Top 10 Nutrition Tips to Improve Performance

Alicia Kendig, MS, RD, CSSD
Sports Dietitian
a.kendig@gmail.com

What is one thing (food or beverage) that you eat daily, even though you know it’s not the best idea?
Olympians Pay Attention to their Nutrition

“I wasn’t really big into nutrition before, but once I hooked up with it, I realized that what I put into my body is as important as my cap and goggles every day.” R. Lochte

“My main goal used to be to just eat a ton of calories. But over the years I’ve adjusted my diet,” he says. “Now I’m eating less, but I’m getting my calories from nutrient- and protein-dense foods.” M Phelps

“I feel like I have more energy throughout practice and drylands, especially in the afternoons.” A. Schmitt

1.

• A nutrition plan should be treated as part of a training plan
  – Busy Days
  – Recovery days
  – Make the time
  – Make the effort
Effects of Poor Fueling

• You work harder than you have to in practice and in a race
• Get tired much faster, in practice and in a race
• It takes longer to recover after a workout or from a race
• Weak immune system

12,000 Calories?

Michael Phelps eats 12,000 calories a day—six times what a normal adult male eats. After waking up at 5 a.m., a typical day’s worth of meals for the Olympic gold medalist swimmer involves:

**BREAKFAST**
- Three fried-egg sandwiches with cheese, lettuce, tomatoes, fried onions and mayonnaise.
- An omelette—containing five eggs.
- A bowl of grits.
- Three slices of French toast, with powdered sugar on top.
- Three chocolate chip pancakes.
- Two cups of coffee.

**LUNCH**
- Half a kilogram of enriched pasta.
- Two large ham and cheese sandwiches on white bread with mayo.
- Energy drinks (about 1,000 calories).

**DINNER**
- Half a kilo of enriched pasta.
- A whole pizza.
- Energy drinks (about 1,000 calories).
2.

- Never underestimate the power of **WATER**
  - Performance
  - Recovery
  - Motivation
  - Prevention of infection / illness
  - Overall health!

*Effects of Improper Hydration*

- Decreased focus
- Decreased blood delivery to muscles
- Heart beats a lot faster
- You work harder than you have to, to go faster
Urine Color Chart

If your urine color matches # 1, 2, or 3, you are well hydrated

If your urine color matches # 4, 5, or 6, you are dehydrated

3.

- Maintain the nutrient density of your food choices
  - Vibrant fruits and vegetables
  - Higher calorie snacks are not “bad”
  - Packed full of vitamins and minerals
    - Dark Color Veggies
    - Nuts/Seeds
    - Avocados
    - Fish
    - Granola
Red: Contain nutrients such as lycopene, ellagic acid, Quercitin, and Hesperidin, to name a few. These nutrients reduce the risk of prostate cancer, lower blood pressure, reduce tumor growth and LDL cholesterol levels. **scavenge harmful free-radicals, and support joint tissue in arthritis cases.**

Orange and Yellow: Contain beta-carotene, zeaxanthin, flavonoids, lycopene, potassium, and vitamin C. These nutrients reduce age-related macula degeneration and the risk of prostate cancer, lower LDL cholesterol and blood pressure, **promote collagen formation and healthy joints, fight harmful free radicals, encourage alkaline balance, and work with magnesium and calcium to build healthy bones.**

Green: Contain chlorophyll, fiber, lutein, zeaxanthin, calcium, folate, vitamin C, calcium, and Beta-carotene. The nutrients found in these vegetables reduce cancer risks, lower blood pressure and LDL cholesterol levels, normalize digestion time, support retinal health and vision. **fight harmful free radicals, and boost immune system activity.**

Blue and Purple: Contain nutrients which include lutein, zeaxanthin, re Vera, vitamin C, fiber, flavonoids, ellagic acid, and Quercitin. Similar to the previous nutrients, these nutrients support retinal health, lower LDL cholesterol, **boost immune system activity, support healthy digestion, improve calcium and other mineral absorption; fight inflammation; reduce tumor growth; act as an anticarcinogen in the digestive tract; and limit the activity of cancer cells.**

White: Contain nutrients such as beta-glucans, ECGC, SDG, and lignans that provide powerful immune boosting activity. These nutrients also activate **natural killer B and T cells**, reduce the risk of colon, breast, and prostate cancers, and **balance hormone levels**, reducing the risk of hormone-related cancers.

