Client Name: Date:

RDN/NDTR: Email: Phone:

Fuel for Combat Arts Athletes

Taekwondo, judo, boxing, wrestling, and mixed martial arts (MMA) demand substantial strength and stamina. Nutrition needs depend on your sport, age, sex, weight class, training and competition level, current training phase, and time until an official weigh-in.

Advice tailored to your weight, weight class, and weigh-in schedule may support competitive success. Losing weight to qualify for a class must be done safely; extreme approaches can harm health and performance. Before trying to change your weight, discuss planned fueling changes with your sports registered dietitian nutritionist (RDN), health care provider, parents or caregivers, and coach.

Tips

Balance Your Diet

During general training, carbohydrate should form most of your diet, followed by protein and fat. Your sports RDN can explain the amounts suited to you.

- Select quality carbohydrate foods.
  - Choices include whole grain breads and cereals, pasta, rice, starchy vegetables, dried or whole fruit, and low-fat yogurt and milk.
- Include protein foods for muscle growth, recovery, and a lasting feeling of fullness. More protein than recommended will neither speed muscle growth nor add muscle mass. It will instead supply extra calories toward your daily energy needs.
  - Options include lean meat, eggs, soy foods, yogurt, milk, beans, and nuts.
- Include healthy fats to provide enough fuel for training and help absorb fat-soluble vitamins, including A, D, E, and K.
  - Prioritize plant sources such as olive oil, nuts, and avocado.
  - Enjoy other fat sources, such as cheese and salad dressings, in moderation. Fat has more calories than carbohydrate or protein.

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Losing Weight

If weight loss is a goal, plan your nutrition carefully with your sports RDN.

- Choose your weight class as early as possible in the competitive season.
  - Selecting a weight class may involve reviewing your usual weight, body composition, time before fights or matches, and, for young athletes, growth pattern.
  - Follow your sport's descent plan. Your sports RDN can develop one with you if your sport has no descent plan.
- Disordered eating risk is higher in sports with weight requirements. These eating patterns can progress to eating disorders. Work with a sports RDN to set a suitable weight goal and fuel your body throughout the season.
  - Tell your sports RDN about frequent thoughts of restricting food, regularly denying yourself fuel, or cutting out food groups, occasionally or often. Also seek support from a medical team that includes a therapist and medical provider.

Hydration

Sweat losses vary widely between technical drills and intense conditioning in combat arts. Hydration supports both health and performance. Exercise fluid needs depend on sweat rate, training status, temperature, humidity, intensity, and duration. Your sports RDN will set hydration goals around these individual factors.

General Hydration Tips:

- Let thirst guide drinking and watch urine frequency and color. You are likely getting enough fluid if you urinate often throughout the day and urine is light straw-colored. Clear urine can suggest overhydration.
- Before training: Have about 16 ounces of water 2 to 3 hours before starting. Sodium-containing drinks or salty foods encourage thirst and help the body retain fluid.
- During training: Aim to prevent excessive dehydration and keep the body from overheating.
  - For most athletes, 16-24 ounces of fluid per training hour is usually enough.
  - Performance can decline when sweat losses and fluid intake together cause a weight loss of 2% or more of starting body weight in a temperature-controlled setting.
  - Another option is an individual hydration plan based on sweat rate, developed with your sports RDN.
- After training: Replace 125% to 150% of final fluid losses shown by weight loss (24-32 ounces of fluid per pound lost). Include salty foods and electrolytes.

eat right. SNCM Sports Nutrition Care Manual®

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Food Before, During, and After Training

This table gives examples of fuel timing around training. A separate table in this handout provides specific advice on eating after weigh-in.

Your sports RDN can guide food amounts and timing to support your best performance.

When to Fuel	Suggested Fuel
	Before Training
3-4 hours before training	Eating 3-4 hours beforehand allows time to digest. Choose a meal high in carbohydrate, low in fat, and moderate in protein. If you follow a descent plan, your sports RDN can help set the right carbohydrate amount. ■ 6-inch grilled tofu and vegetable sandwich, 1 ounce pretzels, 1 piece of fruit, and 1 cup soy milk OR ■ 1 grilled chicken wrap in a flour tortilla, 1 ounce tortilla chips, 1 cup orange slices, and 1 cup 2% milk
1-2 hours before training	Choose a snack with easy-to-digest carbohydrate, little fat, and moderate protein 1-2 hours before training, especially if you could not eat earlier. Larger snacks are generally easier to tolerate when you have 2 hours. ■ 1 bagel with 1 tablespoon peanut butter OR ■ 1 granola bar providing 30-40 grams carbohydrate and 8-10 grams protein OR ■ 5-10 crackers plus 1 ounce cheese OR ■ 1 cup cereal, 1 cup 2% milk or soy milk, and 1 banana OR ■ ¾ cup yogurt with ¼ cup granola and ½ cup fruit OR ■ 12-16 ounces fruit smoothie containing no more than 8 grams protein OR ■ 8-12 ounces 2% chocolate milk plus 1 banana OR ■ 2 hard-boiled eggs and a low-protein/high-carbohydrate granola bar
Under 1 hour before training	Choose carbohydrate foods or drinks that digest quickly and easily. ■ Sports drinks (drink as tolerated; no set amount is suggested) OR ■ 1 piece of fruit, such as a banana or orange OR ■ Other sports foods, including energy gels and sport beans
	During Training
Events lasting over 1 hour	During high-intensity training, aim for 30-60 grams carbohydrate per hour. Extra fuel may be unnecessary for low-intensity cardiovascular or technical sessions lasting an hour or less. ■ Sports drinks or sports foods such as gel packets, gum packets, energy chews, or sport beans OR ■ 1 piece of fruit OR ■ 1 cup pretzels

