**XC Nutrition & Fueling**

**Body Types-**

* Ectomorph: Lean and long, ectomorphs have difficulty building muscle
* Endomorph: Big with high body fat, often pear-shaped, endomorphs have a tendency to store body fat
* Mesomorph: Muscular and well-built, mesomorphs have a high metabolism and responsive muscle cells.

*Although there are three distinct body types, it’s important to remember these are not set in stone. Also, most people share the characteristics of two body types (i.e.- mix of mesomorph and endomorph, where you gain muscle quickly but may also put on weight if you relax your diet).*

**Eat to Fuel-**

Sedentary high school females need about 1,900 to 2,000 calories per day. Female athletes need about 500 more (2,500) OR about 70 calories more per mile of running.

*Common myths lead female runners to believe that thin/low body fat= fast. This is not the case! You need to eat enough to fuel your body in order to maintain and/or improve. So how can you be sure you’re getting enough?*

**Tips:**

* Fuel Up: Eat breakfast. Eat a morning snack. Eat lunch. Eat a post-run snack. Eat dinner.
* Go halves: Eat an extra half serving of healthy foods.
* Eat nightly lightly: Your post-run fuel should make up 25-30% of your daily intake.
* Energy and Regularity: Interruptions in menstruation or fatigue from standard workouts are red flags that you’re not fueling your body enough.
* Muscle vs. Fat: Girls who run distance tend to not have a lot of muscle (unlike their male counterparts). Therefore, you can’t tell by looking at a girl if she is thin due to lack of muscle or because she has no fat. A.K.A., you can’t tell if someone is fast by judging their body type. A female athlete may appear healthy but still be imperiled by not meeting her caloric-energy needs. This happens when a female athlete doesn’t eat enough during the day and puts her body into “starvation” mode. Her body then responds by pumping what energy (food) it is getting into fat for long-term storage. Thus, she has fat, not fuel.

**Underfueling-**

Underfueling can lead to Relative Energy Deficiency in Sport (RED-S). This is a term used to describe the health and performance issues that arise when athletes don’t eat enough to cover both training and daily life activities. Basically, your body doesn’t have enough calories “left over” from daily functions (i.e. digestion, breathing, walking from class to class) to train effectively.

Don’t underestimate what your body requires in order to function optimally in your daily life AND recover from training sessions. Possible signs of RED-S include prolonged low body fat, substantial weight loss, low energy, stress fractures, and reduced bone density (which can lead to an array of further injuries).

Possible outcomes of RED-S include decreased endurance performance, increased injury risk, decreased response to training, decreased glycogen stores (a.k.a. where you get your energy from), decreased muscle strength, depression, irritability, decreased concentration and coordination, and impaired judgment.

*Specifically in females*, it can lead to amenorrhea (intense exercise/not enough calories decreases hormones and can stop your menstrual cycle) and osteoporosis (caused by low estrogen and poor nutrition).

**Example Meal Plans-**

Breakfast *(eat within 30 minutes of waking up)*

Option 1: One cup of iron-fortified cereal with milk, 1 banana, 1 slice of

whole grain peanut butter toast.

Option 2: One cup of iron-fortified cereal with milk or yogurt, 1 slice of whole

grain toast, and 1 piece of fruit.

Option 3: One bagel with peanut butter and one cup of a sports drink.

Option 4: Two pieces of whole grain toast or bread, 1 ounce of lean meat or

cheese, and 1 piece of fruit.

Option 5: Overnight oats

Option 6: Omelet with peppers, onions, and tomatoes, whole-grain toast with

jam.

Lunch

Option 1: Turkey sandwich on whole grain bread with cheese, cottage

cheese, cantaloupe

Option 2: Whole wheat pasta with tomato sauce and grilled chicken

Option 3: Sub sandwich- build your own, get some veggies on there!

Option 4: Spinach salad with grilled chicken, cucumbers, carrots, cheese,

balsamic vinaigrette, 1 peach, 1 whole-wheat roll.

Option 5: Turkey wrap with lettuce, tomato, hummus, and cheese, 1-cup

strawberries and ¼ cup almonds.

Option 6: Tuna salad sandwich on two sliced whole grain bread with mayo or

Greek yogurt, chopped celery, and lettuce with 1 pear and a yogurt.

Post-Practice/Workout Snack *(eat within 30 minutes of workout)*

Option 1: Cottage cheese with fruit

Option 2: Apple (with peanut butter), orange (great for post-hill workouts),

banana

Option 3: Protein Bar

Option 4: Chocolate Milk

Option 5: Trail mix or nuts and seeds

Option 6: Protein shake and almonds

Dinner

Option 1: Cheese ravioli with meat, broccoli

Option 2: Salmon, brown rice, and asparagus/green beans/broccoli/spinach salad

Option 3: Burrito with beans, lean ground beef, avocado, cheese, lettuce, on a

whole-wheat tortilla

Option 4: Grilled chicken, baked sweet potato, zucchini, and a peach

Option 5: Pork roast, applesauce, corn on the cob with butter, and steamed

carrots.

Option 6: Quesadilla with black beans on two whole-wheat tortillas, salsa,

and a spinach and cucumber salad.

Snacks (AM/Afternoon/PM)

Option 1: (Blueberry) yogurt with fruit

Option 2: Hummus and wheat crackers or veggies

Option 3: English muffin pizzas

Option 4: Edamame

Option 5: Dried apricots, plums, raisins (other dried fruit is good too, just

watch out for sugar, and know how your body responds to fiber)

Option 6: Guacamole and corn chips

Tips

\*Nutritious, Calorie-Dense Foods: Chickpeas (throw on top of salads), avocados, quinoa (eat it like rice and cook with chicken broth for flavor), popcorn with butter and salt (not from the bag, make sure its air popped), peanuts, macadamia nuts, dark chocolate, dried fruit, and banana chips.

*Try and incorporate these into your diet.*

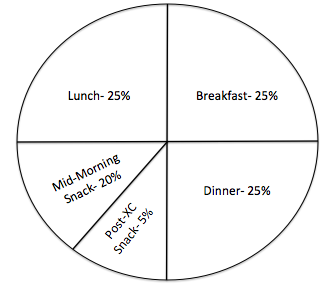
\*Make sure your bread products are 100% whole grain or 100% whole whea

\*Avoid white rice (it’s the white bread of the rice world), use brown, quinoa, or other grains instead

**Daily Intake Breakdown by Percentage-**

70-75% of your daily nutrition intake should be prior to XC practice/workout.

25-30% should be post practice/workout.



**Resources-**

Underfueling:

<http://kidshealth.org/en/teens/triad.html>

<http://globalsportsdevelopment.org/female-athlete-triad/>

<https://www.nationaleatingdisorders.org>

Online Screening for Eating Disorders:

<http://www.mybodyscreening.org>

Meal Plan/Caloric Intake:

<http://healthyliving.azcentral.com/good-diet-track-crosscountry-runner-2625.html>

<https://www.choosemyplate.gov/supertracker-other-tools>