

## Women’s Week Sports Nutrition (AnneGuzman.com)

You’ve got the equipment and the great coach, but are you fueling properly to maximize both? Don’t undermine all that training by leaving your sports nutrition to chance. Here are some tips and some information based on the Women’s Week Presentation about Race Day.

### Endurance athletes and carbohydrate intake:

Endurance athletes expend a lot of energy and a lot of carbohydrates. It’s important to have a good fueling strategy to stay on top of carbohydrate needs and replenish after hard or long training sessions. Our bodies have a limited capacity to store carbohydrates which makes a strategy essential for success in endurance sport.

A good start is to focus on your DAILY carbohydrate intake. Here is a simple chart that works as a great guide. You’ll need to do some trial and error using a free nutrition app to get an idea of your current intake. Adjust upward if needed. We didn’t discuss this in the webinar but I wanted to include it here for you as it’s something I use when I coach.



### Daily Carbohydrate Needs Based On Activity

The following chart is a range of carbohydrate intake based on the intensity and duration of your cycling. Note that there is a range and overlap, as there are no cookie cutter recommendations. *Trial and error is so important during training to prepare for your event. You should start experimenting now for your event this summer.*

Activity	Description	
Light	Skill Based or Low Intensity	3-5grams/kg body weight/day
Moderate	Moderate pace – 1 hour per day	5-7g/kg/body weight/day
High	Endurance pace 1-3 hours daily	6-10g/kg/body weight/day
Very High	Extreme 4-5h day moderate to high Intensity (pace is important here)	8-12g/kg/body weight/day

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Most endurance athletes training over 8 hours a week are falling in the 6-9g/kg bodyweight of carbohydrate intake on training days. Carbohydrate loads will depend on the duration of your event. You will want to do a “mock” race scenario and do a carb load session with the foods that will available on pre-race day. This way you have a plan and know that the foods will work well with your stomach. Once you have a great pre-race day of eating that fits within

the carb load amount that works for you (example 8g/kg bodyweight of carbohydrates the day before a race), repeat it! Keep it simple and don't try anything new the day before any important race.

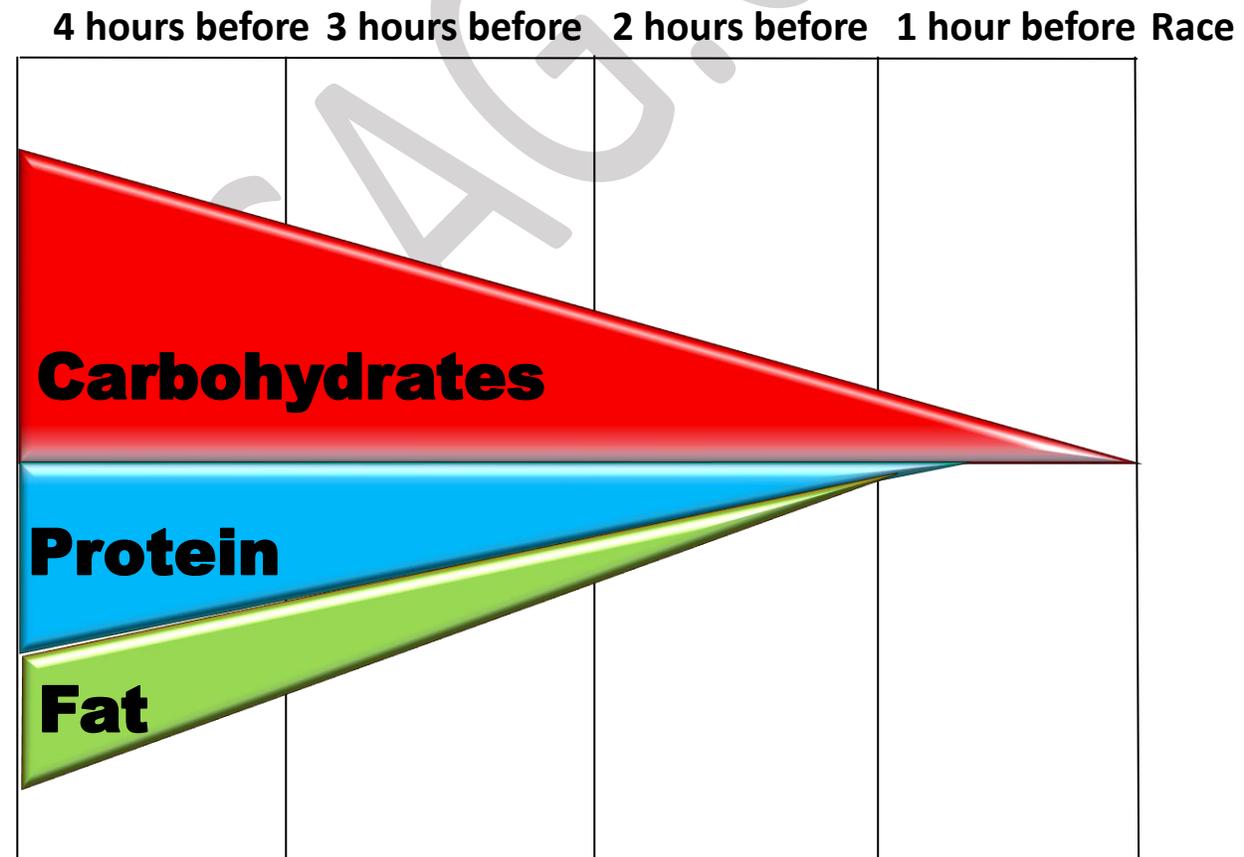
Remember to include vegetables in your daily carbohydrate intake. For women aim for at least one fist full per meal and for men aim for 2. This is a simple rule of thumb to keep it consistent. Fresh fruit is also excellent and tends to be easier for most people to fit into daily nutrition. Aim for 2-3 cups or pieces per day as a general guide.

