



**YOUR DAILY DAIRY**

**Sport**  
nutrition

An Initiative by the Consumer Education Project of Milk SA

www.rediscoverdairy.co.za  
info@dairy.co.za

Give athletes a boost with milk and dairy

**MILK**: an alternative sports drink

An understanding of nutrition and how it affects sports performance is vital to get the most benefit from exercise. An athlete's diet can make a difference to the success of their training programmes.

There are excellent reasons why athletes can turn to dairy products to build muscle and assist in the recovery after strenuous exercise.

Dairy products such as milk, flavoured milk or drinking yoghurt provide a unique combination of:



**CARBOHYDRATES** to boost energy, combat fatigue, fill up fuel stores and ensure hydration

**POTASSIUM, SODIUM and MAGNESIUM** to replace electrolytes lost through sweating

**FLUID** to prevent heat stress and exhaustion

**PROTEIN** to help muscles recover

A rich supply of easily absorbed **CALCIUM** to build and maintain strong bones

The following table presents the typical nutritional composition of water, commercial sports drinks, fat-free milk, low-fat milk and flavoured milk:

Nutrients per litre (L)	UNIT	Water	Sports drink	Fat-free milk	Low-fat milk	Flavoured milk
Carbohydrates	g/L	0	60 - 80	48.5	46.8	80 - 120
Fat	g/L	0	0	1.8	20.1	18 - 23
Protein	g/L	0	0	34	33	33
Energy density	kJ/L	0	1020 - 1340	1 460	2 080	2640 - 3660



# Rediscover dairy ...

**R**epeated exercise or long activity sessions decrease energy stores in the body, which can lead to fatigue and decreased performance. Exercise also triggers muscle breakdown during and after training. A sensible dietary intake before, during and after training can support fuelling the body, minimise muscle breakdown and enhance repair and muscle growth, together with a speedy recovery and decreased injury risk.



## PREPARE

Before exercise an athlete should ensure adequate fuel stores and optimal hydration through the intake of carbohydrates and fluid.

Carbohydrates, stored in the body in the form of glycogen in the skeletal muscles and liver, are the most important readily available source of energy during strenuous exercise. Dairy products such as milk, flavoured milk or drinking yoghurt can be included in pre-exercise nutrition to supply carbohydrates and support hydration.

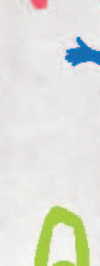


## RECOVER

The main goal of sport nutrition is to:

- \*REFUEL—recover glycogen or fuel stores
- \*REHYDRATE—obtain adequate hydration levels
- \*REPAIR—facilitate muscle building.

The timing and composition of post-exercise meals are particularly important. Replenish your fluid levels within 30 minutes after a workout with a glass of milk, flavoured milk or drinking yoghurt.



## REFUEL

Intense exercise leads to reduced glycogen (energy) stores in the muscle. Consuming carbohydrates and protein together benefits the refuelling process in which carbohydrates are stored.

Milk contains carbohydrates (lactose) and protein (whey and casein) that can aid in the refuelling of glycogen (energy) stores.



## REHYDRATE

Sweat losses in athletes generally exceed fluid intake during exercise, which often leaves athletes dehydrated. The intake of fluids together with electrolytes can aid in rehydration after training sessions.

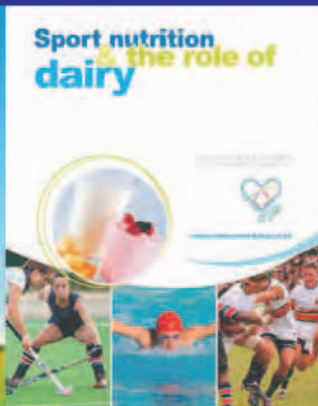
The carbohydrates and electrolytes (potassium and sodium) in milk are in a natural food matrix, which proves to be effective in recovering fluid levels of athletes after exercise.



## REPAIR

Intense exercise leads to breakdown of muscle protein, which can lead to decreased performance. The intake of amino acids, protein or carbohydrates or a combination thereof, after exercise, contributes to enhanced muscle development and decreases the risk for injury.

Milk contains casein and whey proteins in a 3:1 ratio, which provides for slower digestion and absorption of these proteins. This results in sustained elevated blood amino acid concentrations, which can increase gains in lean muscle mass. The intake of 15 - 20g high-quality protein, such as two glasses of milk, can promote faster muscle repair.



## Get this booklet online

[www.rediscoverdairy.co.za/dairyandsport](http://www.rediscoverdairy.co.za/dairyandsport)  
also visit [www.dairygivesyougo.co.za](http://www.dairygivesyougo.co.za)