### Brown Rice vs White Rice

<table>
<thead>
<tr>
<th></th>
<th>Brown Rice</th>
<th>White Rice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calories</strong></td>
<td>218</td>
<td>242</td>
</tr>
<tr>
<td><strong>Carbohydrates</strong></td>
<td>46 g</td>
<td>53 g</td>
</tr>
<tr>
<td><strong>Fiber</strong></td>
<td>4 g</td>
<td>1 g</td>
</tr>
<tr>
<td><strong>Protein</strong></td>
<td>5 g</td>
<td>4 g</td>
</tr>
</tbody>
</table>
4.
• Plan ahead
  – You can eat healthy when on the go
  – Training
  – Commute
  – School
  – Travel, etc...

5.
• More snacks, more often
  – Eat 5-6x/a day
  – Eat between “3-7” (10 point scale)
  – Prevents over eating
  – Indirectly, improves body composition!
  – Add protein or healthy fat to each snack
  – Add 1 fruit or vegetable to each snack time
Example Day of Training

- 6-8am – Morning Practice
- 3-5pm – Afternoon Practice
- 8am, 12pm, and 6pm Meals
- 2 pm Snack

Example Day of Training

- 6-8am – Morning Practice
- 3-5pm – Afternoon Practice
- 8am, 12pm, and 6pm Meals
- 6am, 10am, 2 pm, 8pm Snacks
6.
• Be protein savvy
  – What makes one better than another?

How much protein do you really need?

• The amount of muscle you have determines how much protein you need:
  – .6-1.0 grams of protein per pound of body weight
    • 120 lbs = 72-120 g of Protein per day
    • 150 lbs = 90-150 g of protein per day
    • 170 lbs = 102-170 g of protein per day

• Consume in 15-20g servings throughout the day
7.

- Recovery Nutrition is equally as important as pre- and during exercise nutrition
  - Chocolate Milk??
  - Carbohydrate and Protein
  - ASAP...As soon as possible!
    - Pack Snacks in swim bag
    - Recovery best up to 30 min after exercise
    - Should be a priority for double days
Use Real Food!

<table>
<thead>
<tr>
<th>Food</th>
<th>Protein (g)</th>
<th>Carbohydrate (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 oz skim milk</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>6 oz nonfat Greek yogurt</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>12 oz low fat choc milk</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>Medium banana + 2 Tbsp PB</td>
<td>10</td>
<td>28</td>
</tr>
<tr>
<td>3 oz turkey breast</td>
<td>32</td>
<td>24</td>
</tr>
<tr>
<td>2 slices wheat bread</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PB and J sandwich</td>
<td>20</td>
<td>82</td>
</tr>
</tbody>
</table>

8.

- NEED FOOD FAST??
- Junk food (convenience foods) are NOT the answer
  - Higher-fat foods delay recovery and replace high quality foods w junk
  - Eating high-fat foods before competition can lead to
    - a feeling of heaviness
    - sluggishness
    - digestive upset
  - Avoid food in wrappers when possible...
### 6” Turkey Sub vs. Crispy Chicken Sandwich

<table>
<thead>
<tr>
<th></th>
<th>6” Turkey Sub</th>
<th>Crispy Chicken Sandwich</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving Size</td>
<td>220 g</td>
<td>447 g</td>
</tr>
<tr>
<td>Calories</td>
<td>330</td>
<td>420</td>
</tr>
<tr>
<td>Fat</td>
<td>4.0 g</td>
<td>22 g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>1.0 g</td>
<td>4.5 g</td>
</tr>
<tr>
<td>Carbohydrates</td>
<td>39 g</td>
<td>41 g</td>
</tr>
<tr>
<td>Protein</td>
<td>16 g</td>
<td>15 g</td>
</tr>
</tbody>
</table>

9.

- **Fueling the Engine**
  - **Sports Drinks during practice?**
    - Water is all that is typically needed for 2 hours or less
    - If dryland or lifting before/after, have snack read or bring sports drink
    - If no time for breakfast, snack on SOMETHING before morning practice
  - **Don’t fall victim to the labeling...**
    - All you need is carbohydrate, maybe protein
    - Food first, then sports nutrition products if necessary
Training/Competition Snack Ideas

- Bagel (4”) 52 g
- Fig Newtons (4) 44 g
- ½ PB & J 30 g
- Banana 26 g
- Orange 17 g
- 20 fl oz Sports Drink 42 g
- PowerBar/Clif Bar 42 g
- 1 Gel 27 g

10.

