COACHING IRELAND
OILIÚINT ÉIREANN

Lucozade SPORT

What are the energy demands when playing Rugby?

Rugby is an intermittent high intensity, multiple-sprint sport. In rugby all critical events in a game are normally preceded by a sprint, for example scoring a try or try saving tackle usually follow a maximal sprint to get into position. In between these bursts of intense activity lower intensity activities such as walking, jogging and sub-maximal running are performed. It is vital that players can recover as quickly and as fully as possible, during these lower intensity events in readiness for the next vitally important high intensity activity. The problem here is that multiple sprint sports require a lot of energy. Energy is not only needed during times of high intensity work but is also required to facilitate a speedy recovery during the brief periods of low intensity activity.

The very essence of rugby is the ability to sustain high levels of skill at high speed over the full 80 minutes of a game. Distance is covered during matches at various speeds ranging from walking to maximum sprinting speeds. Analysis of field games has established that most points are scored in the final quarter of games. This is a hugely significant finding given that the aim of the game is to score points without conceding

Why are so many tries scored late in games?

As players begin to fatigue both physical and mental abilities start to decrease. The result of this combination of physical and mental tiredness is an increase in the amount of mistakes being made and a directly related increase in scoring opportunities. The lesson here is that if you and your team mates can postpone the onset of fatigue for longer then you are likely to decrease the amount of errors made. Furthermore, by retaining high levels of physical and mental energy you are in a strong position to capitalise on any fatigue-related increase in errors of your opponents.

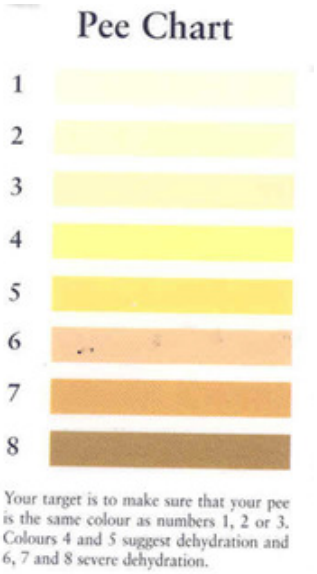
"Loss of fluid and reduction in the body's carbohydrate stores are the two major causes of fatigue in prolonged exercise"

Maughan et al (1993) British Journal Of Sports Medicine, 27 (1), 34-35.

What are the effects of fluid loss?

During exercise the body breaks down fuel to produce energy. The body heats up during this process and sweats. Fluid loss through sweating can lead to dehydration. Dehydration can result in poor concentration, co-ordination and reaction time. Thirst is often not felt until you are already dehydrated, so do not wait until you are thirsty to take on fluids.

The effect of fluid loss on performance	***Body weight Loss of fluid %***
Impaired Performance	2%
Capacity for muscular work reduced by 20 – 30%	4%
Heat Exhaustion	5%
Hallunications	7%
Heat Stroke	10%



What are the benefits of fluids?

1. Taking on fluid helps to restock bodily fluid levels preventing dehydration and therefore can help prevent premature fatigue and decrease in sporting performance.

2. Fluid has a potential cooling effect, which helps to decrease levels of heat stress to which the body is subjected during intense activity, especially in warm and humid conditions.
3. Fluid helps to restore blood volume, which in turn results in a better ability to remove heat from the body's core.
4. If salts and electrolytes are included in the fluid mix then losses as a result of sweating can be offset.
5. If some carbohydrate is included then reductions in the bodies critically important carbohydrate stores can be replenished.

What are the effects of fuel loss?

GAA players require high energy levels. It is estimated that a player can burn between 600 and 1000 calories during a match. The high activity levels reduce the body's levels of stored energy (glycogen stores, in the muscles and liver). If stores are reduced significantly then performance will be negatively affected! Not only due to reduced energy supply to the working muscles but also because low levels of circulating carbohydrates in the blood can lead to a drop in players ability to concentrate. Result? A tired mind and body.

What are the benefits of fuel?

1. Taking on fuel replaces the loss of bodily stores of fuel caused by the high energy demands of training and matches.

2. Carbohydrate fuel been scientifically demonstrated to help performance in both long duration endurance activities and in repeated high intensity efforts (for example the multiple sprints involved during football and hurling)

3. If carbohydrate is taken in fluid form the performance debilitating effects of dehydration can be reduced.

What will give me the energy I need?

Lucozade Sport is an isotonic sports drink, designed to improve sporting performance. It delivers a boost of carbohydrate energy to the working muscles and supplies fluid fast. Together these help to maximize sporting performance and endurance.

FLUID: Water: to replace what is lost as sweat and help prevent dehydration
ENERGY: Carbohydrate: to provide fuel for the working muscles
SALTS: Electrolytes: sodium, potassium, calcium: to enhance fluid absorption into the bloodstream and help maintain hydration

What does 'isotonic' mean?

Isotonic drinks are specially formulated to be in balance with your body's own fluid and are therefore effectively absorbed by the body. They are proven to improve endurance capacity.
"ISOTONIC"
ISO – means equal TONIC – refers to tonicity (also called osmolality). Tonicity is a measure of the number of particles (dissolved solids in a solution)

Lucozade Sport V's Water

Lucozade Sport	*Water*
Stimulates thirst	Suppresses thirst
Retains more fluid and minerals	Stimulates more urine production
Well-tolerated post-exercise	May cause bloating
Contains energy content sources	No energy
Salt content	No salt
Taste encourages voluntary intake	Bland

'In tests against water, athletes using isotonic Lucozade Sport drinks are proven to improve their sporting performance by 33%'
Nicholas et al (1995), Journal Of Sports Sciences, 13 (4), 283-290.

When should I take Lucozade Sport?

Lucozade Sport will facilitate fast fluid replacement and deliver carbohydrate energy. For optimum performance Lucozade Sport should be taken

BEFORE, DURING and AFTER sport

BEFORE
When hydrating prior to exercise you should slowly drink 5 to 7mls per kg of body weight of Lucozade Sport at least 4 hours before. This will ensure that you top up carbohydrate energy stores and ensure that you start fully hydrated.

DURING
The aim of drinking during exercise is to prevent excessive dehydration. A suitable starting point may be 150 to 250 mls every 15-20 minutes during activity. If this is not possible, athletes need to consume larger amounts at half time.

AFTER
1.5 litres of fluid needs to be consumed for every 1kg of body weight lost to aid recovery by effectively re-hydrating and replacing depleted energy stores. It can take up to 48 hours to fully replenish glycogen stores, but the first two hours after exercise is the most important to take in some carbohydrate then.