

FEATHERSTONE NUTRITION X NEXT BEST RUN

# Fueling the Long Run + The Race

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# Topics of this Presentation

## FUELING THE LONG RUN & RACE

### Race & Long Run Nutrition

What, When, How Much  
Caffeine

### Carb Loading

### Pre-Race Nutrition

# What to take?!

## GOAL: FIND WHAT WORKS

### GELS

Find the one that works best for you.

*Hammer, Maurten, Honeystinger, Clif Shot Bloks, Crank e-gel, Gu & Gu Roctane, UCAN Huma...and so many more!*

### CHEWS

**Figure out how long you can chew + run.**

*Skratch, BonkBreaker, Honeystinger, Clif Shot Bloks*

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# When to take it?!

**GOAL: EVERY 25 - 30 MINUTES**

**FREQUENT FUELING....**

DECREASES PERCEIVED EFFORT

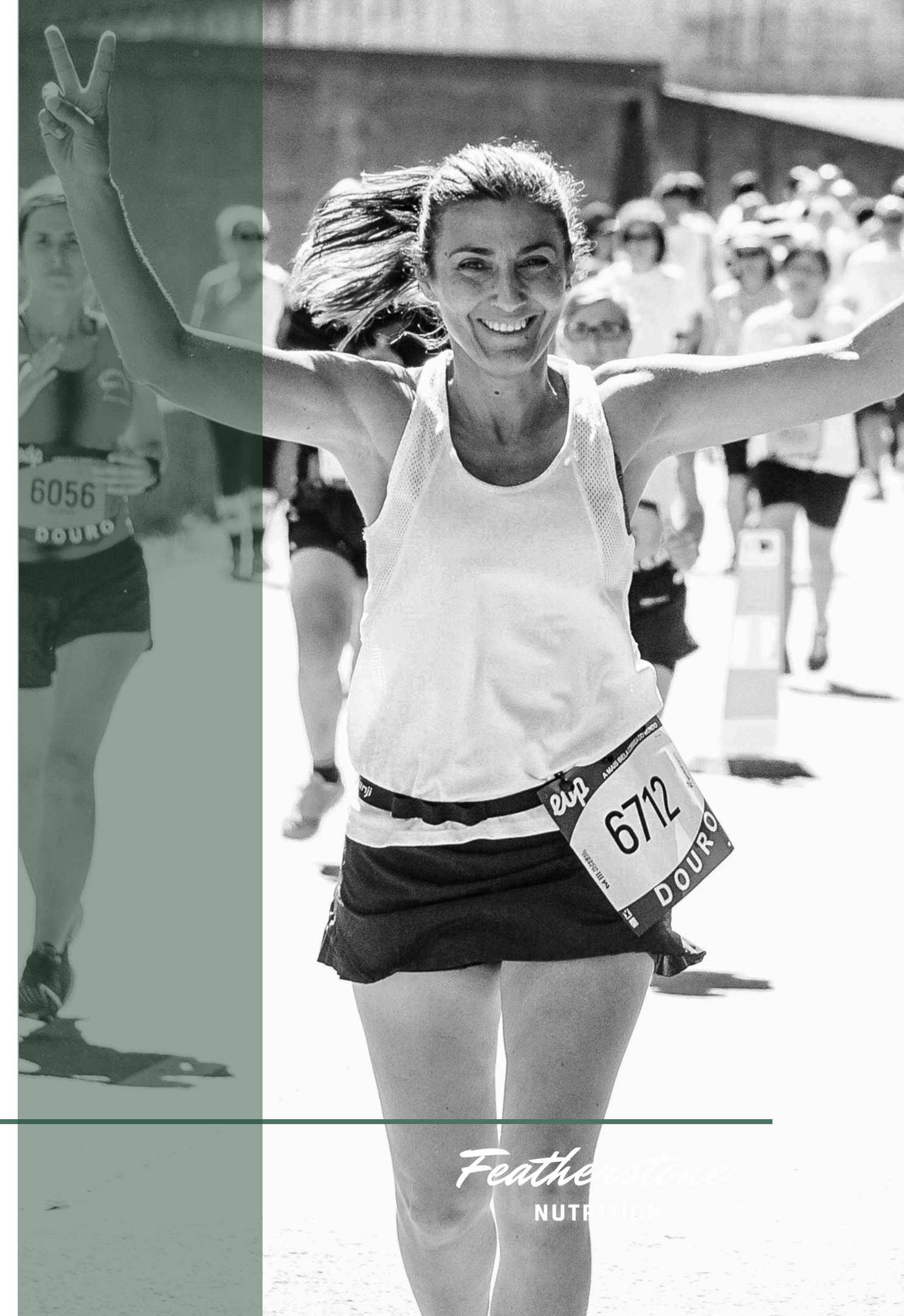
hard work feels easier.

ABILITY TO SUSTAIN FASTER PACES

When we run out of carbs - we 'bonk'

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# How Much?!

**GOAL: 30 - 80 GM CARBS PER HOUR**

## READ YOUR FUEL

Most gels have 20 - 25 gm carbs - check to see if yours has more or less.

## COME UP WITH A TIMING PLAN - NOT MILES BASED.

Fuel by minutes, not miles.

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# Types of Gels & Chews

Brand	Carbohydrate (gm)
Bonk Breaker chews	18
Clif Bloks	24
Clif Bloks 3x	24
Clif Shot	24
Crank e-gel	37
Gu	22
Gu Roctane	21
Hammer	21
Honeystinger	24
Honeystinger chews	39
Honeystinger Original	29
Huma	22
Huma+	23
Maurten	25
Muir Fast Burn	21
Muir Slow Burn	15
NeverSecond	30
Powerbar PowerGel	26
Powerbar PowerGel Hydro	25
SIS Go	22
SIS Go+	22
Skratch chews	19
Spring Energy Canaberry	17
Spring Energy Power Rush	20
Spring Energy Speednut	12
UCAN Edge	19
UnTapped	26





# Types of Gels

CAN TAKE WITHOUT FLUIDS



# Types of Gels

HIGHER IN SODIUM





# Running Performance + Caffeine

**DECREASES PERCEIVED EFFORT**

**DECREASES PAIN**

**INCREASES MENTAL TOUGHNESS**

*Potential downside:*

*GI upset, shakiness, increased heart rate, anxiety*



MIN

MAX

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# How much caffeine?