### Race Day

**As you head into your race, plan out your nutrition.** Think about your race time and work backwards. How much time do you have to have a full meal? If you have 3-4 hours, have yourself a high carb meal with 20-25g of easy to digest protein and a bit of fat, knowing you have time to digest. As you get closer to race time, use the visual below. The closer you get the more you will focus on carbohydrates and a bit of protein and with 1 hour to go you are predominantly consuming easy to digest carbohydrates.

Pre-race meals fall between 1-4g/kg of carbohydrates. If you are 150lbs, you can change your weight in pounds to kg by dividing by 2.2.  $150/2.2 = 68\text{kg}$ . Then if you were eating 2g/kg of carbohydrates that would be 136g in that pre race meal. As an example that could be 3 hours out from the race. See diagram below.

For people who are reactive hypoglycemic, time your last pre-race fueling for 90 minutes pre race, and then have your simple carbohydrates 5-10 min pre race (gels etc.). As always, practice everything in training first to see what works best for YOU.



Example of Pre- Race Nutrition meal.

## Example of a Pre-Race Meal

### *150lb/68kg Athlete*

Fueling 3-4 hours pre-event.
<b>68kg 2g/kg 140g carbohydrates</b>
<b>Smoothie: 700 calories</b>
1.5 cups milk 1% or 2%
2 bananas
1 cup frozen berries
3 medjool dates
1 tbsp. hemp hearts or PB or chia seed
<b>Carbs: 140g</b>
<b>Protein: 27g</b>
<b>Fat: 13g</b>
<b>Give 2-3 hours to digest</b>



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### In Competition Nutrition:



#### 0-75 minutes

Water, small amount of carbohydrate or mouth rinse with a

#### 1-2hours

30g-60g/hr  
Carbohydrate.

#### 2-4+hours

60-90g/hr  
Carbohydrate. Multiple transportable (sucrose +fructose, maltodextrin etc.)

Trial and error with carbohydrate intake is very important in all endurance sports. Training is the time to test and increase your tolerance for absorbing higher amounts of carbohydrates on race day. By consuming higher carbohydrates before and during training you can improve your ability to absorb and tolerate higher intakes on race day.

The carbohydrate ranges in the boxes above can certainly overlap. Some athletes will consume more carbohydrates than others for reasons of fitness, GI difficulties, type of sport, ability to absorb, and individuality.

