



VOLLEYBALL NUTRITION

FUELING FOR SUCCESS

Sports Nutrition Basics:

Eat Early

- NEVER SKIP BREAKFAST

Eat Often

- 5-7 Times Per Day
- Breakfast-Snack-Lunch-Pre Workout Snack-Post Workout Snack-Dinner-Snack

Eat Well

- 80/20 Rule
- Carbohydrate and Protein Pairings

Macros

Carbohydrate

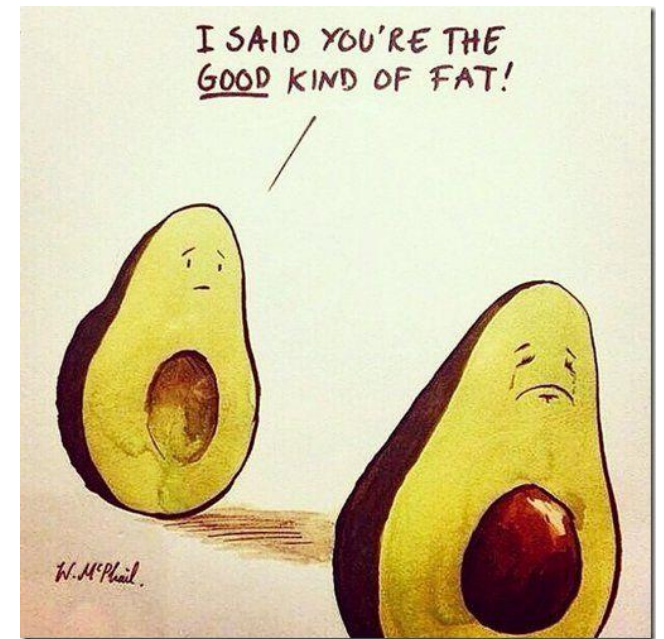
- Primary Source of Energy
- Two Types:
 - Simple – Sugars (digest VERY quickly)
 - Best Time to Eat? Immediately Pre/Post Workout
 - Fruit, Fruit Juice, Gatorade, Chews (Worst Choices – candy, sweets, sugar cereals)
 - Complex – Starches (longer digestion than simple – more sustained energy)
 - Best Time to Eat? At each meal and snack for long lasting energy
 - Oatmeal, Pasta, Potatoes, Sweet Potatoes, Rice, Bread

Protein

- Helps repair/build muscle along with many other functions
- Digests relatively slowly – stabilizes blood sugar
- Best Time to Eat? At each meal and snack (except pre-workout snack)
- Lean meats (not fried, trimmed of fat), Eggs/Egg Whites, Low fat/fat free dairy products, Fish, whey protein powder

Fat

- Primary source of energy when body is at rest or during endurance exercise, aids in nutrient absorption – TAKES A LONG TIME TO DIGEST
- Saturated fats – “Bad Fats” – fried foods, pastries/baked goods, creamy foods i.e. Alfredo Sauce, mayo, sour cream
- Unsaturated fats – “Good Fats” – peanut/almond butter, nuts, avocado, olive oil
- Best time to eat?? In Small servings throughout the day (avoid in pre-training meal). Remember you get dietary fats through most protein sources



Carbohydrates – Best Choices

-Why grains?

- Rich in carbohydrates, B vitamins, give lots of energy
- Should be the **largest** part of your diet

-Best choices

- Wheat bread, oat bread, wheat bagels, wheat English muffins, wheat tortillas
- Cereals: Total, Shredded Wheat, Cheerios, Granola
- Oatmeal, Cream of Wheat
- Brown Rice
- Wheat or Multi-grain Pasta
- Wheat crackers/whole grain granola bars



10 Worst Children's Cereals

Based on percent sugar by weight

1	Kellogg's Honey Smacks	55.6%
2	Post Golden Crisp	51.9%
3	Kellogg's Froot Loops Marshmallow	48.3%
4	Quaker Oats Cap'n Crunch's OOPS! All Berries	46.9%
5	Quaker Oats Cap'n Crunch Original	44.4%
6	Quaker Oats Oh!s	44.4%
7	Kellogg's Smorz	43.3%
8	Kellogg's Apple Jacks	42.9%
9	Quaker Oats Cap'n Crunch's Crunch Berries	42.3%
10	Kellogg's Froot Loops Original	41.4%

Source: EWG analysis of nutrition labels for 84 children's cereals.

