

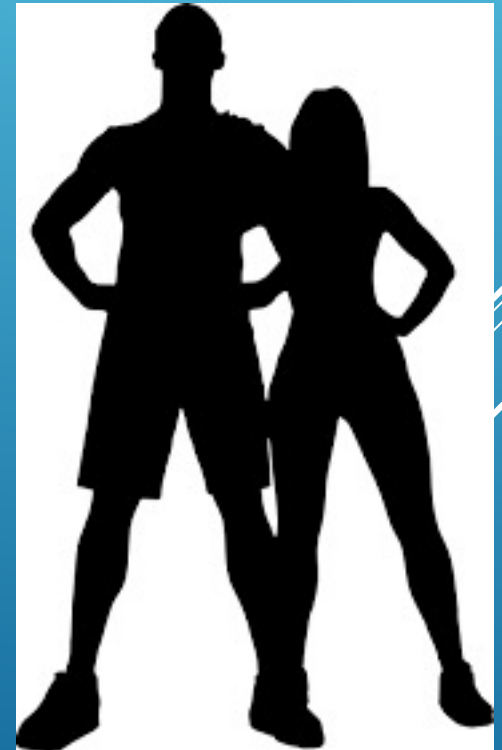
URI SPORTS NUTRITION GUIDE



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HARD TRAINING / RACE DAY:

FATS

2 Tablespoons



Avocado
Oils
Nuts
Seeds
Cheese
Butter



Grains

Pasta
Rice
Potatoes
Cereals
Breads



Fresh Fruit
Stewed Fruit
Dried Fruit



Water
Dairy/Nondairy
Beverages
Diluted Juice
Flavored
Beverages



Coffee
Tea

Poultry
Beef/Game/Lamb
Fish
Eggs
Low-Fat Dairy
Soy (e.g., Tofu,
Tempeh)
Legumes/Nuts



Cooked Veggies
Veggie Soups
Raw Veggies



FLAVORS

Salt/Pepper
Herbs
Spices
Vinegar
Salsa
Mustard
Ketchup



ATHLETE'S PLATE

Training volume and intensity vary from day to day and week to week along your training/competition plan. Eating your meals and fueling your workout or race should also be cycled according to how hard or easy it is. Consult with your sport dietitian to put the Athlete's Plate into practice!

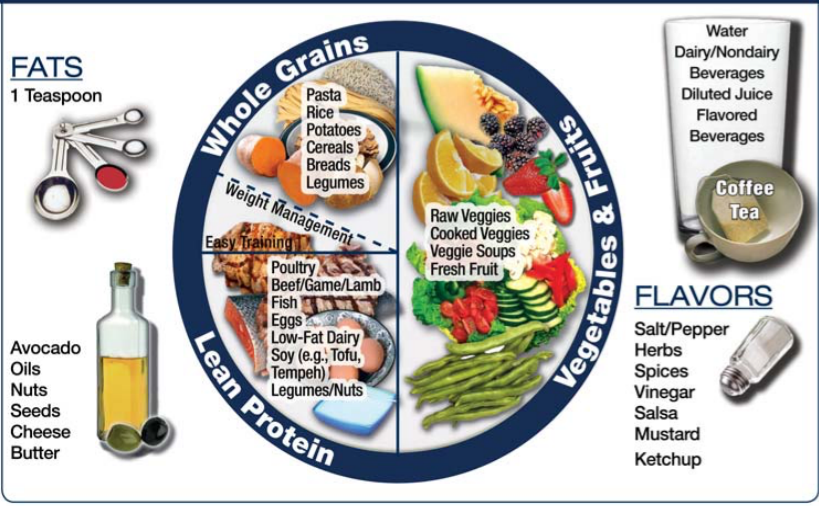
The Athlete's Plates are tools for you to better adjust your eating to the physical demands of your sport!

EASY An easy day may contain just an easy workout or tapering without the need to load up for competition with energy and nutrients. Easy day meals may also apply to athletes trying to lose weight and athletes in sports requiring less energy (calories) due to the nature of their sport.

