Sleep/Recovery
Daily Food Choices
Pre/post-workout
In-race Feeding Strategy

Optimal Performance
The great ones sleep
“If I don’t sleep 11-12 hours per day, it’s not right”
Roger Federer
“Eat, sleep and swim, that’s all I can do”  
Michael Phelps
“Sleep is extremely important to me – I need to rest and recover in order for the training I do to be absorbed by my body”  Usain Bolt
"I really can't say it enough. I don't think people really pay enough attention to how important sleep is,"

Michael Phelps

8 hrs / night + 2-3 hr afternoon nap
Real Madrid

Real Madrid have 81 bedrooms at their training complex for players and staff to nap in.
Why?

✓ Performance
✓ Recovery
✓ Brain function
✓ Immunity
✓ Mood
✓ Injury prevention
Teenage athletes who sleep **8 or more hours/night** are **68% less likely to be injured** than athletes who regularly sleep less.
Trouble sleeping?

Make sleep a priority
Avoid TV after dark
(or at least 90 mins before bed)
Trouble sleeping?

Dim the lights in your house
Trouble sleeping?

Dim your computer screen

—Download the free program F.lux
Night Shift automatically shifts the colors of your display to the warmer end of the color spectrum after dark. This may help you get a better night’s sleep.

Scheduled

From Sunset
To Sunrise

Manually Enable Until Tomorrow

COLOR TEMPERATURE

Less Warm  More Warm
Trouble sleeping?

Sleep in a cool and completely dark room!!!
Sleep/Recovery

Daily Food Choices

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Optimal Performance
Carbohydrate
Carbs

Athletes vs. sedentary people
Intensity matters!

![Graph showing the contribution of fat (FAT) and carbohydrates (CHO) to total energy at different exercise intensities. The graph illustrates that at low exercise intensity, fats contribute more to total energy, while at high exercise intensity, carbohydrates contribute more.](image)
Vegetables and Fruits

- Include a veggie with every meal
- Fruits make great snacks
- Provide vitamins, minerals, phytonutrients, hydration
- Avoid canned
- Frozen are fine
Calories

Energy availability =
Food energy intake – exercise energy expenditure
Impact of suppressed ovarian hormones, secondary to an energy deficit, on sport performance assessed by a 400-m time trial during a 12-wk competitive season in junior national caliber athletes.
Energy Availability During 12-week Season

Energy Availability (kcal/kg/FFM)

- Normal Cycle: 32 kcal/kg/FFM
- Suppressed Cycle: 11 kcal/kg/FFM

Vanheest et al 2014
Changes in 400m Swim Velocity During 12-week Season

Vanheest et al 2014
Typical Day?

**Early Breakfast:** Oatmeal and yogurt

**Breakfast:** 3-4 eggs w/ spinach, avo, fruit

**Snack:** fruit and/or hard-boiled eggs

**Lunch:** Turkey sandwich w/ veggies, rice

**Snack:** Apple/banana w/ peanut or almond butter

**Dinner:** 8-10 oz protein, potato, veggies w/ avocado

**Snack:** Berries, milk
Breakfast: Ackee and saltfish (a traditional Jamaican dish) with dumplings, cooked banana, yellow yam, and potato
Lunch: Pasta and chicken breast
Dinner: Chicken or beef mixed with brown rice, or peas with pork

“I try to go for long periods, maybe three months, without any fast food”
Cooking 101
All you need to know

Meat/fish/eggs and veggies

1. Heat some butter, olive oil, or coconut oil in a pan
(yes, butter…. Not Pam or cooking spray)
All you need to know

Meat/fish/eggs and veggies

2. Add in some veggies
(can be frozen or fresh; spinach, broccoli, mushrooms, bell peppers, onions, tomatoes, etc.)
All you need to know

Meat/fish/eggs and veggies

3. Add in protein (beef/chicken/eggs/fish/canned salmon)
How to make potatoes/rice

1. Cut into smaller pieces
2. Boil in water until they are soft
3. Peel skins off and mash with butter

*can eat with scrambled eggs, meat, sardines, vegetables, etc.
### Nutrition Facts

**Serving Size:** 1 Chipotle bowl w/ chicken, white rice, black beans, veggies, salsa, guacamole

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories 785</th>
<th>Calories from Fat 309</th>
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<tbody>
<tr>
<td><strong>Total Fat</strong></td>
<td>35g</td>
<td>54%</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>7g</td>
<td>35%</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0g</td>
<td></td>
</tr>
<tr>
<td>Cholesterol</td>
<td>125mg</td>
<td>42%</td>
</tr>
<tr>
<td>Sodium</td>
<td>2010mg</td>
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<tr>
<td><strong>Total Carbohydrate</strong></td>
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<tr>
<td>Dietary Fiber</td>
<td>22g</td>
<td>88%</td>
</tr>
<tr>
<td>Sugars</td>
<td>5g</td>
<td></td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td>46g</td>
<td>92%</td>
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*Percent Daily Values are based on a 2,000 calorie diet.