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When to Fuel	Suggested Fuel
	After Training
Have a snack if your next post-training meal is more than 2 hours away. **If you will eat within 2 hours after training, have a complete, balanced meal to meet recovery needs.**	Have a snack rich in carbohydrate and protein. Protein supports muscle repair; carbohydrate replaces glycogen, the muscle carbohydrate used in training. Aim for about 15 to 30 grams protein and 1.0 to 1.2 grams carbohydrate per kilogram of body weight. Your sports RDN can help choose the right amounts. ■ 6-inch turkey sub OR ■ 1 grilled chicken sandwich OR ■ 12-16 ounces 2% chocolate milk or soy milk OR ■ 1 cup cottage cheese plus 1 piece of fruit OR ■ 10-15 crackers with 1-2 ounces cheese

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Food and Drink After Weigh-Ins

Weigh-in timing varies by sport: 2 hours before competition for boxing, 2 hours or less for collegiate wrestling, and the previous day or earlier for MMA and taekwondo. Time between weigh-in and competition shapes both pre-match weight-loss and post-weigh-in recovery strategies. Ask a sports RDN about safe, effective adjustments to carbohydrate and hydration in the days before weigh-in.

After weigh-in, prioritize restoring fluid and muscle glycogen, or stored carbohydrate, for optimal performance. Choose foods and drinks that limit stomach or intestinal discomfort during a match or fight. Practice your post-weigh-in nutrition plan before major events so you can adjust it in advance.

Use the following general nutrition guidance after weigh-in and during and after competition.

When to Fuel	Suggested Fuel
	Fuel After Weigh-In
Immediately after weigh-in	▪ Have 20-32 ounces of fluid. ▪ Use an oral rehydration solution with more sodium and electrolytes to improve fluid retention.
Within 1 hour after weigh-in	▪ Continue drinking in smaller sips to help retain fluid. ▪ Choose meals or snacks high in carbohydrate and sodium and low in fat and fiber, for example, smoothies, deli sandwiches, soup, oatmeal with fruit, eggs with potatoes, or fruit. ▪ Before competition, eat familiar foods because you may not tolerate a new food.
With weigh-in 2 hours before competition	▪ Add snacks and fluids as tolerated, such as dried fruit, granola bars, sports gels, gummies, or sports drinks.
With weigh-in at least 24 hours before competition	▪ Choose meals high in carbohydrate and sodium, moderate in protein, and low in fat and fiber. ▪ The night before competing: Add snacks and drinks as tolerated, high in carbohydrate, low in fat and fiber.
	Fuel During and After Competition
Between matches	▪ Choose easy-to-digest carbohydrate-rich foods and drinks, such as sports drinks, fruit, or gels, to help spare muscle glycogen and support recovery later.
Immediately after meets and fights	▪ For multiday competitions: Check your weight to plan fueling so you can safely make weight again. Restore fluid and carbohydrate stores with snacks and a meal as soon as possible. For ideas, see After Training in the Food Before, During, and After Training table.
Between competitions	▪ Return to regular, balanced meals. Your sports RDN can work with you on an eating plan based on competition timing and the ideal weight range to maintain between events. The plan will depend on your sport's rules and schedule. Avoid large weight fluctuations.

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FAQs

Q: Are there special considerations for female fighters?

A: Many female athletes fall short of daily calorie and carbohydrate needs. Too little of either may cause hormone imbalances and missed periods. Fueling advice is consistent for male and female athletes: get enough calories each day, emphasize carbohydrate, and fuel before and after every training session.

Q: Which nutrition challenges affect heavyweight athletes?

A: A common challenge for heavyweight athletes is gaining and maintaining weight effectively and healthfully. Gradual gains of 2-4 pounds per month are suggested. More daily meals, extra sources of fat, and liquid calories can help meet your needs without excessive fullness. Ask your sports RDN for guidance if gaining or maintaining weight is difficult.

Notes:

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