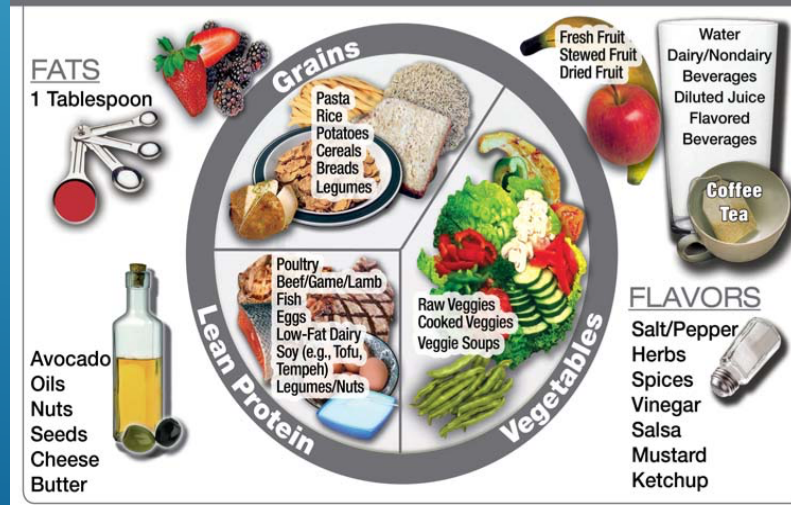
MODERATE A moderate day may be one where you train twice but focus on technical skill in one workout and on endurance or strength in the other. The moderate day should be your baseline from where you adjust your plate down (easy) or up (hard/race).

HARD A hard day contains at least 2 workouts that are relatively hard or competition. If your competition requires extra fuel from carbohydrates, use this plate to load up in the days before, throughout, and after the event day.

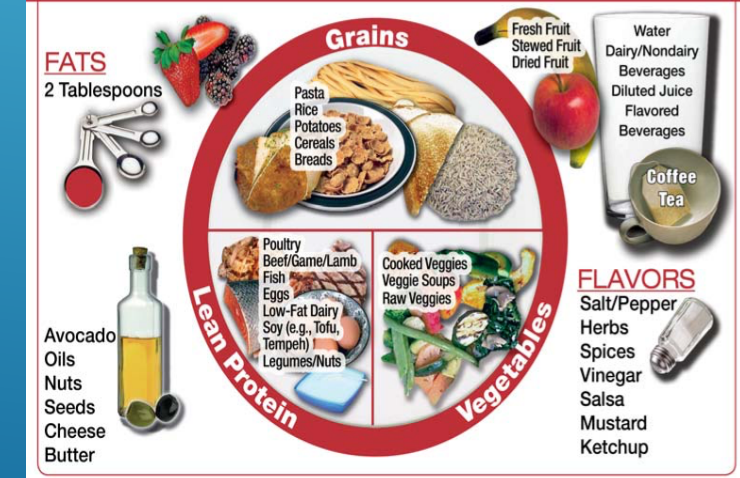
EASY TRAINING / WEIGHT MANAGEMENT:



MODERATE TRAINING:



HARD TRAINING / RACE DAY:



The Athlete's Plates are a collaboration between the United States Olympic Committee Sport Dietitians and the University of Colorado (UCCS) Sport Nutrition Graduate Program.

BASIC NUTRITION GUIDELINES



- ▶ Sound sports nutrition is essential to optimal performance.
- ▶ Adequate intakes of Calories & nutrients allow for:
 - ▶ Full recovery from each training session, ensuring max benefit is achieved from each session.
 - ▶ An increase in energy throughout the day and during practice
 - ▶ Fewer missed training and practice sessions due to illness.
- ▶ Calorie & nutrient needs depend on the individual athlete & his/her athletic demands
- ▶ Proper hydration optimizes performance and decreases injury risk during competition & training.

BASIC RULES FOR OPTIMAL PERFORMANCE NUTRITION



- ▶ Eat breakfast everyday/something within 1-2 hours of waking
- ▶ Drink water throughout the day. Goal of at least 2-4L. Pee should look like pale lemonade
- ▶ Eat >5 cups of colorful vegetables/whole fruit per day.
- ▶ Consume a lean protein source at every meal
- ▶ Intake 1.2-2.0 grams of protein per kilogram of bodyweight per day (1 kilogram = 2.2 pounds).
- ▶ Eat ~every 3-4 hours=4-6 smaller meals each day.
- ▶ Consume a post-workout meal/snack as soon as possible after completing a hard workout. Ideally within 1-2 hours.
- ▶ Avoid eating high (saturated/trans) fat foods.
- ▶ Limit consumption of simple sugars and caffeine.