The duration, intensity, and type of exercise will be a factor in your carbohydrate needs. The longer the duration, the more carbohydrate you will need and the more intense the exercise, the more carbohydrate you will need. Short and intense races can deplete glycogen quickly as carbohydrate is the main fuel source for high-intensity sport. Carbohydrate intake rises and falls depending on the demands of your current training type and duration.

Remember to **EAT EARLY AND OFTEN**. Set a timer to start eating within 3 minutes of any event over 90 minutes in duration and have it beep every thirty minutes. Don't wait until you are 2 hours into a 5 hour even to eat. If you are in a stage race, remember you are also eating for the next day's race and you are missing meals while on the bike. EARLY AND OFTEN is the key.

Recovery from exercise is often overlooked when an event is over. Prepare a recovery meal or drink so that you can enjoy the atmosphere while replenishing glycogen stores and taking in protein to support muscle protein synthesis and repair. See the blue box for details on recovery needs.

**For everyday nutrition, you want to focus on nutrient dense foods.**

**Examples of high vs low nutrient dense carbohydrates.**

Focus mostly on nutrient dense carbohydrates	vs.	Empty Calories
Potatoes		Candies
Brown Rice		Soda
Oatmeal		Cookies
Bananas		Commercial Muffins
Dates		Energy Drinks (Monster etc.)
Fresh Fruit		French Fries – Fast Food
Vegetables		Croissants
100% Whole Wheat Bread		Pop and Soda
Whole wheat pasta		Fast Food Burgers
Homemade baked fries –potato-sweet potato- squash etc.		Cakes
Sweet Potatoes, squash		
Beans (chick peas, black beans etc.)		

During a long day of competition, you will choose foods that are a bit more processed and lower in fiber, and fat as they slow digestion time which can cause some gastrointestinal distress if exercise time is near. In this case you would possibly drink juice and eat a more processed, or easily digestible carbohydrate such as potatoes or a banana. Remember that many pastries, cookies etc. are high in both fat and carbohydrates and are not ideal for quick digestion during or immediately before competition.

## **Breakfast Tips:**

3-4 hours before your race or training. Wake up early enough to digest breakfast properly if that's possible.

Carbohydrates, proteins and fats will make up this balanced meal as discussed in seminar. Aim for 20-30g protein in a meal 3-4 hours from your race, when you have the time to digest.

These are *general examples* of breakfasts, based on foods, but *not* tailored to a particular athlete by weight.

- 1) **3 Eggs**, 2 pieces of toast and nut butter, a banana, a glass of milk, water
- 2) **Oatmeal** (1.5 cups cooked) and plain yogurt with fresh berries and banana, a drizzle of maple syrup and 1-2 tbsp. of nuts or seeds on top for healthy fats
- 3) 2 slices of 100% whole wheat toast with nut butter and a banana plus an orange or other fresh piece or cup of fruit with a few dates or figs or ¼ cup of raisins.
- 4) **A smoothie** with 1 cup of yogurt, 1-2 bananas, 1 cup of frozen berries, 2-4 dates, and some nut butter or hemp hearts or avocado for healthy fats.
- 5) Alpen cereal, 1 cup, with 1-2% milk, 1 sliced banana, 2 tbsp. of raisins and 1 cup of 100% fruit juice.
- 6) **Oatmeal and egg pancake:** Take some dry oatmeal and mix it in a bowl with a few eggs until a semi thick consistency. Add in sliced bananas. Heat oil in a pan and cook on each side at medium heat for 2-3 minutes. Serve with berries or maple syrup and a bit of yogurt on top.

Once your competition starts, if you have a double day, your focus will be to replenish with carbohydrates and protein between events with a lower fat intake. If the events are within a few hours of one another, keep the fiber low and also incorporate hydration and sodium. Fats and proteins stay in your stomach longer and are not ideal in high amounts when quick digestion is required, like in the last 30 min pre-race.