**3 - 5 MG PER KG DURING A RACE**

130# RUNNER

175 - 300 mg caffeine

150# RUNNER

200 - 350 mg caffeine

110# RUNNER

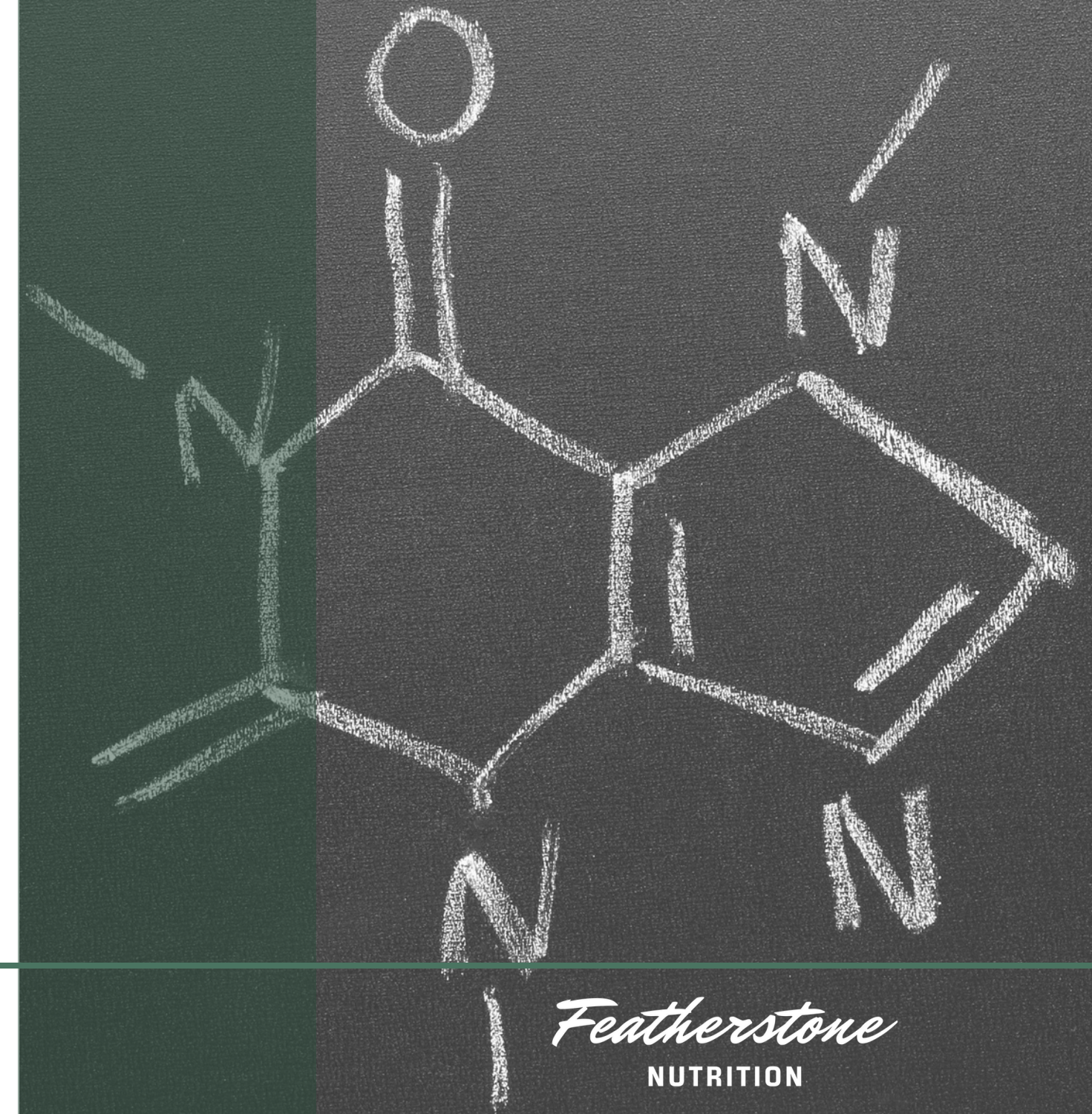
150 - 250 mg caffeine

180# RUNNER

250 - 400 mg caffeine

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# CAFFEINE



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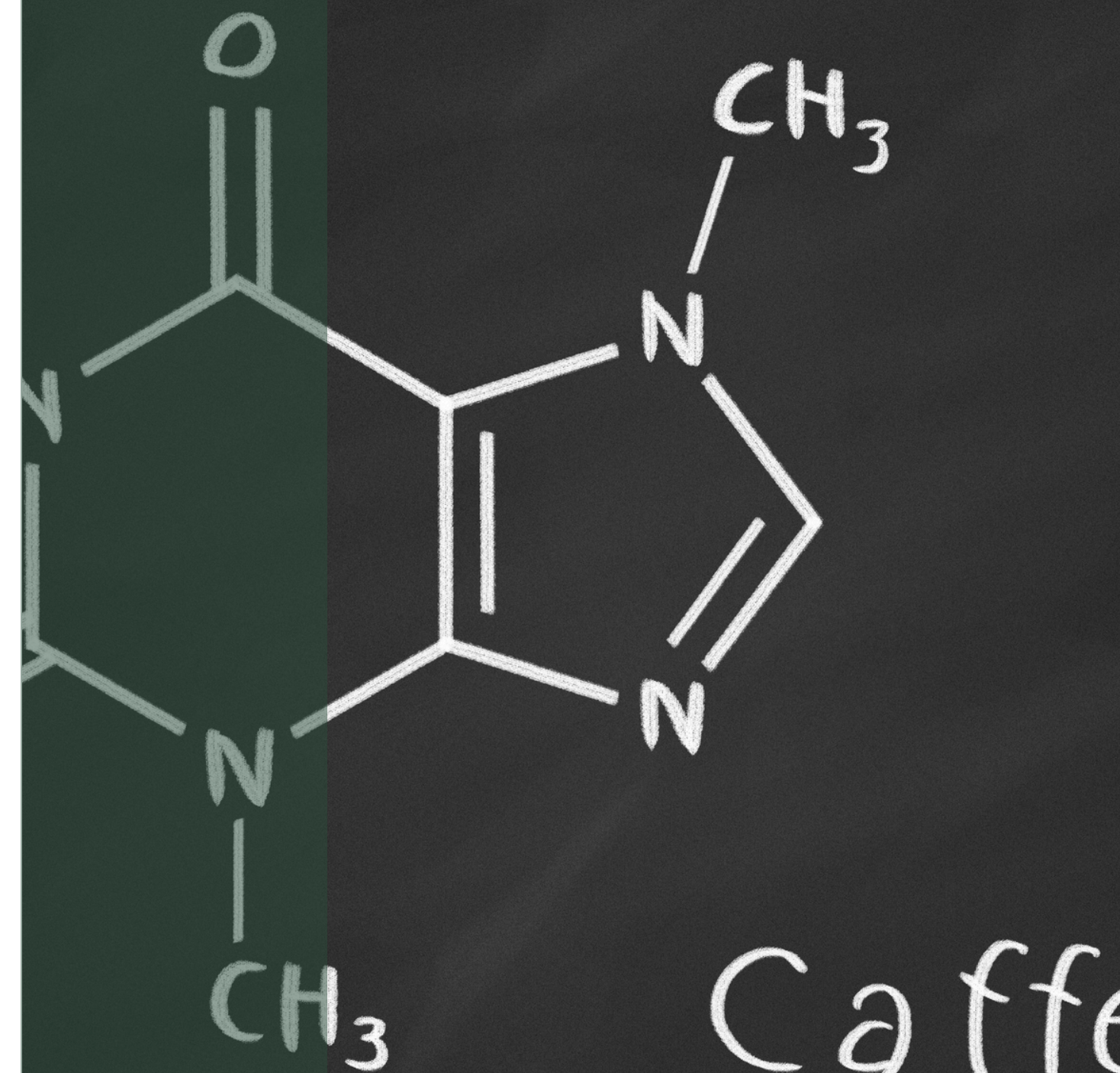
# When should I caffeine?

CAFFEINE PEAKS IN OUR BLOOD  
STREAM 1 HOUR POST CONSUMPTION.

And, hangs there for 60 - 75 minutes before  
slowly decreasing.

TIME CAFFEINE TO HIT WHEN YOU NEED  
IT.

Example: 4 hr marathoner - take 100 mg caffeine  
at 1 & 2 hours.



Caffeine

$C_8H_{10}N_4O_2$

Hydrogel Sports Fuel

**GEL 100**  
**CAF 100**

INGREDIENTS: WATER, GLUCOSE,  
FRUCTOSE, CALCIUM CARBONATE,  
CAFFEINE, GLUCONIC ACID, SODIUM  
ALGINATE

40G

CONTAINS CAFFEINE  
100MG / SERVING

# Let's Practice

## HOW MANY GELS DO I NEED TO TAKE?

**Data we need:** Goal Time + Grams Carbs/gel

Goal time in hours x 50 gm carbs = total carbs needed during your race

Divided by grams of carbs/gel = # gels needed

Goal time in minutes / # gels = frequency



# We've got a Calculator for that!

[FEATHERSTONENUTRITION.COM/RACE-FUEL](https://featherstonenutrition.com/race-fuel)

## Race Fuel Calculator

Goal time [in hours, example: 3.5]:\*

Grams of carb per serving of gel/chew:\*

Total servings of gel/chew for the race:

Frequency of taking each serving (minutes):

RESET

\*This calculation will provide 50 grams of carb per hour. Some athletes (Elite runners, ultra-marathoners, triathletes, etc.) may tolerate and benefit from more carbs per hour. Please reach out for a consult or submit for a Race Day Fuel & Hydration Plan (link below). \*\*If you are mix & matching gels/chews with varying carb amounts and need help with your calculation, please submit for a Race Day Fuel & Hydration Plan (link below).

# During Race Hydration

## DRINK 8 - 20 OZ PER HOUR.

The goal is to avoid >2% dehydration, where performance begins to suffer. Wildly variable - sweat rate is genetic.

## DRINK EARLY & OFTEN.

Most runners tolerate smaller amounts of fluid more often, than chugging large amounts.

## WILL YOU CARRY FLUIDS?

Will you refill?