CARBOHYDRATES: YOUR PRIMARY FUEL SOURCE

What do they do?

- ▶ Body's preferred fuel source
- ▶ Can provide energy quickly
- ▶ Can be utilized for fuel with or without oxygen (aerobic or anaerobic activities).
- ▶ Contain dietary fiber, which aids digestion and helps ensure a healthy gut microbiome.

Sources:

- ▶ Starches:
Grain/bread/cereal/pasta/rice/corn//potatoes
- ▶ Vegetables
- ▶ Fruit
- ▶ Dairy
- ▶ Added sugar (← keep limited)



FIBER

Soluble fiber can be found in foods such as oatbran, barley, nuts, seeds, beans, lentils, fruits (citrus, apples), strawberries and many vegetables

Insoluble fiber is found in foods such as whole wheat and whole grain products, vegetables, and wheat bran



Soluble fiber sources



Insoluble fiber sources



- ▶ Include fiber rich food sources at almost every meal. EXCEPTION within 2-3 hours of hard practice/event.
- ▶ Helps with digestion, regularity, keeping blood sugar levels steady, & healthy gut microbiome
- ▶ Dietary goals for athletes = ~25-35g/day
- ▶ Good sources: Vegetables, whole fruit, whole grains and legumes (beans, lentils, peas)

QUICK GUIDE TO CARBOHYDRATE RECOMMENDATIONS FOR ATHLETES*

Activity Type	Carbohydrate Recommendations (g/kg)
Skill focused workout (light training)	3-5g/kg
~1 hour of training/day (moderate intensity)	5-7g/kg
1-3 hours/day (moderate-high intensity)	6-10g/kg
4-5+ hours/day (moderate-high intensity)	8-12g/kg

*Karpinski, C, Rosenbloom, C. Sports Nutrition: A Handbook for Professionals 6th Ed. 2017. Academy of Nutrition and Dietetics. Chicago.

FATS



What are they?

- ▶ One of the 3 main macronutrients
- ▶ Categorized as saturated and unsaturated (monounsaturated and polyunsaturated).

What do they do?

- ▶ Fats serve as an energy source for the body.
- ▶ Stored by the body as “reserve energy source” to be used the other two macronutrients (carbohydrates and protein) are in short supply.
- ▶ They require the presence of oxygen to be used as an energy source.

Functions of fat in the body:

- ▶ Act as an insulator for the body to conserve body heat.
- ▶ Protect internal organs.
- ▶ Provide structural integrity to the nervous system and almost all cells in the body.
- ▶ Help in blood clotting.
- ▶ Help the body utilize fat-soluble vitamins (A, D, E, & K).
 - ▶ Vitamins D & K are important for good bone health.
 - ▶ Vitamins A & E are important for good immunity.
- ▶ Aid in the formulation of several hormones in the body.
- ▶ Help support the cardiovascular, nervous, reproduction and immune systems.
- ▶ Aids in satiety (aka “feeling full”) and enjoying the taste and smell of food.

RECOMMENDATIONS

- ▶ Athletes diet = ~25-35% calories from fat.
- ▶ Saturated fat intake should be limited and trans fat intake should be as close to zero as possible.
 - ▶ Saturated fat sources to keep limited: processed meats (e.g. bacon, sausage, pepperoni), fat on meat, butter, cream
 - ▶ Trans fat sources to keep limited: partially hydrogenated fat, margarine, commercially prepared baked goods
- ▶ Use **more plant sources** of fat (mono-unsaturated & polyunsaturated fats)
- ▶ Nuts & seeds:
 - ▶ Almonds, Walnuts, Brazil Nuts, Pine Nuts
 - ▶ Nut butter (almond, All natural peanut butter)
 - ▶ Sunflower seeds (raw)
 - ▶ Sesame seeds
- ▶ Oils
 - ▶ Olive oil
 - ▶ Canola Oil
 - ▶ Flaxseed Oil
 - ▶ Avocado Oil
- ▶ Olives
- ▶ Avocados
- ▶ Aim to include at least 1 Omega 3 fat source/day.
 - ▶ Good sources include:
 - ▶ Cold water fish: Salmon, Mackerel, Trout, Albacore Tuna, Sardines, Anchovies
 - ▶ Walnuts
 - ▶ Flaxseed



PROTEIN

What do they do?