**QUICK SNACK IDEAS containing 25g-100grams (100g x 4 calories per gram is 400 calories) of carbohydrates or less and a bit of protein, for shorter breaks. Combine a few to make a snack of at least 50grams of carbs if needed.**

Fig Newman's 4 cookies	<b>44 grams</b>
Bananas 1, 5 almonds, ¼ cup dates	<b>52g carbohydrates</b>
Whole grain bread (2 slices) with nut butter + banana	<b>54g carbohydrates</b>
Dates ½ cup	<b>50 grams of carbohydrates</b>
Small yogurt with 1 cup berries	<b>25g carbohydrates 10g protein</b>
Potatoes 2 cups with sea salt	<b>50grams of carbohydrates</b>
Rice 1 cup cooked	<b>45 grams carbs, 5 grams protein</b>
Pasta 1 cup cooked (add tomato sauce)	<b>43g carbohydrates, 5g protein</b>
Brown Rice Cakes (7g each) + nut butter +Jam (2tbsp 26g)	<b>47g carbohydrates</b>
Raisins ½ cup	<b>57grams carbohydrates</b>

## HYDRATION:

Focus on drinking mainly water if exercise is under 90 minutes. If you are exercising continuously for over 90 minutes, or it's very hot, I suggest a quality sports drink with a minimum of 500ml hourly. Hydration is individual and you should refer to some of the tips we discussed in the seminar such as urine color and pre-post training weigh ins and urine colour can be a "guide." Keep weight loss from dehydration to below 2% of your body weight. Try doing some rides and weighing yourself without clothes pre and post to get an idea of your sweat losses.

Ex. If you start your ride weighing 130lbs, then you weigh yourself after and you weigh 126lbs, you have lost more than 2% of your body weight since  $130 \times 3\% = 3.9$  and  $130 - 3.9 = 126$ . In this example you would want to follow this tip below and on future rides consume more sports drink to reduce that sweat loss.

**For every pound lost from sweating, consume 20-24oz of fluid. One cup is 8oz.**

If you have a second race in the same day, drink an electrolyte drink to get your sodium replaced more quickly. If you don't race again until the next day, you will replenish your sodium from your diet.

Some options for sports drinks include:

- Skratch labs : <https://www.skratchlabs.com/>
- Eload : <https://eload.net/>
- Cliff : <http://www.clifbar.com/>
- Gu Electrolyte Drink : <https://guenergy.com/>
- Osmo nutrition <https://osmonutrition.com/>
- NamedNutrition: <https://www.namedsport.com/en/>

All of these choices can be purchased at MEC and some at Sport Check or online at links provided above. These drinks have no artificial colors and flavors. Quality sports drinks are also made with the optimal ratios of electrolytes and carbohydrates (4-7%) for optimal hydration.

Juices can be used between races as a quick carbohydrate source, however are not recommended as a sports drink due to the high concentration of carbohydrate which can impeded hydration. Homemade sports drinks are possible by diluting fruit juice with water and adding appropriate amounts of salt (sodium).

With the extreme heat this summer keep these tips in mind to stay cool.

- Hydrate regularly throughout the day, not only when training
- Stay in the shade prerace/ride if possible.
- Drink cold liquids when possible
- Pour cool but not freezing water over your head and skin when possible if riding in the heat.
- Drink a slushie on a really hot day if it's available and you are training or pre-race (test this in training).
- Pre-race, use a nylon with ice cubes in it on your chest or neck area to stay cooler.
- Do some 30-minute sessions in the heat, regularly for 2 weeks to acclimatize to the conditions of heat and humidity. [Listen to my latest podcast on heat adaptation here!](#)
- Weigh yourself pre and post workout without clothes on, if you lose more than approximately 2% of your body weight, you will need to increase your hydration during training to minimize dehydration for both performance and health reasons.

## PROTEIN:

Your first goal is to get the optimal amount of protein in “daily,” first and foremost and ideally every 3-4 hours. If you don’t eat for 6 hours one day, it’s not the end of the world. Getting your daily intake would rank as your first goal.

**Aim to consume between 1.2g up to 2g/kg of body weight or protein per day as an athlete.** Note that increases in muscle mass and recovery will plateau around 1.6g/kg body weight, however eating more protein is not detrimental.

