nutrition advice.

Image reprint: U.S. Food & Drug, Changes to the Nutrition Facts Food Label, web, 22 November, 2016.

How do these goals translate to the food I eat?

Total CHO goal (from example above)
284-397 g/day

Dietary Fiber goal 25 to 35g/day
Added Sugar goal 25 to 50g/day

If you consumed 1 servings of the food on the left, you'd consume 37 g CHO, 4 g dietary fiber and 10g of *added* sugar. While this might not seem like a lot, check out the serving size. It's only 2/3 of cup with a lot of added sugar.

Click on the link below to receive guidance on how to read a food label
<http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm>



Step 3: Adjust eating habits to include High Quality CHO foods

Below you will find **4 Tables**: 1) Carbohydrates (CHO's) for Optimal Fueling, 2) Common Hidden *Added Sugar*, 3) Quick Guide to estimate CHO (g) content in food and, 4) Sample Meal Plan

Instructions:

Step 1 of **Carb SMART** challenged you to review CHO (g), dietary fiber and added sugar intake. Now it's time to determine which of these three categories are out of balance and what you'd like to tackle first. Use the guides below to decide where to start then adjust eating habits toward your nutrition fitness goals.

Dietary Fiber

→ If you found *dietary fiber* intake is low, increase intake of fruit and vegetables and review foods in **Table 1**. When grocery shopping select foods which contain 5grams of fiber per serving or more

Added Sugar

→ If you found *added sugar* intake was too high, review **Table 2** then inventory the foods in your home to determine which foods are the greatest offenders.

Total CHO (g)

→ If the total CHO (g) intake is too high or too low use **Tables 3 & Table 4** to assist you in adjusting intake toward the recommended goal.



Table 1 Carbohydrates (CHO's) for Optimal Fueling

Sugars and Starches	Whole Grains & Legumes
All whole fruit All whole vegetables Starchy (yams, squash, potatoes, beets, carrots, peas & corn) Non-starchy (broccoli, asparagus, cauliflower, peppers, spinach, kale, collards, cucumbers, mushrooms, sprouts) Natural honey or pure maple syrup Milk (Regular, Soy, Almond, Coconut) Greek Yogurt (non-flavored)	Brown or Wild rice, Quinoa, Barley, Bulgur, Oats, Millet, Buckwheat Granola, Whole grain cereals Multi-grain or Whole wheat bread Pastas (quinoa, millet, spelt, buckwheat) Whole grain or Corn tortillas Sprouted grains Legumes (lentils, pinto, lima, black, kidney, garbanzo, navy and white beans)

High Fiber Food = 5 g of fiber/serving
For more information go to: <http://wholegrainscouncil.org/whole-grains-101/whole-grains-z>

Table 2 Common Hidden Added Sugars

Dextrose, corn syrup, fructose, honey, lactose, maltose, molasses, barley malt, malt syrup, sucrose, cane juice, corn sweetener, glucose, fruit nectar, agave nectar, saccharose, sorghum syrup, turbinado, treacle, caramel, carob, muscovado, mannose, maltose, mannitol, sorbitol and fruit juice concentrate, grape, beet, date, cane, bardados, brown, castor, coconut, golden, inverted, raw, coconut and palm sugar

Table 3 Quick Guide to Estimate CHO (g) Content in Food*

Grains	Serving Size	CHO (g)	Legumes	Serving Size	CHO (g)
Oatmeal	1 c cooked	25	Lentils	1 c cooked	37
Granola	1 c	80	Lima beans	½ c	15
Buckwheat Pancake	7" diameter	20	Refried beans	½ c	18
Long grain or brown rice	1 c cooked	50	Pinto beans	1 c	33
Whole Grain Pasta	1 c cooked	40 to 60	Black Beans	1 c	40
Whole Wheat Bread	1 slice	25	Navy Beans	1 c	34
Whole Grain Bagel	1 whole	50 to 60			
Buckwheat Groats or Bulgur	1 c cooked	33	Garbanzo beans	1 c	50
Barley or Quinoa	1 c cooked	45	Kidney beans	1 c	37
Whole Wheat Tortilla	8"	30	Baked beans	1 c	54

Note: Adapted from: USDA Food Composition Database. <https://ndb.nal.usda.gov/ndb/search/list>



