



Fighting Fatigue

Most athletes find that they experience times when they are tired. For most this is only a passing phase and can be account for by a change in lifestyle (exam time, increased pressure at work, lack of sleep, increase in training load etc.). The tiredness usually disappears as you adapt to the new situation or you revert to the way things were before. However, for some the tiredness persists. It may be stress related or a lack of sleep or inadequate nutrition. The latter is often overlooked as a factor that may play a role in fatigue. In may cases a simple change to dietary patterns may improve and increase energy levels and aid performance.



The role of carbohydrate

Carbohydrates are the most important energy source for physical activity and performance. They are stored either in the muscle as glycogen or in the blood as blood sugars. The glycogen fuel stores need to be constantly maintained and replenished and in fact most athletes need to make constant efforts to ensure the stores are adequate. Attention to the detail of your meal just before competition will not be enough if your intake has been poor in the days and weeks leading up to the event.



Adequate carbohydrate intakes are important at all times so that athletes are ready for competition but also so that training is not compromised. A level of 5-8grammes per kg of body weight should achieve adequate glycogen stores. Otherwise low glycogen stores can result and this can lead to a feeling of fatigue. Alternatively an increase In training load or intensity can place a strain on stores and this combined with a reduction in appetite which can result after intense exercise can further increase the problem.

Athletes should watch for muscle heaviness and lack of energy or motivation to train, particularly when the intensity is greater. Most will have enough glycogen stores for 90-120minutes of exercise; however, eating too little carbohydrate will reduce this time to probably less than one hour. To solve the problem an athlete will either have to rest and / or reduce the intensity of the exercise or increase the dietary intake of carbohydrates to replace their stores.

Timing:

Another important point to consider is the timing of carbohydrate intake. Many athletes find themselves running between training, school, college or a full time job. Timing of carbohydrate intake is very important for muscle recovery especially when you are training twice a day. Research shows that the muscles do not start to refuel at a high rate until carbohydrate is eaten, so effective recovery only starts after you have had a good meal or snack containing substantial amounts of carbohydrates. The quantities that you are trying to achieve post exercise is 1g per kg of body weight, so for a 75kg athlete that is 75g of carbohydrates. In a day the total quantities required are 7-10g per kg. So for that same individual the daily target is 525-750g per day.

- Some examples:
 - Cup of fruit salad and 2 scoops of ice cream = 45g carbohydrates
 - Ham and salad roll and 1 piece of fruit = 50g
 - 2 slices of toast and 3 table spoons of spaghetti / baked beans = 55g
 - 2 slices of toast with jam / honey / marmalade and 200mls fruit juice = 70g
 - 1000mls sports drink = 70g
 - Rice or pasta salad (2 cups) = 85g
 - Breakfast cereal and 200mls semi skimmed milk = 55g

Iron Deficiency

Athletes can be prone to iron deficiency due to blood loss in sweat, urine and faeces with females being at the greater risk. Drugs such as anti-inflammatories often used in the treatment of injuries can cause small levels of gastro-intestinal bleeding, which can also increase iron loss. Some athletes will have a low iron intake which can compound the problem. Iron deficiency anaemia is less common than low iron stores and full-blown anaemia can result in athletes not being able to exercise. Decreased iron stores can result in a more general tiredness with an increase in recovery time, decreased immune function with the increased likelihood of colds and flu type symptoms. A blood test will be used to determine iron status however one blood test will not be able to give a full picture of the causes or other factors that are involved. Monitoring of these athletes is an essential component of their treatment.

Vitamin and minerals: Do you need them?

There are many claims suggesting that the general public and athletes need to take extra vitamin and mineral supplements to meet individual requirements for these nutrients. For most individuals there are no clinical or sub clinical signs or symptoms of vitamin and mineral deficiencies so taking a supplement will do little beyond giving a psychological boost.

There are some individuals that will need their diet supplemented if there is a clinical deficiency either as a result of a direct deficiency of a nutrient (Iron deficiency anaemia) or an indirect deficiency due to another medical problem (lactose intolerance etc.) and women of childbearing age are recommended to take folic acid supplements. For athletes who are travelling, are missing normal meals or have a limited choice, who have to limit food intake to make weight or have a heavy competition schedule they may benefit from a multivitamin supplement. Do seek advice on which product that you require and the most appropriate supplement to take.

Reduce your risk: points to consider.

Avoid crash diets and faddy eating. Don't eliminate food groups.

Choose wisely when you are busy and eating on the run.

Athletes can often eat "too healthy". Fat is an essential component of the diet and eating too little can cause problems.

If you think you have iron deficiency, get a blood test and take steps to increase your iron intake.

Ensure you are well hydrated.

Fruit and vegetables should be part of your DAILY food intake.

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