

## **Nutrition and Hydration update from Drake MTB 2/2016**

### **Stacy Sims Recap from Drake team meeting**

Who is Stacy?

Dr. Stacy Sims, MSc, PhD is an exercise physiologist and nutrition scientist with almost two decades in the field and is also a longtime endurance athlete.

*Hydration:*

Water alone doesn't hydrate, the body needs a little sodium in the water to absorb it well. You will know it is getting absorbed because you won't have to pee so frequently.

*Fuel:*

Eat properly before training and racing to maximize energy and get the optimal benefits of training. Your body cannot make the adaptations that are the purpose of training if you do not eat correctly before, during and after your training rides and races. Having a mixture of fats, protein and carbohydrate at every meal or snack ensures that your body receives an evenly distributed amount of energy over the day, rather than a quick high from sugar followed by a crash.

Of the various options for protein powders, whey protein is the best bang for the buck, with the most accessible protein for the body.

### **Training day with 9 a.m. morning ride:**

*Prepare:*

Eat a breakfast that includes protein, carbohydrates and fat.

- Oatmeal with berries, yogurt, banana
- Eggs with toast and butter, banana

Pack water enhanced with 1/16 tsp. salt and 1 Tb maple syrup OR electrolyte solution (Osmo, etc.). No plain water.

Pack food; "real" food (sandwich, Clif bar, trail mix, banana or other bar), and simple sugar product (Clif bloks, GU chomps, glucose tablets, etc.)

*Ride:*

You are expending 180-200 calories per hour.

First hour, hydrate.

Starting in the second hour, hydrate and eat "real" food, not sugar. Real food is always better than bars. Don't wait to feel hungry, use the "nibble, nibble, sip, sip" approach throughout the ride.

Near the end of the ride is the time for sugar, in the form of blocks or glucose tablets. It will give you a final burst of energy to get home.

*Recover:*

Use the mantra; "Person first, equipment second." Eat first, then clean your bike and gear.

You have a 30-minute window to consume some protein in order to optimize your absorption of carbohydrates later. If you don't, your training will not have the effect you want. Not enough protein keeps your stress hormones elevated.

As soon as you step off the bike, the clock starts ticking for your 30-minute window.

You need 20-30 grams of protein after a ride. Girls need more than boys.

You can drink a commercial recovery product, such as Osmo Acute recovery, or chocolate milk with a scoop of protein powder, plain Greek yogurt with some berries or made into a smoothie, or anything that is easy to digest that has the correct amount of protein. To find out the amount of protein in real food, look on the label or you can look up whole foods online. Search "egg protein content", for example (6 grams, by the way).

Within 2 hours, eat a real meal that includes protein, fat and carbohydrates. Avoid sugar.

### **Training day with 4 p.m. after school ride:**

Same preparation as morning training day, with the following additions:

Eat a lunch that includes protein, carbohydrates and fat.

Just before your ride, eat a snack. Perhaps an almond butter and jelly sandwich or something similar. Prep ahead of time, and keep with your clothes that you have set out to ride.

**Race day:** Think of it the same as a training day, with some changes – read above.

*Prepare:*

Know the course ahead of time so you can plan ahead where you can eat and drink.

Eat the same breakfast you always eat, don't change anything up on race day.

*Race:*

If your race is within 2 hours of breakfast, no need to eat more. Hydrate and fuel during the race. Leave sugar products to the end, giving you energy to attack and sprint at the end.

*Prepare:*

If your race is later, eat a substantial snack within 2 hours of the race. For example, toast with butter, a sprinkle of salt, and avocado, or a small sandwich.

*Race:*

Hydrate in the first hour, then hydrate and eat real food during hour 2. Use glucose tablets or blocks in the last 15 minutes for quick energy to attack and sprint.

*Recover:*

Recover with the same schedule as a training day. Protein within 30 minutes, followed by a real meal within 2 hours.

### **Avoid:**

*Gel products:*

Gels use sugars from maltodextrin and fructose, which are difficult for your body to digest and assimilate. The undigested maltodextrin causes generalized inflammation,

which you are actively trying to avoid. For sugar needs, use products with glucose and sucrose, which are more easily accessed by the body.