Carbohydrates: Best Choices

EAT THIS.....

- Whole Wheat Bread/Bagel Thin
- Oatmeal
- Brown Rice
- Baked Chips
- Sweet Potato/Baked Potato
- Wheat/Whole Grain Crackers
- Whole Grain Cereals

NOT THAT!!!!!!

- White Bread
- Muffins/Breakfast Pastry
- Belgian Waffles/Pancakes
- Regular Chips
- Pasta w/Cream Sauce
- Sweets – cookies, candy, etc
- Children's Cereals

Protein – Best Choices

-Purpose: Build/repair muscles, hair/nail growth, boosts immunity, RBC production

-Lean meat

- Chicken, turkey, lean ham, lean red meat, fish, tuna, turkey bacon and turkey sausage
- Take the skin off of meat

-Eggs and egg whites

-Low-fat dairy products

- Milk, cheese, yogurt, cottage cheese

-Whey protein powders and smoothies/shakes made with it...whey protein absorbs very quickly – best choice for post workout

-Nuts, seeds, peanut butter have some protein



Protein – Best Choices

EAT THIS.....

- Eggs/Egg Whites
- Fat Free/Low Fat Dairy (milk, yogurt, cheese)
- Low Fat Greek Yogurt
- Chicken Breast
- Lean beef (93/7 ground, lean steaks trimmed of fat)
- Fish (tuna, salmon, white fish) – grilled/baked
- Turkey

NOT THAT!!!!

- Fried eggs
- Full fat dairy
- Yogurt with lots of added sugar
- Dark meat chicken, any fried chicken
- Fatty steaks
- Fried Fish
- Bacon

Fats

-Saturated Fats: “Bad Fats”

- Fried foods, pastries/baked goods, creamy foods

-Unsaturated Fats: “Good Fats”

- Peanut butter, almond butter, nuts, seeds
- Olive oil and Canola Oil
- Avocado
- Flaxseed or flaxseed oil
 - Can buy milled, as oil, or in breads and cereals
- Fats in fish like salmon

-Remember that you get some fat in dairy products, meats, whole eggs, and energy bars/shakes



Fats – Best Choices

EAT THIS.....

- Avocado (guac)
- Nuts
- Peanut/Almond Butter
- Olive Oil
- Reduced fat mayo
- Reduced fat salad dressings

NOT THAT!!!

- Full Fat sour Cream
- Full Fat mayo
- Full fat salad dressings
- Creamy white sauces (alfredo)
- PROCESSED FOODS (chips, pastries, sweets, freezer “meals”) typically have tons of saturated fats!!!

GENERAL TIPS

Start The Day With Breakfast!!

Cheap, Quick On-the Go Breakfasts

- Whole wheat bagel w/2 spoons peanut butter, banana & 1 bottle 2% milk
- Energy bar, banana & 1 bottle 2% milk
- Peanut butter & jelly sandwich on wheat bread, Yoplait 2x Protein Yogurt and 8 oz low-fat milk
- Peanut butter crackers, 1 cup trail mix, 1 bottle 2% milk
- Smoothie w/fruit, milk & whey protein powder
- Nature Valley Granola bar & add peanut butter on top, string cheese, 1 bottle 2% milk
- Quaker Oatmeal On-the-Go bar, Individual bag of nuts, 1 bottle 2% chocolate milk



REMEMBER TO PAIR CARBOHYDRATES AND PROTEINS TO STABILIZE BLOOD SUGAR LEVELS

Eat Fueling Snacks vs. Junk Food! (CARB + PROTEIN!!)