For recovery, aim to consume 20-30g in your recovery meal or 0.3g/kg of body weight. Masters athletes should aim to consume more, in the 30-40g range as we become less efficient at using protein with age.

Here is a short list some typical foods both animal and plant based. Eggs 6g each

- Fish 4oz -20g
- Chicken 4oz 30g
- Red Meat 4oz 30-35g
- Yogurt 1C – 9g
- Milk 1C – 2% 8g
- Tempeh 1 cup – 31g
- Lentils – ½ cup 9g
- Chickpeas – 1 cup -12g
- Quinoa – 1 cup – 8g
- Peas- 1 cup – 8g
- Spinach- 1 cup - 1g
- Oatmeal- 1 cup cooked – 6g
- Tofu- 1 cup – 20g
- Almonds- 2 tbsp. – 7g

A basic portion estimate for protein is to use the size of your palm. For women one palm of protein is “approximately” 20-30g of protein and for men 2 palms are approximately 40-60grams. This is a simple way to guesstimate with typical protein choices. If you need 120g per day then as a woman you could aim for 4-6 palms of protein per day. It’s not exact, but for those not willing to take the time to use a nutrition app, it’s better than having no means of knowing your intake.

[Check out this article on plant-based protein for more detailed information on how to be a plant based athlete.](#)

## Recovery:

If you’ve finished a training session, it’s generally a good idea to eat a meal within an hour after, especially if you are racing and training again the next day. If you ate a meal within 2-3 hours before, it’s not as pressing as the protein you ate pre training will also help with muscle repair post training within that 5-hour window. But you’ll want to replenish glycogen within the hour when possible. I recommend a balanced meal with protein and carbohydrate post race.

Post exercise your muscles are primed for 24 hours for muscle protein synthesis, so as long as you are meeting your daily needs for protein, this is the most important focus. Having said that there is no detriment to consuming

another meal post workout with protein as well, to optimize muscle protein synthesis. An easy to digest protein post workout is ideal, eggs, lean chicken, whey protein isolate, lower fat milk, brown rice protein etc.

Replenishing glycogen post workout, especially if you have another workout that same day or the next day, is important for endurance athletes. First as previously mentioned, you are aiming to meet your daily carbohydrate needs. After a hard and long training session **you'll want to make sure you consume a meal with 1.2g/kg carbohydrates along with your 20-40g of protein, to help replenish glycogen. Repeat again 1-4 hours later if training again the next day or if you haven't yet met your daily needs.**

After a hard training session or race, focus on a lower fat meal to speed up the digestion of the recovery meal. Your following meal can return to a meal with your quality fats included.

Post training and racing is also another time to focus on hydration and make up for any losses. **For every pound loss you could follow a general guide of drinking 3 cups of water back.**

### **CALCIUM: Extra!!**

Remember the importance of bone health. Up until your mid 20's are the years to create a strong foundation of healthy bones that you will need for the rest of your life. As an adult you are mostly maintaining the bone you have. Either way, bone health should be a focus for all cyclists.

Cycling is a non weight bearing sport, especially road cycling. It's important to incorporate weight bearing exercise like walking and resistance training, as well as multi directional exercise, into your regular routine. Jumping, stairs, weights, soccer, basketball and other movements where your feet are on the ground are key to building and maintaining bone health.

Remember to focus on **getting calcium from foods first!**

**Between ages 14-18 you need 1300mg per day and 19-50 you need 1000mg per day.**

Most non-dairy milks are fortified with calcium, however besides soy, they are low in protein, something to keep in mind when choosing plant-based milk over dairy or soy.

If you need to bridge the gap with supplements, the **maximum calcium supplement at one time should be 500mg.**

**Osteoporosis Canada has great resources for foods with calcium and a free calcium calculator.**

Remember that healthy athletes are strong athletes. Eating healthy may not sound "fancy" and "cutting edge" but it's the foundation of good recovery, strength and performance. Build your house on a strong foundation and it will last you a long time.

To learn more about athletes and bone health [read this article](#).

If you are interested in learning more about cycling and bone health, check out my course on cycling and bones [here](#).

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