- ▶ Provide structural integrity to muscle tissue & cells.
- ▶ Critical component of some hormones, transporters, and enzymes.
- ▶ Essential for muscle protein synthesis (MPS) and minimizing muscle protein breakdown (MPB).
- ▶ Adequate intake helps to optimize healing.
- ▶ Help maintain fluid & electrolyte balance.
- ▶ Can supply energy to the body, but is non-preferred energy source.

RECOMMENDATIONS



- ▶ Depends on body size and sporting demands.
- ▶ Most athletes should aim for **1.2- 2.0 grams of protein per kilogram of body weight per day** through lean protein sources (a variety of plant and animal sources of protein).
- ▶ Intake should be spread out throughout the day to improve the efficiency of recovery by the body.
 - ▶ average goal of ~10-20+ grams (~0.25g protein/kg body weight) every ~3-4 hours (>20 grams for more muscular athletes).

Sources:

- ▶ High-quality sources of protein: meat, fish, eggs, poultry, milk, and cheese.
- ▶ Good plant sources of protein: soy, peas, beans, nuts, and seeds (to include quinoa). You can also find some protein in wheat, rice, and corn.



VITAMINS

- ▶ Fat Soluble: (Vitamins A, D, E, & K)
 - ▶ Vitamin A (& its precursor B-carotene), :
 - ▶ Helps with vision
 - ▶ Antioxidant*
 - ▶ Good sources = orange, red, yellow vegetables
 - ▶ Vitamin D:
 - ▶ Important for bone health
 - ▶ Good sources: Milk, yogurt, sun (20min)
 - ▶ Vitamin E:
 - ▶ Key Antioxidant*
 - ▶ Good sources: Nuts and oils
 - ▶ Vitamin K:
 - ▶ Boosts blood clotting
 - ▶ Assists with bone formation
 - ▶ Good sources: green leafy vegetables
 - ▶ Vitamin C:
 - ▶ Aids healing
 - ▶ Antioxidant*
 - ▶ Strengthens connective tissue
 - ▶ Helps iron absorption
 - ▶ Good sources: citrus fruits, berries, apples

*Antioxidants= serve as a line of defense to help “neutralize” the damaging effects of free radicals.

- ▶ Help to enhance our immune system, which decreases the risk of viruses (e.g. colds) & flu.

SUPPLEMENTS



What you need to know

Items to consider before taking a supplement:

(Karpinski, C. et al. 2017. Sports Nutrition: A Professional's Guidebook. AND. Chicago):

Efficacy

Safety

Legality

Cost

NCAA's Banned Drugs- http://www.ncaa.org/sites/default/files/2018-19NCAA_Banned_Drugs_20180608.pdf

It is your responsibility to check with the appropriate or designated athletics staff before using any substance.

A supplement is meant to *augment* a sound sports nutrition plan, not try to replace it.

- Supplements will not fix a bad diet.
- They may or may not improve performance
- Avoid large doses of any nutrient
- Take shortly after you eat to increase absorption
- Understand labels and check with ATC & compliance office

WEIGHT LOSS



- ▶ Avoid fad diets
- ▶ Gradual weight loss: (~1-2 pound loss/week) minimizes lean body mass loss
- ▶ Limit or eliminate high Calorie beverages. To include alcohol. Alcohol is high in calories and provides no nutritional value. 1 average drink (=12oz beer, 1.5 oz hard liquor, 5 oz wine = ~100 Calories).
- ▶ Eat 4-6 smaller meals throughout the day as opposed to 2-3 large meals.
- ▶ **Never skip breakfast.**
- ▶ Get most of your carbohydrates from high fiber foods such as vegetables & whole grains. Limit added sugar.
- ▶ Choose leaner protein options like chicken, turkey, or fish instead of red or processed meat.
- ▶ Bake or grill your meat instead of frying it.
- ▶ Limit high fat sauces and dressings.
- ▶ Avoid all fried foods. These foods are high in saturated fat and calories.
- ▶ Avoid high fat dairy products. Use skim or 1% options instead.
- ▶ Eat fruit in place of ice cream, cake, or other sugary desserts.
- ▶ Get help- arrange a meeting with the Sports Dietitian: Kelli Kidd, MS, RD, LDN (kelli_kidd@uri.edu) for a personalized plan