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# During your Race

**GOAL: NEVER RUN OUT OF CARB ACCESS!!**

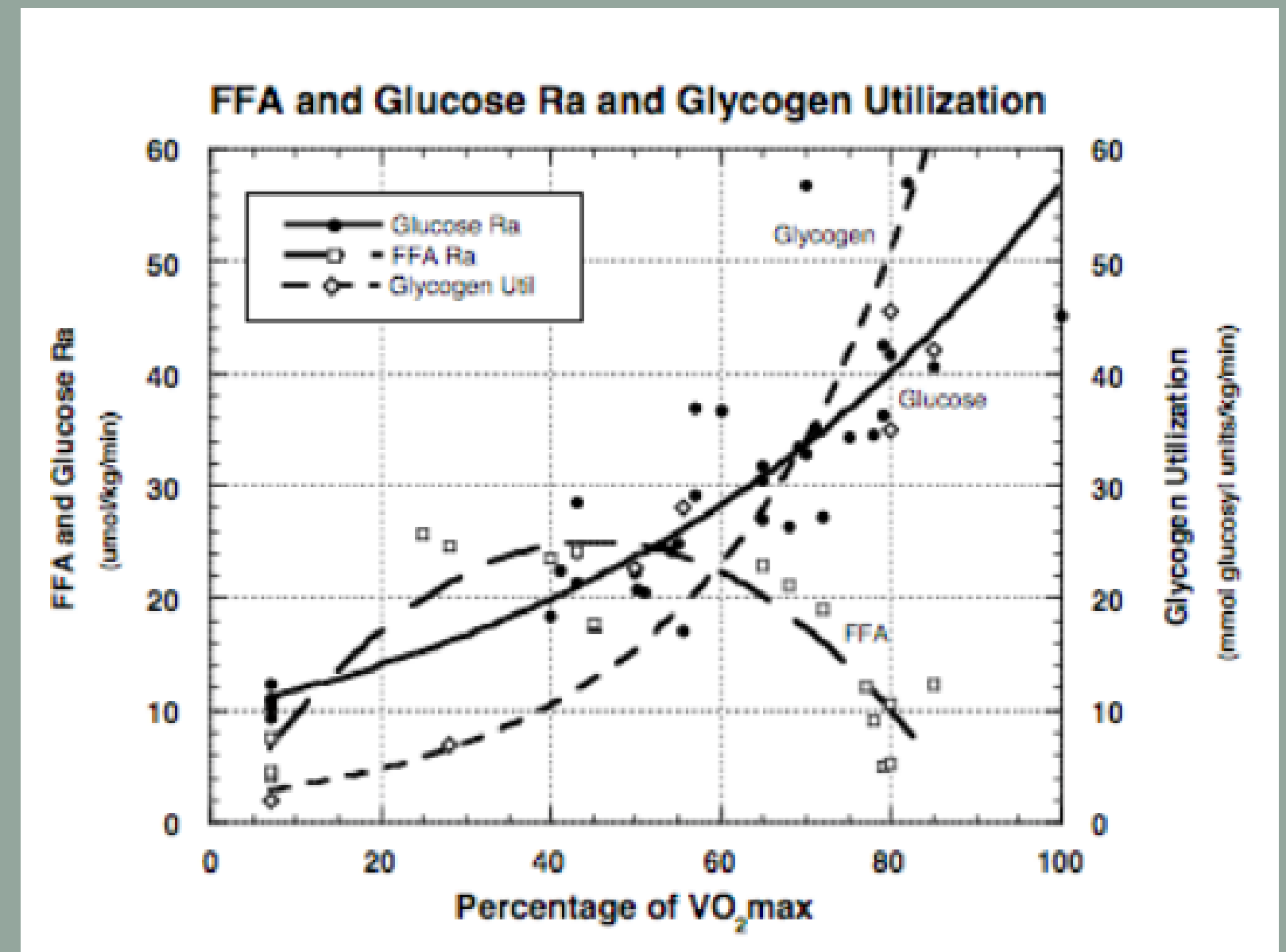
START EARLY

Get 5 - 10 minutes before the start.

FUEL OFTEN

Every 25 - 30 minutes

<adjust based on your gels carb content>





# Why should I carb load?

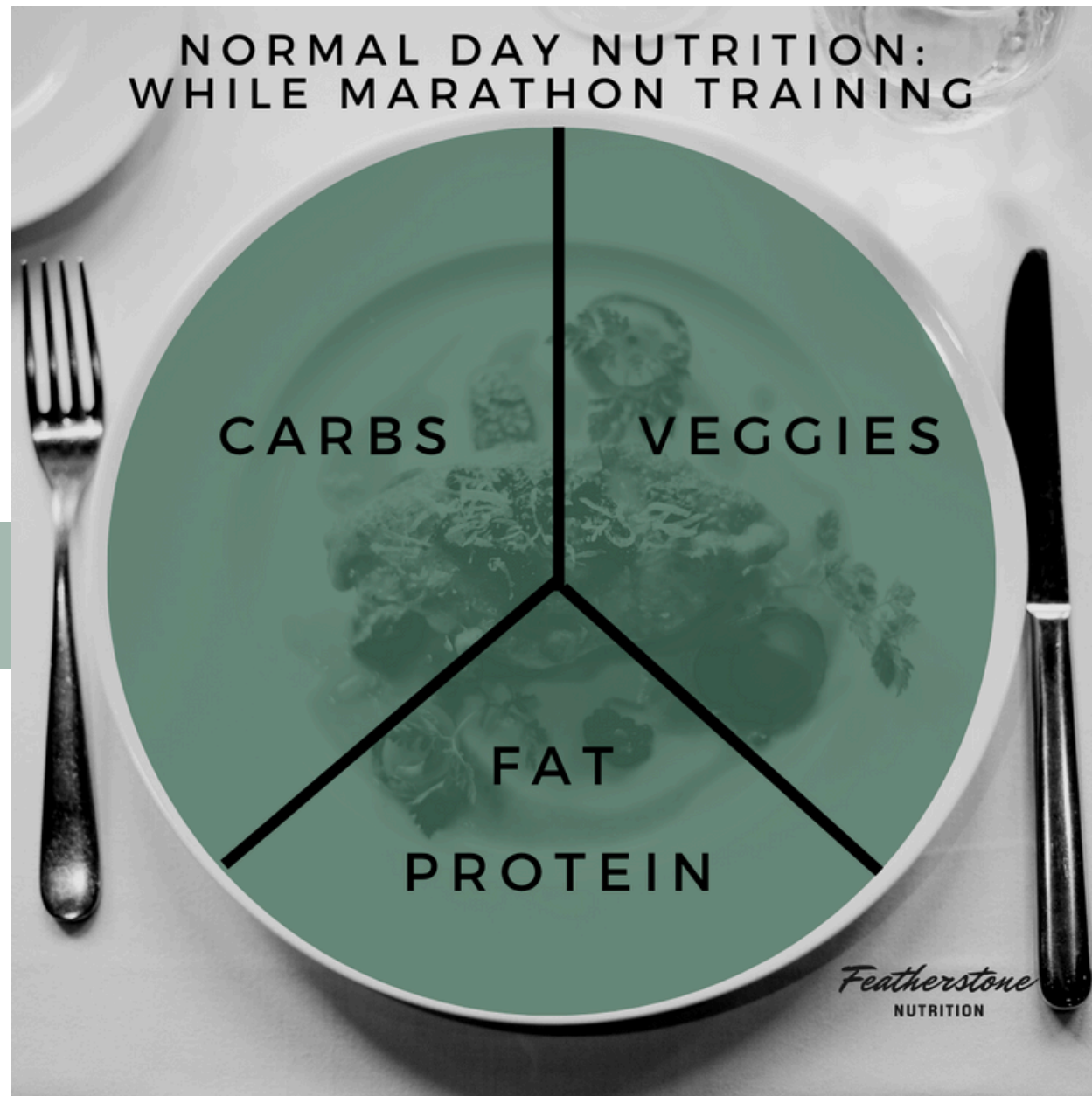
## **GLYCOGEN = STORAGE FORM OF CARBOHYDRATES**