- Energy bar
- Individual bag trail mix
- Beef jerky and a banana
- Granola bar and nuts
- Whole wheat crackers and string cheese
- Yoplait 2x Protein Yogurt and fruit
- Hummus and whole wheat pita bread/pita chips
- Apple and peanut butter
- Popcorn and string cheese
- Peanut butter bites
 - Stir ½ cup peanut butter and ¼ cup honey together
 - Stir in 1 cup oats and ½ cup whey protein powder
 - Roll into 20-22 balls and refrigerate
 - Approx 70 calories, 7 carb, 2 fiber, 3 protein, 3 fat each



Hydrate!!



Hydration - Cramping

-Typical causes:

- Fatigue – you didn't go hard in practice and now its gameday....Oops
- Dehydration due to loss of electrolytes

-Foods to improve/prevent cramping

- SALT YOUR FOOD
- EAT FOODS HIGH IN SODIUM (SALT)
- EAT FOODS HIGH IN POTASSIUM
 - BANANAS, AVOCADO
- SPORTS DRINKS
 - Gatorade, Powerade, Pedialyte



TIMING!!!

Pre-Exercise Eating

-How much time should I allow for digestion of food?

- Allow 3-4 hours for large meal
 - Meat, pasta, vegetables, salad, roll
- Allow 2-3 hours for smaller meal
 - Sandwich, crackers/baked chips, fruit
- Allow 1-2 hours for a liquid meal to digest
 - Smoothie, protein drink/shake

-Carbohydrate snack 30 minutes before exercise provides “energy burst” for performance

- 50-70% carbohydrate, low-moderate protein
- Gatorade, Gatorade chews, granola bar, banana, goldfish

Morning Training

-Lots of carbohydrate; more bland foods

-Good choices for early morning:

- Shake with carbohydrates & some protein
 - Smoothie made with whey protein powder, fruit, milk/water
- Energy bar like Balance, Zone, Clif, Go Lean Crunchy, Luna, Power Bar Harvest/Triple Threat, Gatorade
- Low-fat granola bar like Kashi crunchy/chewy, Nature Valley, Quaker Oatmeal Square w/PB
- Fruit (i.e. banana, nothing very acidic) w/PB
- Plain bagel or dry cereal/granola mix
- Peanut butter on toast, bagel, banana, or granola bar

During Workouts

-Carbohydrate-rich foods/drinks

- Carbohydrates digest the quickest & thus provide energy faster!

-Carbohydrate need

- 30-60 grams of carbohydrate per hour after the first hour of exercise
 - Banana = ~30g carb
 - 20 oz Gatorade = ~30g carb
 - Granola bar = ~30g carbs (varies)
 - Pack of Gatorade gumies = ~30g carbs

-Fluid need – match sweat losses

- Consume 5-10 oz fluid every 15-20 minutes
- Water and sports drink to replace electrolytes

-Avoid fat, protein, & fiber when exercising... slows digestion & increases time in which energy is available to be used



Mid-Practice/Meet Snacks

-Carbohydrates, some protein, little fat

- Energy bars
- Granola bars
- Peanut butter jelly sandwich and fruits
- Peanut butter crackers
- Dry cereal/trail mix
- Sports drink with snack
- Gatorade Energy Chews for quick energy

-AFTER SET 2 IF A SPLIT, AFTER SET 3 IF 2-1

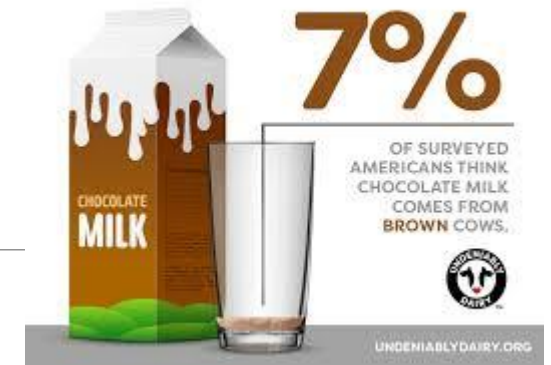


Post-Workout Nutrition

The three R's to post-workout recovery:

- **Replenish** carbohydrate burned during exercise (simple carbs best)
- **Repair** damage done to lean muscle mass (protein)
- **Rehydrate** the body
- 2 Hour Window:
 - 0-45 min – need at least a snack (carb/protein)
 - 45 min – 2 hours – EAT A MEAL

SUMMARY: 16-20 OZ LOW FAT CHOCOLATE MILK AFTER PRACTICE, THEN EAT!!



