



HAMILTON HIGH SCHOOL SPORTS FUEL

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PLAY GREAT

RECOVER FAST

STAY HEALTHY

PLAY GREAT

- Eat the right amount of the right fuel
- **NUTRITION**
PERIODIZATION = matching nutrients consumed with training needs
- Your nutrition needs vary throughout the year!

ENERGY = CALORIES

- *Eat the right amount of energy for **YOUR** body*
- *Very general rule of thumb:*
 - *10 calories for every pound you weigh (RMR)*
 - *+ 100 calories for every mile you run (or every 10-15 minutes of training)*
 - *+ daily activity calories (300-500 on average)*
- ***150-lb. runner** = 1,500 + 1,000 (10 mile training run) + 500 (activity) =
≈ 3,000 calories for the day to maintain weight*

Estimated Daily Energy (Calorie) Needs for Energy Balance (wt maintenance)

Training/workouts Calories/pound BW

	120-lbs.	160-lbs.	280-lbs.
Low (sedentary) 13 to 15	1,560 – 1,800	2,080 – 2,400	3,640 – 4,200
Active (30 to 60min/d) 16 to 18	1,920 – 2,160	2,560 – 2,880	4,480 – 5,040
Moderate (1 to 1 ½ hr/d) 19 to 21	2,280 – 2,520	3,040 – 3,360	5,320 – 5,880
High (1 ½ to 2 hr/d) 22 to 24	2,640 – 2,880	3,520 – 3,840	6,160 – 6,720
Very High (2 to 3 hours/d) 25 to 30 or more	3,000 – 3,600	4,000 – 4,800	7,000 – 8,400

**YOU DON'T NEED
TO COUNT
CALORIES IF
YOU'RE
FOLLOWING A
GOOD FUELING
PATTERN**

CONSEQUENCES OF CHRONIC NEGATIVE ENERGY BALANCE IN ATHLETES

- *Weight loss*
- *Strength loss*
- *Inability to adapt to training regimen*
- *Diminished performance*
- *Soreness, joint pain*
- *Lethargy*
- *Chronic fatigue*
- *Micronutrient deficiency*
- *Respiratory infections*
- *Menstrual or endocrine abnormalities*
- *Decreased bone mineral density*
- **Overtraining syndrome**



**FUEL
EARLY AND
FUEL
OFTEN**

- Breakfast (within 30 min of waking up)
- Lunch
- Dinner
- Night Snack

- Pre-workout fuel
- Recovery fuel

*Every day, every workout
No skipping*

**IS HUNGER A
GOOD MEASURE
OF HOW MUCH
TO EAT DURING
CAMP?**

**BUT I WANT TO
LOSE WEIGHT
DURING CAMP...**

Formula:

WHAT TO EAT?

1. Lean Protein
one serving

2. Grains
generous amount

3. Healthy Fat
choose wisely

4. Colorful Fruit or Veggie
be creative

Formula:

WHAT TO EAT?

1. Lean Protein
one serving

=STRENGTH

2. Grains
generous amount

=ENERGY

3. Healthy Fat
choose wisely

*=HEALTH &
PROTECTION*

4. Colorful Fruit or Veggie
be creative

SAMPLES

1. Lean Protein	2. Grain	3. Healthy Fat	4. Fruit/Veg
Eggs, milk	Cereal, toast	Peanut butter	Banana, OJ
Egg McMuffin	Oatmeal	Nuts	Dried fruit, smoothie
Turkey/ham/cheese , chocolate milk	Sub roll, baked chips, cookie	(in cookie)	apples
Chicken breast	Rice or potatoes	Salad dressing- oil based	salad
Beef, bean, chicken	Taco shell or tortillas	Guacamole, cheese	Tomatoes, juice

**WHAT'S THE
PROBLEM WITH
HIGH FAT FOOD
DURING CAMP?**

PROTEIN SCORECARD FOR ATHLETES

AIM FOR 1 GRAM
PER POUND YOU
WEIGH.

