

Nutrition Bites

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Carbohydrate

This week we take a closer look at carbohydrate.

When we digest carbohydrate it is stored in the body as glycogen in our muscles and liver. As we exercise this glycogen is broken down to glucose to provide energy to the working muscles. The body can only store a small amount of glycogen however, so as this store is used up exercise will begin to feel a lot harder and you will start to feel tired. Eating enough carbohydrate in our diet can help ensure we start our training sessions with enough glycogen in our body to improve performance and delay the feeling of tiredness.

The more you exercise or train, the more carbohydrate you need. Carbohydrate is the most important source of energy for our muscles but carbohydrates also feed our brain to keep us going mentally. But it's not a case of eating just any old thing close at hand. You need to be fussy about your carbohydrates! For people who are trying to lose weight or who exercise up to seven hours a week, carbohydrates need to be mainly starchy and wholegrain where possible. People who have much higher energy requirements, like long distance runners or cyclists, can have some additional high sugar carbohydrate snacks from the second list below.

Tip - for those people trying to lose weight aim to have ½ your plate full of vegetables/fruit/salad and ¼ carbohydrate and ¼ protein.

Nutritious starchy sources of carbohydrate.

Eat high fibre or wholegrain versions regularly. Many of these carbohydrates have a lower glycaemic index (Gi) . They provide a gradual rise in blood sugar levels and help to spare muscle glycogen. This way you can minimise problems of low blood sugar levels during long training sessions.

Sources of nutritious carbohydrate include:

- Breakfast cereals, porridge
- Bread / crackers / crispbread
- Rice / noodles / pasta / cous cous
- Potatoes
- Peas, beans and lentils
- Root vegetables

Less nutritious sugary sources of carbohydrate.

Eat less of these types of foods unless you have very high calorie needs.

- Jam/honey/marmalade
- Sweets, fruit pastilles, gums and jellies

- Soft drinks, fruit squash
- Desserts and cakes
- Biscuits, muffins
- Sports drinks, energy bars, sports gels

If you are low in energy during a training session, it may indicate low glycogen stores so what you eat earlier in the day and before your training session is very important to ensure you don't run out of fuel!

Follow these tips to maximise your carbohydrate intake

Best snacks to boost energy before training

- 1 large banana
- 1 portion of fruit e.g. apple, pear, 2 kiwis
- 1 handful of dried fruit
- 1 cereal bar

Best snacks & drinks during training

(for exercise sessions lasting more than 90 minutes)

- 500ml diluted fruit juice
- 1 cereal bar (plus 500ml water)
- 2 handfuls of dried fruit (plus 500ml water)

Boosting your carbohydrate intake

As you progress through your training programme, you may develop more muscle and your fitness levels will increase. As a result your energy requirements may increase too. To get the most out of your training, you may find it useful to keep a diary of what you eat over a few days. This will help you to pinpoint where you could improve your carbohydrate intake in meals and snacks.

There are many simple ways to boost your energy intake:

- Include a greater variety of breads, such as pitta bread and crispbreads. Use thicker slices of bread.
- Add honey or 100% whole fruit jam to toast, instead of butter.
- Have a high fibre breakfast cereal at any time during the day as a snack. Add sliced banana or a handful of raisins for extra energy.
- Add sweet potatoes to soups, casseroles and salads.
- Choose sweetcorn, beetroot, parsnips, kidney beans, peas and lentils when shopping for vegetables, as these are all good sources of carbohydrate.
- Use yoghurts and fruit (fresh, tinned, stewed) as desserts and snacks.
- Drinks, such as fruit juice, smoothies and milk shakes are great for boosting carbohydrate intakes, when your needs are high.

Tip - Try making your own 'high carbohydrate' smoothie with fresh fruit, low-fat yoghurt and honey or sugar.

If you need additional advice about the type, amount and frequency of your carbohydrate intake you may need to contact a qualified dietitian. Check out www.indi.ie.

Next week we discuss the importance of protein in your eating plan. Please join us again for more nutrition tips. Happy training!