Sample Day – Morning Workout

-Small pre-workout snack 5:30-6:30am

- Hydrate during workout

-Breakfast – within 30 minutes after workout

- If going to be longer, drink chocolate milk or small shake

-Mid-morning snack – 10:00am

-Lunch – 11:30am-1:00 pm

-Afternoon snack – 3:30-4:30pm

-Dinner – 6:00-7:30 pm

-Evening snack – 9:00 pm

Sample Day – Afternoon Workout

- Breakfast – 7:00-8:30 am
- Mid-morning snack – 10:00am
- Lunch – 11:30am-1:00 pm
- Small pre-workout snack – 3:00-4:00pm
- Hydrate during workout
- Post-workout snack – within 30 minutes
- Dinner – 6:00-7:30 pm
- Evening snack – 9:00 pm

Sample 2-A-Day Practice – or Lift Days

-6:00am snack

- Granola bar, energy bar, banana, baggie of cereal

-Post-workout snack: chocolate milk or other carb/protein pairing snack

-Breakfast within 45 min-1 hour after practice

-Lunch -Afternoon (pre-workout) snack around 2pm-ish

-Workout: Consuming water & Gatorade

- Might want to consume energy bar or granola bar in the middle of practice if possible

-Dinner within 45 min-1 hour after practice

-Evening snack approximately 3 hours after dinner

BODY COMPOSITION MANAGEMENT

Weight Gain Tips

- Eat 6-7 meals/day
- Do not skip breakfast
 - Can eat and go back to bed if they have to
- Drink milk and/or juice with meals
- Eat a 30-min pre-exercise snack, every hour during exercise, and immediately post-exercise
- Eat a high-calorie meal or shake right before bed (PBJ!!)
- Make high-calorie food exchanges
- Consistency!!! IT'S A JOB, NOT A HOBBY

High Calorie Exchanges:

Instead of:

Bread

Toast

Cereal

Butter or jelly

Candy

Granola Bar

Skim milk

Steamed vegetables

Water

Water

Choose:

Bagel

Waffles

Granola

Peanut butter

Nuts

Trail Mix

2% milk

Sautéed vegetables

Milk/juice at meals

Sports drink at practice

Weight Gain Food Ideas

- Add 2 Tbs. peanut butter to oatmeal
- Add peanut butter & honey to waffles, pancakes, toast, & bagels
- Mix high-calorie protein powder with 2% milk
- Drink & make shakes with low-fat chocolate milk
- Eat a PBJ sandwich as a “dessert” post meals

Weight Loss/Leaning Out Tips

-Eat small meals often...5-7 times/day

- Keeps blood sugar stable to avoid binge eating
- Don't skip meals

-80/20 rule

-More carbs morning/daytime, fewer at night

-Add bulk to meals by eating vegetables

HELPFUL CHARTS/INFO

Mix and Match Snack Ideas

Carbohydrate	Protein
1 cup of mixed berries	6oz. low-fat Greek yogurt
1 piece of fresh fruit (apple, banana, orange, peaches, grapefruit, etc.)	2% string cheese
1 serving whole-wheat crackers	¼ cup hummus
1 slice whole-wheat bread/ pita pocket	1-2 tablespoons nut butters (peanut butter, almond butter)
1 granola bar (Nature Valley, Kashi, chewy or crunchy)	2 tablespoons almonds
2-4 graham crackers	1 serving pistachios
1 serving popcorn (light, SmartPop)	1-2 oz. turkey roll up
1 Kashi granola bar	8-12 oz. low-fat chocolate milk
1 That's It. Fruit Bar	½ cup low-fat cottage cheese
1 serving pretzels	2 Chobani Greek yogurt tubes
¼ cup banana chips, apple chips, or dried fruit	1 slice 2% cheese
1 serving applesauce (no added sugar)	1 egg
1 cup grapes	Light tuna in water (snack pack)

