

Eating for Training and Competition

For every physical activity, the body requires energy and the amount depends on the duration and type of activity. Energy is measured in Calories and is obtained from the body stores or the food we eat. Glycogen is the main source of fuel used by the muscles to enable you to undertake both aerobic and anaerobic exercise. If you train with low glycogen stores, you will feel constantly tired, training performance will be lower and you will be more prone to injury and illness.

Nutrient Balance:

- Proteins - essential to growth and repair of muscle and other body tissues
- Fats - one source of energy and important in relation to fat soluble vitamins
- Carbohydrates - main source of energy
- Minerals - those inorganic elements occurring in the body and which are critical to its normal functions
- Vitamins - water and fat soluble vitamins play important roles in many chemical processes in the body
- Water - essential to normal body function - as a vehicle for carrying other nutrients and because 60% of the human body is water
- Roughage - the fibrous indigestible portion of our diet essential to health of the digestive system

Key factors in your training diet

Each day have three main meals and two to three snacks. All meals should contain both carbohydrate and protein - 20 to 30 grams worth of protein with each main meal and 10 to 20 grams with each snack.

The amount of carbohydrate will vary greatly, mainly depending on your workload. It may be in the region of 40 to 60 grams for main meals and 20 to 30 grams for snacks. If you are training hard and possibly doing multiple daily sessions, the recovery meal is critical. Have 1gram of carbohydrate per kg of body weight and about 30 grams of protein. Have a drink (e.g. a recovery drink or a pint of skimmed milk) and a banana immediately post-training (this provides about 10 grams of protein and 30 grams of carbohydrate) followed within about 45 minutes with more substantial food such as beans on toast and tuna.

Always try to eat at least five pieces of fruit per day. Skimmed milk is a great protein food and provides critical minerals, such as calcium and phosphorous.

What should you eat in the week before a competition?

The week leading up to the event: Ensure a high-carbohydrate eating plan. Include more rice and pasta: they have more carbohydrate than potato. Include nutritious carbohydrate-based between-meal snacks. Eating the right balance of increased carbohydrate and less fat is the key.

The Pre-Event Meal: Eat this meal about 2-3 hours before competition (approximately 2-3 hours before warm-up). This meal should top-up your blood sugar levels after the night's rest. The meal does not have to be large, but should fill you up for the next few hours. High-carbohydrate foods are the best options: e.g., bread, cereals, fruit, pasta, rice, etc. Ensure that the meal is low fat, this speeds up digestion. Eat breakfast before you get to the pool, this leaves time for the carbo fuel to get in! Have a drink to optimize hydration: try sports drink, juice. Avoid the caffeine in cola drinks, coffee, chocolate, and tea - it is dehydrating.

In the week before a competition you should plan your meals around complex carbohydrate foods with a low glycaemic index to help boost your glycogen stores.

What should you eat on the day of competition?

Your pre-competition meal should be high in carbohydrate and low in fat, protein and fibre. Try to eat complex carbohydrates and avoid simple carbohydrates as they trigger the release of insulin that can soon make you feel tired. Suitable types of food include: breakfast cereals, porridge, bread, rolls, toast, fruit juice, fruit, rice cakes, plain crackers, boiled rice, potatoes, sweet potatoes, yams, boiled pasta, dried fruit, oatmeal biscuits, plain wholemeal biscuits, muffins and carbohydrate drinks.

Should you eat just before the competition starts?

Eating a small amount of carbohydrate food (approx. 50gms) with high glycaemic index just before exercise will help delay fatigue and improve endurance.

Should you eat or drink during competition?

Make sure you are well hydrated before the competition having your last drink about 15 to 20 minutes before the start. Drink at regular intervals (150 to 300ml), ideally every 15 minutes or whenever you have a break during competition. Do not wait until you feel thirsty as you will already be dehydrated. Consider a commercial carbohydrate drink (Sports Drinks) as this will also refuel your glycogen stores.

What should you eat after competition?

Consuming high GI carbohydrates, approximately 2g/kg of body weight, and 40g of protein within two hours after exercise speeds up the replenishment of glycogen stores and recovery time. It appears that the muscles are more receptive to and retaining carbohydrate during the two hours after exercise.

TOP 5 RECOVERY SNACKS FOR SWIMMERS

1. Almond or peanut butter and fruit jam sandwich on whole grain bread. If you are tired of peanut butter, try almond butter for a new taste. Almonds contain the antioxidant vitamin E and are a good source of protein. Mix the nut butter with quality carbs from the bread and fruit jam for a tasty recovery snack that needs no refrigeration.
2. Vanilla-flavored Greek yogurt with low-fat granola cereal and berries. Greek yogurt has more protein than regular yogurt (but slightly less calcium), and when paired with granola and berries it makes for a sweet treat that also provides healthy plant compounds (called phytonutrients) in berries.
3. A cup of instant oatmeal with low-fat milk. Oatmeal is a satisfying recovery snack that will keep you feeling full until your next meal, and if you have water and a microwave handy, it is hot and ready to eat in a few minutes. Pair it with a carton of low-fat milk to add protein.
4. Pita bread pocket stuffed with Albacore or light chunk tuna. The tuna in a pouch is less fishy tasting than canned tuna and comes in interesting flavors (try sundried tomato and olive oil or lemon pepper). Tuna is good source of the healthy "fish oils" called omega-3-fatty acids. Water packed tuna contains the heart healthy fats so you don't need to buy the oil packed tuna to get the health benefits.
5. Whole wheat mini-bagel with sliced turkey, cheddar cheese and sliced apple. I love mini-bagels; each one has 100 calories and 25 grams of carbohydrate making a good recovery carb. Turkey is a lean protein, and a slice of cheddar cheese provides calcium and loads of flavor. Apple slices add crunch and pairs well with the turkey and cheese. Hard cheeses, like cheddar, have less lactose (milk sugar) than other cheeses, so a good for those with mild lactose intolerance.

Consuming high GI carbohydrates (approximately 1gram per kg body) within 2 hours after exercise speeds up the replenishment of glycogen stores and therefore speeds up recovery time.