Runners can store 300 - 500 gm of glycogen - fully carb loaded.

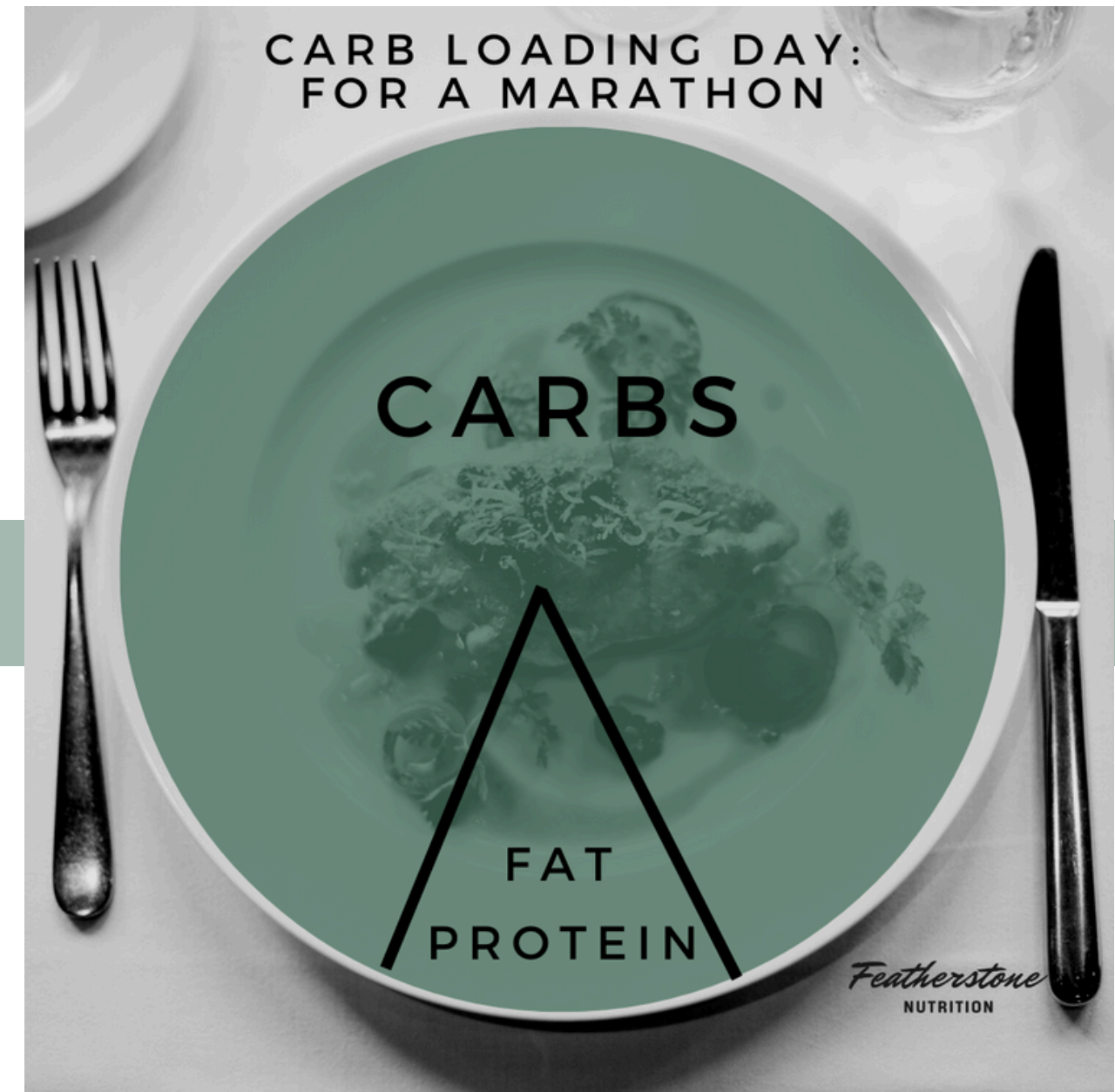
This can fuel 90 - 120 minutes of race day pace.