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### Nutrition Facts

**Serving Size:** Chipotle burrito w/ sofritas, white rice, pinto beans, salsa, sour cream, cheese, guacamole; guac and chips; 20 oz soda

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>Calories 2280</th>
<th>Calories from Fat 998</th>
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<tr>
<td><strong>Total Fat</strong></td>
<td>113g</td>
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<tr>
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<td>26g</td>
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<tr>
<td>Trans Fat</td>
<td>0g</td>
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<tr>
<td>Cholesterol</td>
<td>165mg</td>
<td>55%</td>
</tr>
<tr>
<td>Sodium</td>
<td>3830mg</td>
<td>160%</td>
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<tr>
<td><strong>Total Carbohydrate</strong></td>
<td>274g</td>
<td>91%</td>
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<tr>
<td>Dietary Fiber</td>
<td>39g</td>
<td>156%</td>
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<tr>
<td>Sugars</td>
<td>80g</td>
<td>90%</td>
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*Percent Daily Values are based on a 2,000 calorie diet.
Nutrition Facts

Serving Size 1 Subway 12" cold cut combo on Italian herb w/ provolone, cucumbers, green peppers, onions, spinach, tomato, olive oil

Amount Per Serving

<table>
<thead>
<tr>
<th></th>
<th>Calories 660 Calories from Fat 150</th>
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<tr>
<td>Calories</td>
<td>26%</td>
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<tr>
<td>Total Fat</td>
<td>17g</td>
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<tr>
<td>Trans Fat</td>
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<tr>
<td>Cholesterol</td>
<td>40mg</td>
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<tr>
<td>Sodium</td>
<td>1530mg</td>
</tr>
<tr>
<td>Total Carbohydrate</td>
<td>93g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>10g</td>
</tr>
<tr>
<td>Sugars</td>
<td>14g</td>
</tr>
<tr>
<td>Protein</td>
<td>36g</td>
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Nutrition Facts

Serving Size Subway 12" cold cut combo on Italian herb w/ provolone, cucumbers, green peppers, lettuce, pickles, onions, tomatoes, chipotle sauce, mayo, avocado; 20 oz. soda

Amount Per Serving

<table>
<thead>
<tr>
<th></th>
<th>Calories 1680 Calories from Fat 830</th>
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<tbody>
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<td>% Daily Values*</td>
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<td>Saturated Fat</td>
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<td>Trans Fat</td>
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<tr>
<td>Cholesterol</td>
<td>165mg</td>
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<td>Sodium</td>
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<tr>
<td>Total Carbohydrate</td>
<td>165g</td>
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<td>Dietary Fiber</td>
<td>11g</td>
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<tr>
<td>Sugars</td>
<td>82g</td>
</tr>
<tr>
<td>Protein</td>
<td>47g</td>
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*Percent Daily Values are based on a 2,000 calorie diet.
Sleep/Recovery

Daily Food Choices

Pre/post-workout

In-race Feeding Strategy

Optimal Performance
1st thing in the AM
Early morning?

• Leftover dinner (chicken/rice)
• Boiled egg w/ dates
• Oatmeal
• PB&J
Post-workout

Carbs + Protein (ideally within 30 mins)

- Chocolate milk
- Chicken & rice
- Meat & potatoes
- PB&J (+protein!)

The harder the workout the more important eating becomes!
Carbohydrate (Carb): 10%
Fat: 79%
Protein: 11%

Nutrition Facts

<table>
<thead>
<tr>
<th>Amount Per Serving</th>
<th>% Daily Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fat: 1.7g</td>
<td>29%</td>
</tr>
<tr>
<td>Saturated Fat: 3.5g</td>
<td>18%</td>
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<tr>
<td>Sodium: 140mg</td>
<td>6%</td>
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<tr>
<td>Total Carbohydrate: 7g</td>
<td>2%</td>
</tr>
<tr>
<td>Dietary Fiber: 2g</td>
<td>8%</td>
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<tr>
<td>Sugars: 3g</td>
<td></td>
</tr>
<tr>
<td>Protein: 7g</td>
<td></td>
</tr>
</tbody>
</table>

*Percent Daily Values are based on a 2,000 calorie diet.
Typical intake

- Pre: gel
- 2 feeds: gel + sports drink
- Avg total ~50 g carb/hr
Key Points

Get enough sleep

-Sleeping at least 8 hours/ night will make you feel better, swim faster, think clearer, recover better, get stronger. No question.
Key Points

Drink water in the morning

– Overnight fluid losses!
Key Points

Eat evenly through the day
Key Points

Eat after practice/ workouts
Mistakes

• Going too long after practice without eating anything

• Not eating breakfast

• Saving calories for the end of the day
ATHLETES VS SWIMMERS

*athletes do what’s necessary to prepare to win their sport...
this involves things besides playing your sport
Activity

List 2 nutrition-related goals

- For each, list 2 specific steps you can take to achieve them

Ex. I want to sleep at least 8 hours a night
- I will turn off the TV after 8pm
- I will do my homework during my breaks at school