WEIGHT GAIN TIPS



- ▶ Consume more high-quality calories throughout the day than you expend.
- ▶ Never skip a meal, especially breakfast. Try to eat ~every 3 hours. (=~4-6 meals per day).
- ▶ Increase your lean protein intake. Consume foods such as chicken, turkey, fish and low-fat dairy products.
- ▶ Aim to consume ~10-20g every 3-4 hours each day consistently.
- ▶ Eat a balanced snack ~1 hour before bed that contains ~10-20g protein from foods that are rich in leucine.
- ▶ Get at least 8 hours of sleep per night.
- ▶ Consume the right kinds of fat. Fats from non-animal sources, such as avocados, nuts and olive oil,
- ▶ Think of snacks as “mini-meals”. Consume balanced snacks that contain some protein + nutrient dense carbohydrates, (e.g. skim-1% milk or yogurt, fruit, raw vegetables, trail mix, yogurt, nuts & seeds, and string cheese.
- ▶ Aim to have something with ~15-20g protein, especially from food sources rich in the amino acid Leucine, and >~45g Carb (=>1.0-1.2g carb/kg BW) as soon as possible after hard training/efforts.
 - ▶ *Leucine rich foods* include dairy products, beef, chicken, & eggs
- ▶ Always include a recovery nutrition meal or snack. Doing so as soon as possible after a hard workout/effort.
- ▶ Cook hot cereals & soups with milk instead of water.
- ▶ Choose dense cereals such as granola, grape nuts, and wheat chex. Avoid sugary cereals such as Froot Loops, Cocoa Puffs, or Cinnamon Toast Crunch. Try topping cereal with fruits such as raisins or bananas + nuts or seeds like walnuts, slivered almonds, chia, or flax seeds.
- ▶ Spread peanut, almond, or cashew butter on your toast, bagel, or fruit or mix in your yogurt or oatmeal.
- ▶ Use thick whole grain bread options, like bagels or buns instead of bread when you make sandwiches.

HYDRATION



- ▶ Good hydration is essential to optimal muscle functioning. In a dehydrated state
- ▶ muscle contractions can be much slower and weaker than if properly hydrated.
- ▶ fluid transports needed nutrients that are ingested to the muscles.
- ▶ Proper hydration is the number one defense against muscle cramps and strains.

Hydration Recommendations:

- ▶ **Before:** drink ~8-24 oz fluid (upper end for heavy sweaters) ~2-4 hours prior to workout/event to allow body time to excrete excess fluid (aka- urinate) (Position of AND, DC, & ACSM: Nutrition & Athletic Performance. 2016).
- ▶ Urine color should be pale yellow. If it is dark yellow and/or urination is scant, or you will be exercising in very hot/humid conditions drink ~1-2 additional cups of fluid ~2 hours before exercise.
- ▶ **During:** drink 6-12 oz. (about ~1-2 cups) of fluid every ~10-20 minutes.
- ▶ **After:** drink ~24 oz. of fluid for every pound of body weight lost during the workout.
- ▶ Weigh yourself before and after various workouts to determine your average sweat loss so an individualized hydration plan can be developed for you. A hydration schedule may also be helpful to prevent dehydration and optimize performance.

PRE-SEASON WEIGHT CHARTS



- ▶ Athletes will be monitored to prevent heat illness, dehydration, and extreme weight loss
- ▶ Early signs of dehydration: fatigue or weakness, muscle cramping, loss of appetite, headaches, heat intolerance, light-headedness or disorientation, dark urine with a strong odor, and a dry cough.
- ▶ Dehydration can cause serious heat illnesses, such as heat stroke and heat exhaustion with the early signs of dehydration as well as more serious symptoms such as flushed skin, feeling of chills, tingling arms, and cessation of sweating.
- ▶ Athletes are expected to weigh in/out before and after each practice session
- ▶ Athletic Trainers & Strength and Conditioning Staff will check utilizing the following protocols
 - ▶ 0-2% wt loss = ok to participate ☐
 - ▶ 3-4% wt loss = monitored
 - ▶ >5% wt loss = out
- ▶ ATC will also account for preseason initial physical exam/medical updates

