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NUTRIENT TIMING FUELING GUIDE: Pre-Workout, During Workout & Post-Workout Nutrition

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Fueling your body with the right nutrients at the right times is essential to your athletic performance and meeting your weight and wellness goals. Optimal fueling before, during, and post exercise will enhance your energy, endurance, speed, strength, muscle recovery and development; it will also decrease your injury risk. Outlined below is a nutrient timing guide that can help elevate your training to the next level, and help you unleash

the energy and stamina you need to obtain the greatest returns on your workout. Whether your imperatives include lowering your running speed for a race, burning more calories during a spin class, increasing your endurance on a triathlon, or finally seeing real muscle mass growth and improvement from your weight training regimen—the combination of the right nutrition content and timing is a key element.



NUTRIENT TIMING FUELING GUIDE:

1. BREAKFAST FUELING

Even before an early morning workout, breakfast is an essential component in the optimal fueling process. Muscle glycogen stores, which provide carbohydrate fuel during exercise, get depleted overnight. Therefore, it needs to be restored after awakening to give your body energy for your workout and your daily energy needs. Although prioritizing breakfast may mean waking up an extra 30 minutes earlier than usual, it is a small expense relative to the gains of correct fueling. For example, eating a healthy breakfast within 1 hour of waking up can also increase your metabolism by 10 percent throughout the day. This can help run your body's caloric intake more efficiently and can help you manage

your weight. Ideally, breakfast should be a balance of low sugar, whole grains, fruit, and lean protein. It is also important to start your day with 16-20oz of water as soon as you awake.

Breakfast Meal Suggestions:

- Egg white omelet, whole grain toast, and green juice.
- Steel cut oatmeal with added blueberries, walnuts, and chia seeds.
- Cottage cheese with fresh fruit salad.
- Greek yogurt parfait with granola and sliced strawberries.
- Scrambled egg whites with a multigrain waffle and banana slices.
- Bowl of low sugar, whole grain cereal with fat free milk and an orange.
- Multigrain English muffin with natural peanut butter and an apple.

2. PRE-WORKOUT FUELING

PRE-WORKOUT MEAL:

3-4 hours prior to exercise is the ideal fueling timing for your workout. This meal should be nutritionally balanced and rich in carbohydrates, moderate in protein, and low in fat and fiber. To ensure this fueling time provides the leanest, most efficient energy for exercise, limit fried food, chips, pastries, full fat dairy, and high fat protein such as beef, lamb, and pork chops. Those foods should be avoided since they take longer and more energy for your body to digest and will impair your body's ability to use carbohydrates during your workout. It is also important to drink 16-32oz of water 3-4 hours prior to exercise.

Pre-Exercise Meal Suggestions:

- Turkey sandwich on whole grain bread with lettuce, tomato.
- Salad with tuna, chickpeas, dried cranberries, boiled egg whites, and cup of fruit.
- Grilled chicken, baked sweet potato, salad.
- Lean turkey burger on a wheat bun and side salad.
- Roasted fish with steamed vegetables, and quinoa.
- Stir-fry shrimp and mixed veggies over brown rice.
- Egg white omelet with veggies, multigrain toast, and fruit.
- Greek yogurt parfait with granola and berries.
- Whole grain bagel with peanut butter and a banana.

PRE-WORKOUT SNACK:

Eat a pre-workout snack 45 minutes to 1 hour before exercise.

Pre-workout meal suggestions





Pre-workout snack suggestions

The pre-workout snack should be rich in carbohydrates, contain some protein, and have minimal sugar and fat. View the food labels on your snacks and choose the items with a nutritional content of less than 7g of sugar and 5g of fat per serving. White processed flour, candy, cookies, soda, and other sugary foods should be avoided since those items can decrease athletic performance. Eating those foods before a workout could spike insulin levels resulting in an energy crash, and preventing your body from efficiently burning carbohydrates and fat for fuel.

Pre-Workout Snack Suggestions:

- Fresh fruit salad with low fat cottage cheese.
- Fat free yogurt and an apple.
- Small bowl of low sugar cereal.
- Banana with a spoonful of peanut butter.
- Low sugar granola bar.
- Protein bar.
- Individual bag of trail mix.

3. DURING WORKOUT FUELING

Aim for fluid, carbohydrates, and electrolytes. Drink water throughout your workout and for exercise greater than 60 minutes, include a sports drink with carbohydrates and the electrolytes, sodium and potassium. Carbohydrates during exercise will help delay early fatigue and lower the rate of perceived exertion. For exercise longer than 90 minutes, adding a serving of protein during the workout has been shown to be beneficial towards sustaining energy. Aim to drink 8oz of water and sports drinks every 15-20 minutes during a workout.

During workout Suggestions:

- Water
- Sports drink (for example: Gatorade and Propel)
- Protein bar
- Banana

4. POST-WORKOUT FUELING

This meal initiates muscle rebuilding and restoration of energy reserves. The post exercise nutrient timing is critical given there is a 30min window of opportunity for optimal post-exercise recovery. The main goals of post-workout nutrition are to rehydrate by replacing fluids and electrolytes, restore carbohydrates used during activity, and supply protein for muscle and tissue repair and growth. Optimal post-workout fueling can enhance performance in future exercise, stimulate growth of new muscle, and lower your risk of injury. As soon as possible after exercise, consume protein, carbohydrates, and water. The ideal dosing of nutrients post-workout are .2-.3 grams of protein per kilogram of body weight, .5-.6 grams of carbohydrate per kilogram of body weight, and 16-20oz of fluid. Therefore, drinking a recovery drink with 10g-30g of protein and 30-45g of carbohydrates within 30 minutes post-workout will provide the nutrients to help achieve the recovery goals. Then to further aid in the recovery process, eat a balanced, nutrient rich meal within 1 hour post-workout. This meal should include protein, vegetables, healthy fat, and carbohydrates in the form of vitamin and mineral rich fruits and whole grains.

During this time, alcohol should be avoided since it can promote bleeding and inhibit protein synthesis.

Immediately Post-Exercise Recovery Suggestions:

- Whey protein recovery shake.
- Low fat chocolate milk.
- Greek yogurt with fresh fruit.

Post-Exercise Meal Suggestions:

- Roasted turkey, baked sweet potato, kale salad with olive oil.
- Grilled chicken, steamed vegetables, and brown rice.
- Baked salmon, quinoa, salad, and lightly sautéed mixed vegetables.
- Lean sirloin steak, roasted mixed vegetables, and farro.
- Turkey meatballs, whole wheat pasta in a tomato sauce, broccoli, and side salad.
- Tofu and vegetable stir-fry over multigrain rice.
- Omelet with roasted root vegetables, salad, and fruit smoothie.



Post-exercise meal suggestion