Gels also cause dehydration by putting a concentrated carbohydrate into the small intestine without adequate water, forcing the body to pull water from tissue to deal with it, leading to dehydration.

*Advil:*

Avoid Advil in or around training. If it must be used, use at night only.

Also avoid other NSAIDs 3-4 hours after training.

### **Resource:**

Runningonrealfood.com: website with recipes for “real” food for athletes.

Recipes suggested by Stacy:

<http://ohsheglows.com/2014/08/26/back-to-school-21-portable-allergy-friendly-snack-recipes-vegan-gluten-free-with-nut-free-options/>

I have attached one of the inspiring recipes at the end.

### **Notes for women:**

Hormonal changes affect our bodies and the ability to make hard efforts in training and racing.

- 5-7 days before menstrual period you might need a little extra carbohydrates if you are experiencing fatigue.
- Branched chain amino acids are also helpful if you are making hard efforts in the 5-7 days before your period. 3 grams before training, 5 grams after training.
- Increase your protein intake during your menstrual period.

### **Alexis' breakfast ideas**

*Breakfast basics for a training or race day:*

Protein, carbs and fat are needed. Fat is the fuel that keeps the body going. Green veggies are a bonus!

Carbs should be slow release, also known as low glycemic index. The rider will get the benefit of the carbohydrate energy over a longer period of time, rather than a quick burn and then crash.

White sugar is at the very high end of the glycemic index, along with processed grains like white flour and white potatoes. Oatmeal and whole grains, along with sweet potatoes and vegetables are low glycemic index.

**Smoothie:**

Start with:

- Almond milk, full fat milk, apple juice or water\*
- Unflavored protein powder\* (whey protein is an excellent choice)

Add some or all of the following:

- 1 scoop of green powder\* (I like Green Vibrance)
- 1/2 banana\*
- 1 Tb ground chia seeds\*
- 1 Tb coconut oil\*
- 1 Tb almond butter
- 1/4 avocado
- Kale
- Spinach
- Frozen berries

\* ingredients in my smoothie every morning!

Whiz up in powerful blender so that everything is smooth. Drink immediately, or the chia seeds will thicken it. Delish!

**Mom's Organic Power Oatmeal:**

- 3/4 cup organic rolled oats (or steel cut oats)
- 1 1/2 cups organic water
- Pinch organic salt
- 1 tsp organic whole chia seeds
- 1 Tb organic coconut oil
- Maple syrup to taste, organic of course
- Raw organic pecans, if desired

Put oats and water in pan, start heating, Add chia seeds and stir immediately to mix around. Turn heat down to medium after boiling and cook for 5-7 minutes, stirring frequently until done. Add coconut oil, and stir to incorporate it into the oatmeal. Add syrup and nuts! Yes!

**New York Bagel:**

- Bagel
- Full fat cream cheese
- Lox
- Tomato
- Capers
- Red onion slices
- Lemon

Slice bagel, add cream cheese and lox (important for protein and fat). Add other ingredients as desired. Yum!

**Egg Sandwich:**

- 2 scrambled eggs, shaped compactly to fit on a slice of bread
- 2 slices bread, buttered on one side
- 2 slices of cooked bacon
- 1 slice cheddar cheese

Cook two slices of bacon, set aside. Put cheese on one slice of bread. Griddle two slices of bread, butter side down in pan, until golden brown and cheese is soft. Meanwhile, scramble eggs, shaping them compactly to fit well on bread. Slide eggs on cheesy bread, add bacon and finish with the second slice. Ta da!

**Sweet potato and eggs**

- Sweet potato
- Sesame seeds
- Onion (optional)
- 2 eggs
- Butter

Bake sweet potato for about 45 minutes, slice open and add sesame seeds, butter and salt. Side of scrambled or fried eggs.

Alternate: Cube sweet potato, toss with diced onion, sesame seeds, coconut oil, sea salt and pepper. Sauté or roast in oven until soft and golden brown. Top with fried eggs.

