

Nutrition Bites

Nutrition Bite Week 11 – What to Eat Before, During and After Exercise

Eating for Training

What you choose to eat before, after and during exercise will determine how much you get out of your exercise session. If you are skipping meals or snacks you may find yourself struggling long before you should, and tiring easily.

Before Exercise

When should you eat?

The purpose of the pre-training meal is to provide you with adequate energy, stop you feeling hungry during exercise and be easily digested.

If you begin training with low glycogen levels stored in the muscles, you will tire easily and perform below your potential. The best time for the pre-exercise meal is 2-4 hours before exercise. Carbohydrate in this meal will help top up your stores of glycogen and enhance performance during training/competition. This may not always be possible, but try to plan your meals as best you can around commitments such as work, travel, study etc. If you can't have a meal 2-4 hours beforehand, have a smaller meal or healthy snack to give you enough energy to exercise.

What should you eat?

Your pre-exercise meal should be based on a high carbohydrate food such as bread, pasta, potatoes, rice. These foods have a low glycaemic index which means they give you a slow release of energy. A low GI meal helps maintain blood sugar levels, increase endurance and delay fatigue.

Before exercising, avoid very high fibre sources of carbohydrates as these may cause stomach discomfort. More refined carbohydrate such as regular pasta, white rice and plain bagels etc. are better before long runs. Although they are not as nutritious as wholegrain varieties they are easier on the stomach.

Include some protein in the pre-exercise meal e.g. chicken, fish, cheese, egg, beans, lentils, nuts etc. This will help to lower the overall GI of your meal, as well as preventing muscle breakdown during exercise.

Avoid high fat foods as these take longer to digest and may make you feel uncomfortable during training.

Many people believe that not eating before exercise will help them to lose weight more quickly, but by eating something, you will be able to exercise harder and for longer. If you attempt to train on an empty fuel tank, you can't perform at your best.

Pre-Exercise Meals (eat 2 – 4 hours before exercise)

- Jacket potato topped with cheese/beans/tuna, plus salad.
- Sandwich or bagel or wrap filled with chicken/fish/low fat cheese/egg/peanut butter and salad
- Porridge with low fat milk, honey and raisins
- Breakfast cereal with low fat milk and fruit juice
- Toast with low fat spread and jam/honey/marmalade
- Lentil/vegetable or chicken soup with bread roll
- Pasta with tomato-based pasta sauce, chicken or low fat cheese, and some vegetables
- Rice, pasta or noodles with chicken, fish or beans, and vegetables

Pre-Exercise Snacks (eat up to 1 hour before exercise)

- 1-2 portions of fruit e.g banana
- Handful of dried fruit and nuts
- A smoothie
- A pot of low-fat probiotic fruit yoghurt and some fresh fruit
- Oat-based cereal bar
- Rice cakes with peanut butter or low fat cheese

During Exercise

For exercise lasting **less than an hour**, it is not necessary to refuel with carbohydrate during training. The muscles should contain enough glycogen to fuel and hour's exercise.

For exercise lasting **more than an hour**, refuelling with carbohydrate can improve your performance and concentration. Isotonic sports drinks (check back to week 9 for recipes) or fruit juice diluted half and half with water will provide carbohydrate to the body.

If you choose to take the carbohydrate from food, remember to drink enough fluid as well to prevent dehydration.

Foods Suitable for Consumption During Exercise Longer than 1 Hour

- Handful dried fruit
- Fresh fruit e.g. banana
- Cereal bar (avoid ones with a lot of saturated and trans fat)
- Energy gels
- Sports drinks
- Wine gums/fruit gums

After Exercise

It is after, not during exercise that your body gets stronger and fitter. There are 3 areas to focus on for recovery:

1. Rehydration
2. Refuelling muscle glycogen
3. Synthesis of new muscle protein

The sooner you eat carbohydrates after training, the quicker your muscles will begin to replenish their glycogen stores. There is a 2 hour window of opportunity after exercising when carbohydrate can be converted into glycogen one and a half times faster than normal. After this 2 hour period, glycogen storage slows down again. Try to have a carbohydrate rich snack within 30 minutes of exercise, and no later than 2 hours after exercise. This may mean taking a refuelling snack with you to have after

exercise e.g. to have if you are exercising away from home, won't be back until late that night, are exercising on the way to work etc. Plan ahead!

Your post-exercise meal should contain some carbohydrate to refuel your glycogen stores, as well as some protein to repair and rebuild the muscles. A mixture of carbohydrate and protein promotes a faster recovery of glycogen stores and muscle, compared with a carbohydrate-only snack or meal. The combination of carbohydrate and protein increases the level of insulin in the blood and so encourages the muscle to take up glucose and amino acids (the building blocks of protein). It also helps reduce muscle damage and muscle soreness.

A build up of free radicals, which are normally generated during exercise, can leave your muscles very sore and tired. Although regular training improves your body's defences against free radicals, you can also boost them further by eating anti-oxidant rich fruits, vegetables, whole grains and pulses.

The ideal post-exercise meal or snack should contain roughly 10-20 g protein and 50-70g carbohydrate.

Refuelling Snacks and Drinks after Exercise (should be eaten within 2 hours of exercise)

- 500mls flavoured low fat milk (see recipe below)
- A couple of pieces of fruit plus 500mls low fat/skimmed milk
- A smoothie – whizz 150g low fat yoghurt, your favourite fruit and 150ml fruit juice in a blender
- A salmon/chicken/turkey/hummus/low fat cheese and salad sandwich (2 slices bread)
- A handful of dried fruit, nuts and seeds
- Rice cakes/wholegrain crackers with peanut butter/hummus plus 200ml fruit juice
- Fig rolls/jaffa cakes with 500mls low fat milk

Recipe for basic recovery drink

400mls low fat/skimmed milk

2 heaped tablespoons chocolate milk powder

2 heaped tablespoons skimmed milk powder

1 heaped tablespoon sugar

Pinch salt

Shake all the ingredients together until dissolved

Ideas for Refuelling Meals after Exercise

- Pasta with tomato based sauce, grated low fat cheese and vegetables
- Jacket potato, chicken breast and vegetables
- Bean and vegetable stew with wholegrain rice
- Fish pie with vegetables
- Chicken/vegetable curry with rice
- Baked potato with grilled salmon and salad
- Chilli or vegetarian chilli with rice and vegetables
- Chicken/pulses and vegetable stir-fry with noodles
- Spaghetti bolognaise with added vegetables

Next week we discuss the big day itself!

Email any questions or comments to walsh.eimear@hotmail.com