# 2 - 3 Days before Race Day Nutrition



MARATHON TRAINING  
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CARB LOADING  
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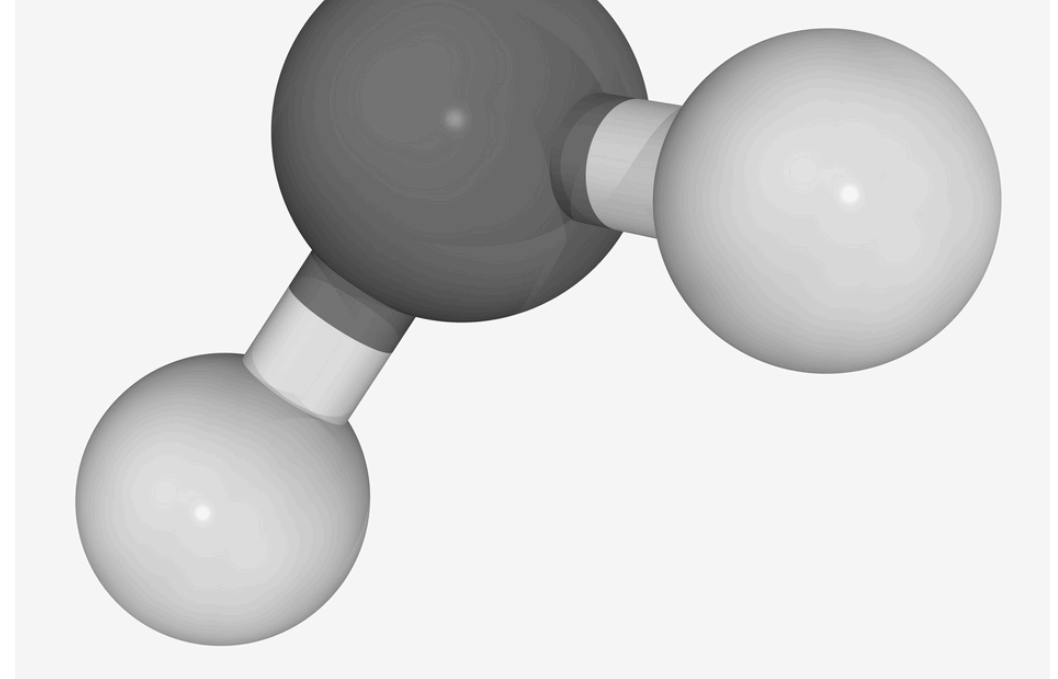
# Carb Load Considerations

## DO I JUST NEED CARBS?

Glycogen is 1 gm carbohydrate to 2 - 3 gm of water.

Any carb will do - but suggest lower fiber carbs to minimize race day GI distress.

Add 30 oz fluid per day while carb loading.



carbohydrate  
biological

$C_6(H_2O)_5$

and their

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## Carb Loading Calculator

Age

Height (inches)

Weight (pounds)

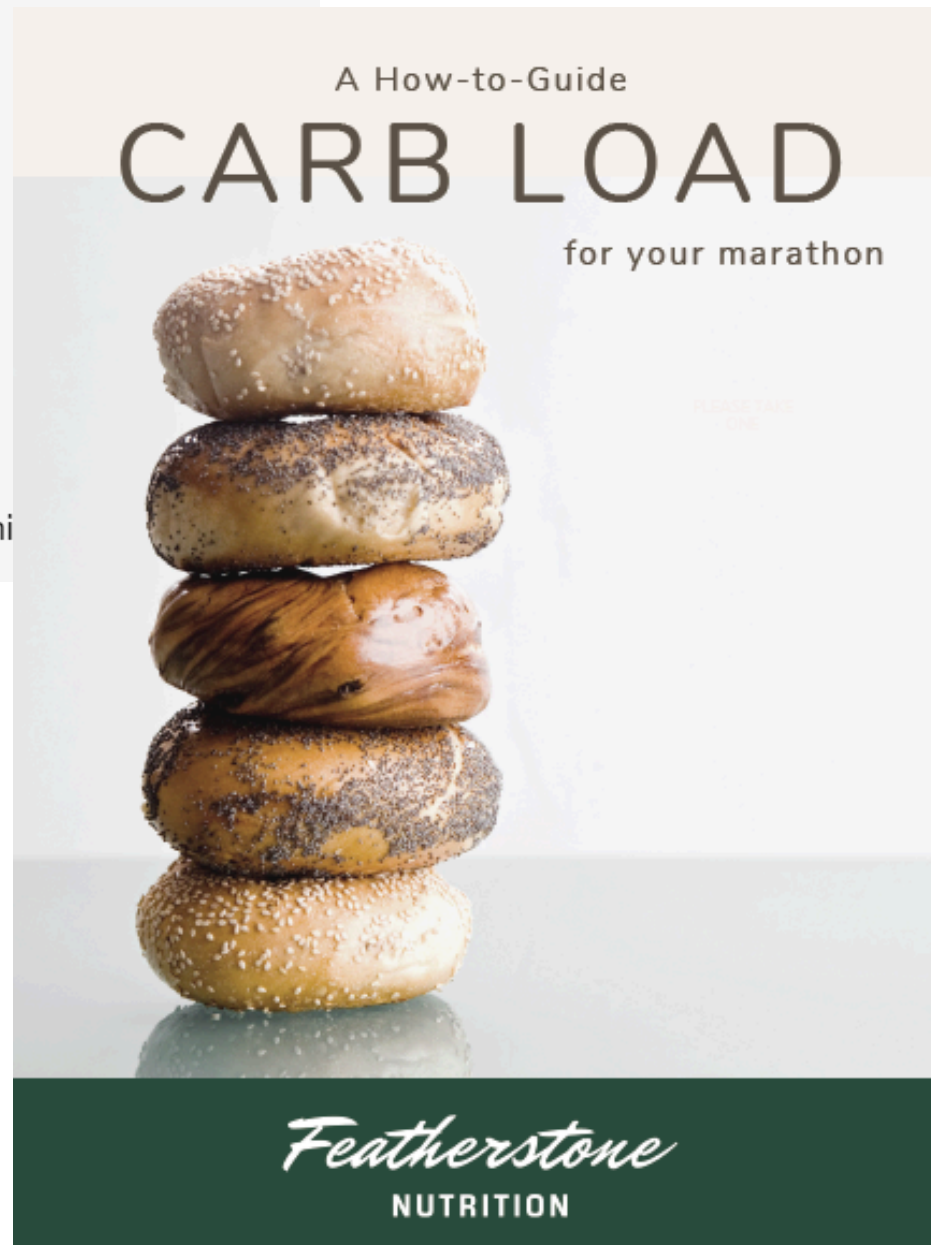
Goal Race & Estimated Finish Time

☐ Half Marathon Over 1:40

☐ Half Marathon Under 1:40







☐ Marathon

☐ Endurance Event Over 2 hours [i.e 70.3, Ironman, 50k, 50 mi]