- You are responsible for your food choices
- Communication...
  – W/ coach, sports dietitian, trainer, etc.
- Good fuel, good performance
- Experiment with ways to fuel properly
Coaches Chat: Dietary Supplements

Alicia Kendig, MS, RD, CSSD
Sports Dietitian
a.kendig@gmail.com

Truth about Dietary Supplements

Functional Foods and Dietary Supplements
• “Functional Food” = Bars, Protein Powders and Gels
• **FDA does not regulate these products**
• Ingredients in bars/drinks are added in same way as supplements, opening them up to the same contamination issues
• Manufactures intentionally label supplements as food to keep below banned substance certification
• Don’t be fooled by the claims...no one verifies these claims until its too late...
**A typical list...**

![United States Anti-Doping Agency Declaration of Use Form](image)

**jack-3d.com**

Everything you need to know about Jack3d from USPLabs

![Jack3d Product Image](image)

250 Grams
Lemon Lime

**Supplement Facts**
- **Serving Size:** 1 Scoop (5.55 grams)
- **Servings Per Container:** 45
- **Amount Per Scoop:**
  - **Proprietary Blend:** 4145mg*
    - (Arginine, L-Ketoglutarate, Creatine, Monohydrate, Beta Alanine, Caffeine, 1,3-Dimethylamylamine (Geranium (Stem)), Schizandrol A)
  - *Daily Value not established*
- **Other Ingredients:**
  - Citric Acid, Natural Lemon-Lime Flavor, Acesulfame K, Sucralose, Vegetable Stearate, Silicon Dioxide, Chlorophyll (For Coloring).
- **This product is produced in a facility that processes milk and soy ingredients**
- **Black Box Warning:**

[www.jack-3d.com](http://www.jack-3d.com)
2013 WADA Prohibited List

PROHIBITED SUBSTANCES

56. STIMULANTS

All stimulants (including both optical isomers where relevant) are prohibited, except imidazoline derivatives for topical use and those stimulants included in the 2010 Monitoring Program.

Stimulants include:

- Non-Specified Stimulants:
  - Adrenaline; amfepramone; amiphenazole; amphetamine; amphetaminil; benfluorex; benzphetamine; bupropion; bromantan; clobenzorex; cocaine; desipramine; dextroamphetamine; diethylamphetaamine; fentanyl; fenfluramine; fenprozor; fenprofpron; flupenthixol; mefenamic acid; mesocarb; methandienone; methylphenidate; methylphenidate; metandienone (dimethylpentylamine); modafinil; norfenfluramine; phenmetrazine; phenethamine; pentoxyfylline; prenyllamine; propranolol. A stimulant not expressly listed in this section is a Specified Substance.

Jessica Hardy Case

- Olympic Trials 2008
- Hardy tested positive for: Clenbuterol
- Clenbuterol is on the WADA Prohibited list as a stimulant
- Trace amounts of clenbuterol found in Advocare energy drink ➔ Automatic 2 year suspension from competition ➔ No Olympics

“Jessica did not knowingly or intentionally take any banned substances. Active investigations are being conducted to determine the source of this very low level of clenbuterol. Following completion of this investigation, Jessica will seek to have her period of suspension reduced substantially. It is anticipated that a hearing on this issue will take place within the next several months.”
Consider Risks versus Benefits

Take Home Message on Supplements

• What can you do
  – GO NATURAL...Eat Food, Train Hard!
  – Improve other lifestyle factors first
    • Diet, nutrition timing, sleep, stress management, etc.
  – Check with professional (not a salesmen): Are the claims accurate?
  – Choose products that are 3rd Party Tested
    • NSF Certified for Sport – Highest Quality Test
      – iPhone/Droid App: NSF Sport
      – Informed Choice, BSCG cheaper alternatives

Muscle Builders
Single AAs
Weight loss suppl.
High doses of vitamins/minerals
Creatine
Caffeine
Bicarbonate
Dietary Antioxidants
Glycerol
Carbohydrate
Protein
Fluids & Electrolytes
Calcium, Iron, Vitamin D