**Veggie scramble:**

- Vegetables, cubed or diced; sweet potatoes, mushrooms, spinach, carrots, squash
- 2-3 eggs, beaten
- Olive oil, coconut oil or butter

In a sauté pan, cook vegetables that you like, sautéing until done, noting that some veggies take longer than others and to cook accordingly. Add beaten eggs, and scramble all together. Yum!

**Bacon burrito:**

- 2 Eggs
- 2 slices bacon
- 2 Tb diced sweet potato
- Tortilla (gluten-free if needed)

Fry two strips of bacon in a pan. Once crispy, set aside on paper towels to cool. Chop into one-inch pieces. Leave a tablespoon of the bacon grease in the pan, discard the rest. Sauté sweet potato until tender. Put the potatoes aside. Scramble two eggs. Wrap everything in a tortilla.

**Avocado toast:**

- 2 pieces whole grain bread or GF bread
- ½ avocado
- Olive oil
- Sea salt

- Eggs

Toast bread and drizzle with olive oil. Cook eggs your favorite way. Divide avocado in half and smash gently on toast. Sprinkle with sea salt and have eggs on top or on side.

### **Vincenzo Nibali's breakfast (2014 Tour de France winner)**

1. Four ounces of pasta with one tablespoon of olive oil and grated Parmesan cheese to taste.
2. Two eggs fried in light olive oil.
3. Two ounces of dried ham.
4. Four small bread rolls with jam or honey.
5. Dried apricots, figs, and raisins, and an ounce of almonds.
6. A glass of orange juice.
7. One liter of tap water.

### **Dinner for breakfast**

There is no reason why not to eat dinner food for breakfast, if it's more appealing.

- Roast veggies with eggs or meat.
- Pasta with olive oil and cheese, with some eggs for protein.
- Leftovers from the night before.
- Chicken, rice, vegetables.
- Lasagna.

# Banana Bread Muffin Tops

Vegan, gluten-free, nut-free, refined sugar-free

By Angela Liddon

Ultra dense and chewy, these banana bread muffin tops make a great running-out-the-door breakfast or snack. Sweetened with banana and dates, there are no added sugars (and the chocolate chips can be easily swapped for walnuts). Try them warm served with a pat of vegan butter, nut butter, or coconut oil.

Yield  
9 large cookies

Prep Time  
10 Minutes

Cook time  
18 Minutes

## Ingredients:

- 2 large ripe bananas, peeled (230 grams banana without peel)
- 1/2 cup packed pitted Medjool dates (125 grams pitted dates)\*
- 1/4 cup virgin coconut oil
- 1 teaspoon pure vanilla extract
- 1 teaspoon cinnamon
- 1 teaspoon baking powder
- 1/4 + 1/8 teaspoon fine grain sea salt
- 2 cups gluten-free rolled oats, divided
- 3-4 tablespoons non-dairy chocolate chips (or chopped dark chocolate)

## Directions:

1. Preheat oven to 350F and line a large baking sheet with parchment paper.
2. Add the peeled bananas, pitted dates, coconut oil, and vanilla into a food processor. Process until smooth. I let it run for a minute or so.
3. Add in the cinnamon, baking powder, and salt and process again until combined.
4. Add in 1.5 cups of the rolled oats and process for only 4-5 seconds, just long enough to roughly chop the oats.
5. Remove processor from the base and then remove the blade and set aside. Carefully stir in the remaining 1/2 cup rolled oats and the chocolate chips.
6. Spoon a large portion of dough (about 3-4 tablespoons or so for each) onto the parchment. Do not press down on the dough to flatten - simply leave it in a mound on the baking sheet.
7. Bake cookies for 10 minutes, rotate the pan, and bake for another 7-9 minutes until golden brown on the bottom.
8. Immediately transfer the baking sheet onto a cooling rack for 10 minutes. Then lift off muffins and place on the rack to cool completely.

## Tips:

Make sure you use very soft Medjool dates. If you are using firm dates, be sure to soak them in water until softened before proceeding with recipe.