Fruit	Serving Size	CHO (g)	Vegetables	Serving Size	CHO (g)
Apple	1 medium	20	Beets	1 medium	8
Avocado	1 medium	17	Carrots	1 c raw	12
Berries (straw/black/rasp)	1 c	15	Corn	1 c	30
Banana	1 medium 7"	26	Green peas	1 c cooked	22
Blueberries	1 c	21	Potato	1 medium	35 - 38
Mango	1 c sliced	30	Yam	1 c cooked	38
Orange	1 medium	15	Non-starchy (i.e. broccoli, peppers, spinach, cucumbers)	1 c cooked	6 - 7
Pear	1 medium	25		1 c raw	5 - 6
Pineapple	1 c chopped	20	Acorn Squash	1 c cubed	15
Tomato	1 medium	5	Summer Squash	1 c cubed	7
Dried fruit	¼ c	32	Winter Squash	1 c cubed	16
100% Cherry/ Blueberry Pomegranate Juice	½ c	17	Vegetable Juice	1 c	18
Natural Honey	1 tbsp.	18	Regular, Soy, Coconut Milk	1 c	12
Maple Syrup	¼ c	53	0% Plain Greek Yogurt	1 c	11

Note: Adapted from: USDA Food Composition Database. <https://ndb.nal.usda.gov/ndb/search/list>

Note: The above table is a “quick guide” to illustrate the content of CHO (g) in typical servings of food. The best way to align CHO (g) goals to actual intake is to log in the USDA SuperTracker for the duration of this program. This will allow you to gain confidence in knowing the right amount CHO (g) to eat each day as well as the CHO content in the foods you typically consume.

Table 4 Menu Example (125 lbs. Field Hockey Player)

Breakfast	Lunch	Dinner	Snack	CHO (g)
2 Buckwheat Pancakes w/pure maple syrup 1 Banana 1 poached egg	1 cup Greek Yogurt Mixed Nuts ¼ c Dried Fruit	2 c Whole Grain Pasta w/Marinara Protein of Choice 2 c Steamed Broccoli/Cauliflower	2 Tbsp. Peanut Butter 1 c Carrots 1 Apple	298
1 c Oatmeal 1 tbsp. honey Walnuts 1 Pear	1 WW Tortilla ½ c Black Beans 1 c Brown Rice 1 c Spinach Salsa	Protein of Choice 1 Yam 2 c Grilled non-starchy vegetables	1/2 c Granola 1 c Milk 1 c Berries	290



Step 4: Transfer results to the **SportFit Nutrition Plan**

Transfer CHO (g), dietary fiber and *added* sugar nutrient goals calculated in **Step 2 above** to week 2 of the **SportFit Nutrition Plan**. It will be important to update your nutrition plan each week so at the end of the **Nutrition Boot Camp Blast** program you will have a comprehensive nutrition training program. Once you have completed this program you are eligible to enroll in our **SportFit Cookin' Program**. In **SportFit Cookin'** you will learn how to prepare and incorporate the foods we recommend in to your daily diet. Next week we will learn about dietary fat, how much we need and food sources which fuel healthy athletes.

NOTE: Participants who are not accustomed to eating a variety of whole grains, fruits, vegetables or beans may experience flatulence (gas). **This may never be an issue**, however, if it happens ***DON'T GIVE UP***, your body needs time to adjust! *Drink plenty of water*, introduce foods *slowly*, avoid bran cereals, cook vegetables and take **BEANO** if needed. This will help correct and balance out digestive challenges. Once your body is accustomed to eating high fiber foods on a regular basis it will adapt accordingly.



Resources

Web-based

Sugar Science <http://www.sugarscience.org/>

American College of Sports Medicine www.acsm.org

Academy of Nutrition and Dietetics www.eatright.org

Center for Nutrition Policy and Promotion www.usda.gov/cnpp

2015-2020 Dietary Guidelines for Americans www.health.gov/dietaryguidelines/

National Agricultural Library, U.S. Department of Agriculture www.nutrition.gov

USDA Food Composition Database. <https://ndb.nal.usda.gov/ndb/search/list>

Peer Reviewed Evidence Based

American Dietetic Association. *Sports Nutrition. A practice manual for professionals* (4th edition). United States Library of Congress Cataloging-in-Publication Data. 2006

Burke L, Hawley J, Wong S, Jeukendrup A. Carbohydrates for training and competition. *Journal of Sports Sciences*. 2011; 29(S1):S17-S27

Clark, N. Sports Nutrition Guidelines. *American College of Sports Medicine*. Spring 2011.

https://www.acsm.org/docs/fit-society-page/2011springspn_nutrition.pdf?sfvrsn=0

Nutrition for Athletes. Nutrition Working Group of the International Consensus of Conference held at the IOC in Lausanne in October 2010. Updated April 2012.

http://www.olympic.org/documents/reports/en/en_report_833.pdf.

Dunford M. *Sports Nutrition. A Practice Manual for Professionals. 4th Edition*. United States of America. Library of Congress Cataloging-in-Publication Data. 2006