~10 grams protein in:

- 1 ounce meat or equivalent
- 2 eggs
- 1 cup milk/yogurt or 1 ounce cheese
- 2/3 cup beans
- 1/3 cup nuts or 2T peanut butter



FUEL WORKOUTS

- Athletes need carbs and sometimes protein within 1 hour of starting exercise.
Have a snack daily!
- Athletes burn >30-60grams of carbs every hour DURING exercise.
Take in sports drinks or other carbs during practice/games.

PRE-GAME MEAL

- 2/3 normal size
- 4ish hours before game
 - Foundation of 30-50g lean protein
 - **+** Low fiber, low glycemic index carbs
 - *low fat, not fried, not spicy, nothing new, nothing risky*

How do the following stack up to recommendations?

- Pasta dinner
- Giant steak and baked potato
- Fried chicken
- Pancakes, eggs, bacon
- Subway subs

GAME-FUELING

- 1 hour pregame top-off fuel
 - Individual tolerance primary determinant
- Half-time
- Does it really all start the night before?
- Can it all happen with a tight budget?

RECOVER FAST

- Practice good recovery nutrition after

EVERY
SINGLE
WORKOUT

POST- WORKOUT RECOVERY WINDOW

*3 R's:
Repair,
Refuel,
Rehydrate*

Protein
+
Carbs
+
Fluids

Within 30 minutes of
exercise completion

EXAMPLES

- Chocolate milk
- Recovery Shake
- Protein bar
- Yogurt & cereal
- Smoothie with protein or yogurt

Also ok:

- PBJ & Gatorade or juice
- Trail mix & Gatorade or juice
- Cheese /crackers & Gatorade or juice

RECOVER FAST

- Don't forget about the impact of-
 - Consistency
 - Sleep
 - Stress management

STAY HEALTHY

1. Show up for practice well-fueled.

Fatigue greatly increases injury risk.

STAY HEALTHY

2. Wash your hands.

Prevent spreading of
germs.

STAY HEALTHY

3. Stay well-hydrated.

Dehydration-
Heat illness
Muscle cramping
Heat stroke
Soft tissue injury
Concussion



Mild dehydration matters!

*Decreased speed, strength,
power, stamina, focus*

HYDRATION

- Drink all day long.
 - Carry a fluid bottle.
 - Never feel thirsty. If you're thirsty, you're already in beginning stages of dehydration.
 - Pee clear or pale yellow urine at least every couple of hours.

HYDRATION

- Drink 16 ounces of fluid 2 hours before practice.
- Drink another 8 to 16 ounces 15 minutes before practice.
- During practice, drink Gatorade during every fluid break.
- Drink enough to lose less than 1% body weight during practice. Always weigh yourself before and after practice to know how much sweat you're losing...and how well you're hydrating.

HYDRATION

- After practice, drink 24oz (3 cups) for every pound that you lost.
- During camp,
NO CAFFEINE.
(Soda, tea, energy drinks)
- Before the next practice, get within 2pounds of your weight the previous practice. If you're not, keep drinking!

ARE YOU A CRAMPER?

- Drink enough fluids
- Use Gatorade instead of water all day.
- Add Gatorlytes or salt to Gatorade.
- Add salts to food and eat more high sodium foods.
- Eat more potassium , calcium, and magnesium (dairy, nuts, fruits, veggies, whole grain cereal)
- stretch

AT EXTRA RISK FOR DEHYDRATION /HEAT ILLNESS

- sickle cell trait
- fever or illness
- diarrhea or vomiting
- certain medications or supplements
- deconditioned or very out of shape
- obese or significantly heavier than typical
- high sweat rate

EXTRA RESOURCES

GSSI Diet Analysis Tool

<http://data.gssiweb.com/data.html#home>

Useful Calculators

American College of Lifestyle Medicine

<http://lifestylemedicine.org/>

Under Education, select Calculators

Lots of free fact sheets:

<http://scandpg.org>

<http://www.autmillennium.org.nz/services/nutrition/nutrition-advice-sheets/>

<http://www.scandpg.org/sports-nutrition/sports-nutrition-professional-resources/>