EXERCISE PHYSIOLOGY



1. 0-30 sec = ATP $\rightarrow$ ADP + CP (anaerobic)
2. 30 sec-1.5min= lactic acid system (anaerobic)
3. 1.5 min and greater=steady state (aerobic CHO)
4. Greater than 20 min= fats

- ▶ Prolonged =protein stores

Examples of sports teams and energy systems

- ▶ Weight lifting (anaerobic)
- ▶ Cross country running (aerobic)

THE PRE-COMPETITION MEAL

Amount of Time Before Exercise	Carbohydrate Amount
4 hours	4g/kg**
3 hours	3g/kg
2 hours	2g/kg
1 hour	1g/kg

Carbohydrate Recommendations Before Exercise*

- ▶ Eat the pre-event meal **three-four hours** before an event.
- ▶ Pre-event snacks (consumed 1-2 hours before competition), should be primarily composed of easily digested carbohydrates to limit potential gastrointestinal discomfort.
- ▶ Some athletes have “nervous stomachs” and should consider liquid nutrition options for pre-event fueling. They can also be helpful for athletes with weigh-in requirements. Options include Boost, Ensure, Muscle Milk Smoothie, Carnation Instant Breakfast Original, Gatorade Endurance Carb Energy Drink.
- ▶ Eat easily digested foods, which include high starch, low fiber, low protein, and low-fat options.

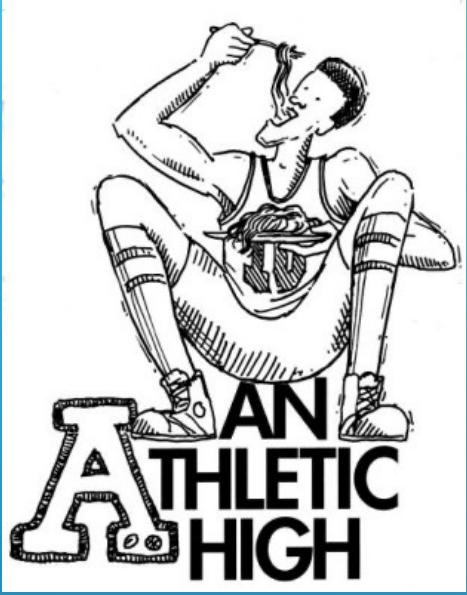
**Karpinski, C, Rosenbloom, C. Sports Nutrition: A Handbook for Professionals 6th Ed. 2017. Academy of Nutrition and Dietetics. Chicago.

** To calculate weight in kilograms, divide weight in pounds by 2.2

PRE-GAME MEAL EXAMPLES

Option 1	Option 2	Option 3
Pasta	Pancakes & Syrup	Baked Sweet Potato
Baked Chicken	Canadian Bacon	Grilled Turkey Tenderloin
Steamed broccoli & cauliflower	Sliced banana	Steamed Green Beans
Dinner Roll	Chocolate Milk	Toasted Sourdough Bread
Cubed Melon	Water	Sliced Peaches
Water		Water

ADDITIONAL PRE-GAME MEAL TIPS



- ▶ Limit fats and oils. They take a long time to digest and often lead to GI discomfort (e.g. cramping, bloating, nausea, and/or diarrhea).
- ▶ Restrict high sugar foods.
- ▶ Avoid foods and drinks that contain excess caffeine.
- ▶ Avoid foods that produce gas (e.g. certain raw vegetables like cabbage, broccoli, cauliflower, & onions), certain fruits, or certain beans, high fiber foods).
- ▶ Avoid foods that may cause acid reflux (e.g. spicy foods).
- ▶ Avoid drinking carbonated beverages.
- ▶ **Avoid eating foods that are unfamiliar to you and your body is not accustomed to digesting.**
- ▶ Drink plenty of fluids with your pre-competition meal.