# Carb Loading Resources

### Sample Day 500 gm carb

 <b>Breakfast</b> 1 cup oats + 1/2 cup raisins, cooked in almond milk <100 gm carbs>	 <b>Snack</b> 2 servings of pretzels <50 gm carbs>	 <b>Lunch</b> Bagel sandwich + banana + bag of pretzels <100 gm carbs>
 <b>Snack</b> 4 graham crackers + a little PB <50 gm carbs>	 <b>Dinner</b> 2 cups cooked pasta + sauce + big hunk of bread <150 gm carbs>	 <b>Snack</b> 2 cups dry cereal <50 gm carbs>

### 50 gm carbs =

Foods that contain 50 gm carbs:

- 1 large bagel
- 2 scoops Skratch or sports drink
- 4 graham crackers
- 2 slices large bread
- 1 heaping cup cooked pasta
- 1 cup cooked rice
- 2 servings pretzels
- 16 oz juice or lemonade
- 1 1/2 - 2 cups dry cereal
- 2 servings skittles or candy
- 1 large baked potato
- 1 cup dry oats
- 2 bananas
- 1 cup sweetened applesauce
- 2 cups pineapple
- 3 Tbsp honey
- 1/4 cup maple syrup
- 1/2 cup raisins

Make this easy! Find your grams of carbs per day on page 3 - divide that by 50 - that's how many servings you need to eat above per day.



# Pre Race Nutrition

## EAT 2 - 4 HOURS BEFORE THE RACE.

Eat half your body weight in gm of carbs. *<ie. 150# = 75 gm carbs>*  
Add a little fat and/or protein.

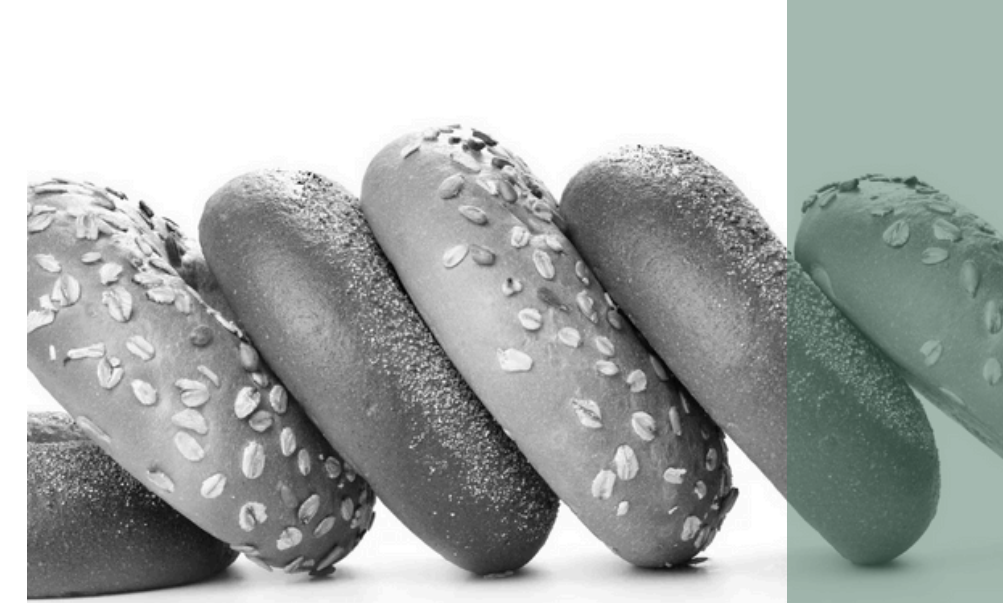
## FIND YOUR RACE START TIME. WORK BACKWARDS.

If it's a 7am start, eat once. If it's a later start, we likely need to eat twice.


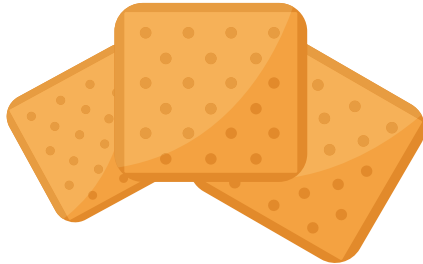



## STOP DRINKING FLUIDS 1 HOUR BEFORE RACE.

Give your body time to process extra & pee before the race.

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Start Time ↓	Breakfast 1 g carb/kg + a some protein or fat if you wish 	Snack 0.5-1g carb/kg 	Gel 1 gel 
9:10 AM	5:10 AM	7:10 AM	9:05 AM
9:45 AM	5:45 AM	7:45 AM	9:40 AM
If you have one of the below start times, you may want to have a bigger breakfast & include protein and/or fat.   <div>Tip: Don't try new foods &amp; stick to low fiber carbs.</div>			
10:20 AM	6:20 AM	8:20 AM	10:15 AM
10:55 AM	6:55 AM	8:55 AM	10:50 AM
11:30 AM	7:30 AM	9:30 AM	11:25 AM

\*Weight in lbs / 2.2 = weight in kg

# Pre Race Nutrition - NYC



# Know What You Need to Carry

## NYC Marathon

### AID STATIONS

First aid station is at 5k

Then, approximately  
every mile after.