Mix and Match Snack Ideas – Lactose Intolerance

Carbohydrate	Protein
1 cup of mixed berries	6oz. lactose-free yogurt or soy yogurt
1 piece of fresh fruit (apple, banana, orange, peaches, grapefruit, etc.)	2% low-fat string cheese (if tolerated well)
1 serving whole wheat crackers	1/4 cup hummus
1 whole wheat pita pocket	1-2 tablespoons nut butters (peanut butter, almond butter)
1 Kashi granola bar	2 tablespoons of almonds
2-4 graham crackers	1/2 cup of pistachios (with shells)
3 cups popcorn (light, SmartPop)	1-2 oz. turkey roll up
1 serving pretzels	8-12oz. lactose-free skim milk
1 That's It. Fruit Bar	8-12oz. lactose-free chocolate milk
1 serving applesauce	8-12oz. cup of chocolate soy milk
1/4 cup banana chips, apple chips, or dried fruit	8-12oz. cup of soy milk
1/2 whole-wheat pita pocket	1 egg
1 cup grapes	2 Chobani yogurt tubes

BUILD A PERFORMANCE- ENHANCING PLATE

Properly fueling can provide an edge over other athletes who don't focus on their nutrition.

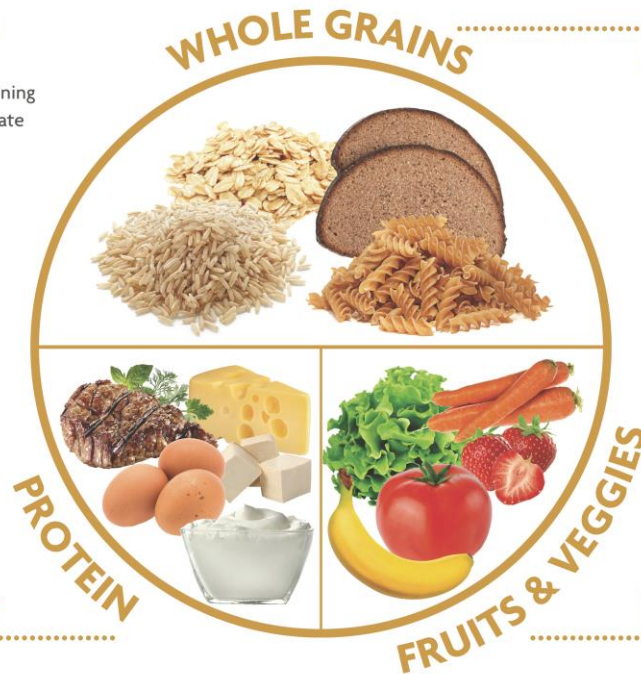
- Calorie and nutrient needs vary depending upon intensity and phase of training.
- This plate represents a hard training day. On light training days, substitute 1/4 plate of whole grains with 1/4 plate of fruits and vegetables.



HEALTHY FATS

Moderate amounts of healthy fats provide a concentrated **energy** source and **essential fatty acids**.

[nuts, seeds, oil and fatty fish]



Carbohydrates fuel muscles and are the quickest source of **energy** for athletes.

FLUIDS

Stay **hydrated** by drinking fluids at mealtime and throughout the day.

[milk, water, 100% fruit juice]

Many fruits and vegetables provide **nutrients** that have been linked to **reduced oxidative damage** from hard training.



For advice on customizing a nutrition plan, consult a sports dietitian.

LET'S
BUILD
SOME
PLATES!!