The pre-competition meal is extremely important, but will not work miracles for the athlete in terms of competition performance. The pre-competition meal and the competition performance are set up by **sound nutrition HABITS days, weeks, and months before the competition.**

Healthy Eating Ideas*

<i>Food Groups</i>	<i>Serving Size example</i>	#1	#2	#3	#4	#5
~10-20 g Protein	3oz=  (deck of cards) 2T=  (9ping pong ball)	2 medium eggs	1 c Greek yogurt	2-3 oz lean poultry or meat	2-3 oz salmon	2T All Natural nut, seed, or soy butter**
Colorful fruit & vegetable ideas	1C=  (Baseball))	tomato, purple onion, kale	1 c mixed berries (blackberries, raspberries, blueberries)	>1C mixed green herb salad w/ shaved carrots & beets	>1C Red onion, arugula, & diced butter nut squash	½-1C chopped cherries, apples, grapes
Whole grains	1C=  (Tennis ball)	½-1 whole wheat English muffin	½-1 C oatmeal	½-1C quinoa	1-2 slices multigrain bread	½-1C brown rice
Healthy fats	1oz nuts=  (golf ball) 1T oil=  (poker chip) 1 oz cheese=  (3 di)	¼- ½ med avocado	1 oz walnuts (or almonds, or pistachios)	1 T Olive Oil	1 oz goat cheese	** (can count as protein+fat) (use 2 tsp nut, seed, or soy butter as 1 serving fat)
Herb/spice	To taste	Chives	Nutmeg	Cilantro	Dill	Cinnamon

*Mix & match (1 from each column & row) to create your own meals/snacks. See what combinations fit your individual taste

HEALTHY SNACK IDEAS



Think of Snacks as “mini meals”

- ▶ **Basic Snack Goals:**
 - ▶ ~10-20 grams Protein
 - ▶ >3g fiber
 - ▶ <10-15g fat

Ideas

- ▶ **Yogurt (Aim for <20g Total Carbohydrate & >10g Protein)**
 - ▶ Greek yogurt (aim for vanilla, lemon, lime, or plain) + 1T nut butter + handful berries (fresh or frozen-thawed)
 - ▶ Lemon or banana yogurt + $\frac{1}{4}$ C pecans
- ▶ Whole grain tortilla + 1oz cheese
- ▶ Apple Slices with Nut Butter
- ▶ 1C grapes + 1oz string cheese
- ▶ 4 graham cracker squares + 1T Nut Butter + berries (made into mini sandwiches). Can dip into Greek yogurt.
- ▶ Homemade trail mix (~1oz nuts (e.g almonds, walnuts, pistachios, cashews) + ~1C whole grain cereal + 2T dried fruit)
- ▶ 2 Baby Belle cheese circles + 1 sliced pear or apple
- ▶ **Make your pizza:** 1 whole wheat mini Naan, English muffin, or pita. Top w/ tomato or BBQ sauce, shredded cheese, vegetables of choice (i.e. spinach, peppers, onions, cherry tomatoes), shredded cheese + grilled chicken strips
- ▶ 3 triangles of Laughing Cow cheese + whole wheat crackers or celery stalks

HEALTHIER EATING OUT OPTIONS

Use the Training Plate Model as a guide!

- ▶ Choose vegetables without cheese, butter, or cream toppings and ones that are raw or steamed.
- ▶ Avoid fried or breaded foods. Instead, choose grilled, baked or broiled entrees.
- ▶ Choose baked potatoes instead of French fries, Au Gratin, scalloped, or with heavy cheese or cream toppings.
- ▶ Include vegetables.
- ▶ Limit adding salt or sugar to foods.



MENU SELECTION SUGGESTIONS

Subway

- ▶ **Breakfast Items:** Black Forest Ham, Egg, & Cheese or Egg & cheese
- ▶ **Subs/sandwiches/Salads**
- ▶ Turkey, Black Forest Ham, Roast beef, Oven roasted chicken, Rotisserie style chicken, Subway Club (sub, wrap, or salad)
- ▶ Sweet onion chicken teriyaki

Chik Fil-A

- ▶ **Breakfast Items:** Egg White Grill, Greek Yogurt Parfait, Chicken, egg, & cheese bagel, Bacon, egg, & cheese muffin, or Chikn' Minis
- ▶ **Entrees:** Grilled Chicken Sandwich, Grilled Nuggets, Grilled Chicken Cool Wrap, Chick-fil-A Chicken Sandwich, Spicy Chicken Sandwich
- ▶ **Salads:** Spicy Southwest Salad + grilled filet, Market Salad + grilled filet or spicy grilled filet or + grilled nuggets