*<20 total stops>*

Some longer stretches  
with the bridges.

### NYC MARATHON

Water

Gatorade Endurance  
Lemon Lime flavor

SIS Go Gels at mile  
12 & 18

### PROHIBITED ITEMS

Packs with a bladder

Bottles larger than 1 L



# GI Issues During the Race

## HOW TO AVOID

DRINK WITH ALL FUEL.

except Maurten, Powergel Hydro, SIS Go, Never Second

AVOID >2% DEHYDRATION.

dehydration increases GI distress

LOW FIBER CARB LOAD + BREAKFAST

stick to familiar, low fiber foods

and avoid high fat foods

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# Heat & Fuel Tolerance

## WHAT TO DO

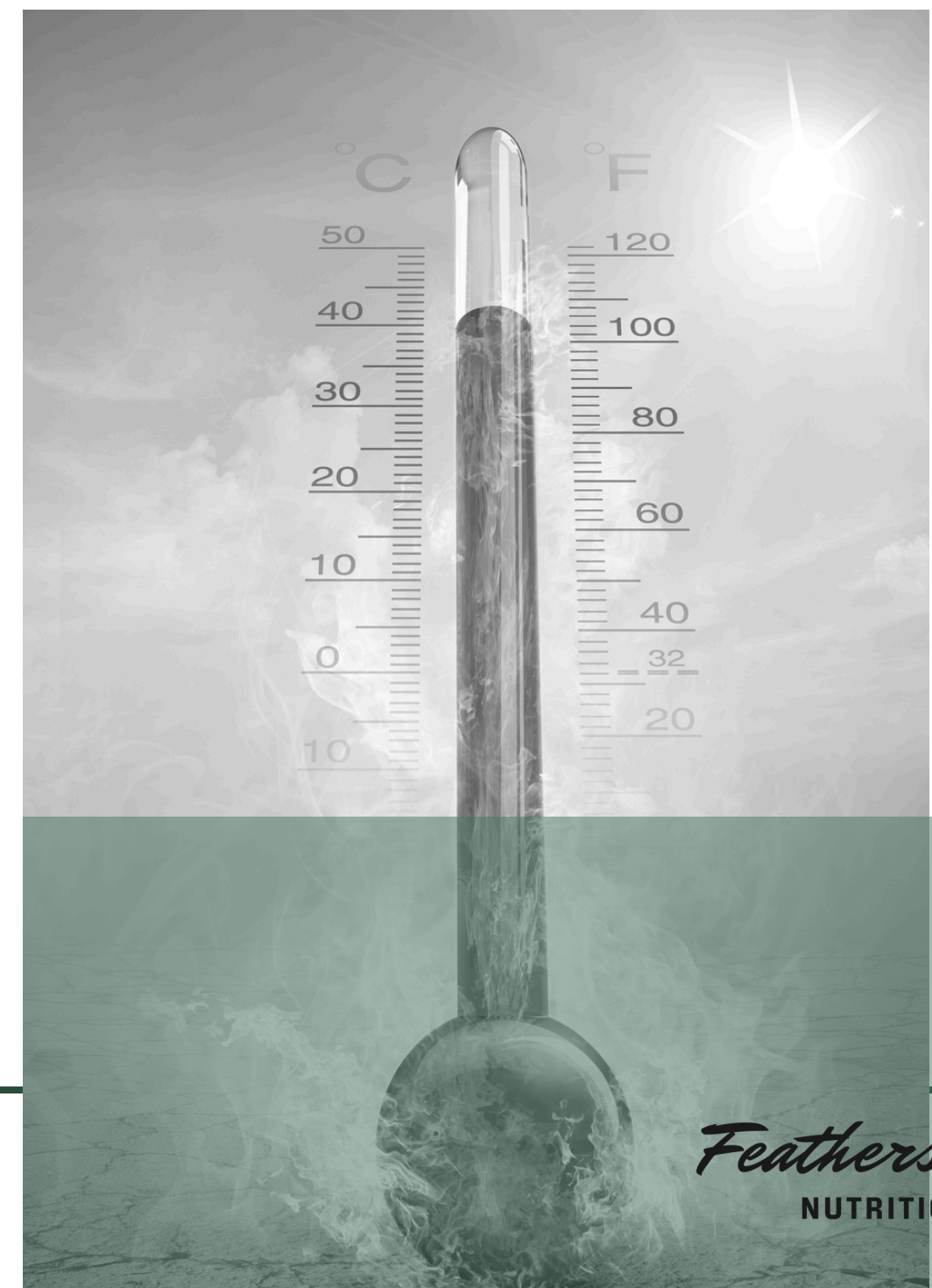
Fuel early!

Carry extra electrolytes.

Drink at every stop.

Carry fluids.

Stay as cool as possible before & during.



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# Race Day Nutrition Recap

## 2 - 3 DAYS BEFORE RACE

Make carbs 90% of  
your meals and snacks.

Drink enough fluid.

Eat less fiber.

## MORNING OF RACE

Eat 0.5 - 1 gm carb per  
# body weight 2 - 3  
hours before race.

Stop drinking 1 hour  
pre race.

Take some sports fuel  
at the starting line.

## DURING RACE

Fuel & hydrate early  
and often.

Take 50ish gm carbs  
per hour. Fuel every 30  
minutes.

10 - 20 oz sports drink  
or water + lytes per  
hour.

## AFTER RACE

Snack with carbs +  
protein asap.

Rehydrate with  
electrolyte drink asap.

Recovery meal within  
2 - 3 hours.

# PRACTICE LONG RUN NUTRITION.

*Calculate your fuel plan & practice!*

*Reach out with questions:  
[meghann@featherstonenutrition.com](mailto:meghann@featherstonenutrition.com)*

# Questions?