

Carbohydrates are an essential nutrient for Sam as a high energy user because they are the major source of fuel. There are three different forms of carbohydrates; starch, fibre and complex carbohydrates. Examples include breads, cereals, fruits and vegetables. Carbohydrates are stored in our muscles and liver as glycogen which is the main source of energy for the muscles to perform during exercise. However, our body can only store a limited amount so it is essential that Sam eats carbohydrates every day in order for her to get the most out of the carbohydrates she consumes so it does not store as fat in her body. As a high energy user Sam requires a higher amount of carbohydrates than the average person as she is constantly burning energy and fat. Sam could have pita bread filled with ingredients such as mixed salad and smoked chicken for lunch with an apple to gain the carbohydrates she needs.

1

Protein... Calcium... Iron... Vitamins... Four food groups... Plate Model for high energy user... suitable meal ideas....

Glycaemic Index is the ranking of carbohydrate foods based on their effects on blood sugar levels.

Pre Competition: It is advisable for Sam to consume a low GI meal before exercise and competition in order to maintain blood sugar levels and to improve use of fat stores. An example of low GI food is pasta or muesli with low fat yoghurt. Having a low GI meal before exercise will benefit Sam as it will help protect her energy stores throughout prolonged exercise which will in turn, improve endurance performance.

2

Competition: Having carbohydrate during prolonged exercise provides an extra source of fuel, improving capacity and performance which is important to Sam as a high energy user. Sam could have a handful of nuts such as almonds during exercise to give her the energy boost she may need during her training or game.

Recovery: Sam should consume moderate to high carbohydrates after her training or soccer games as doing so will result in quickly raised blood sugar levels which will enhance recovery.

Eating well for less/shopping skills:

Meat... Fast cooking cuts... slow cooking cuts... Eating in season... Don't buy anything you can make yourself...

Reading labels: It is important for Sam and her family to learn how to read the nutritional labels on foods before they buy them. This is because they could be purchasing foods extremely high in sodium, saturated fat and sugar which can impair their health and performance. Sam and her family should read the labels by looking below the 'per 100g' column; saturated fat should be 10g or less, sugar should be 10g or less, fibre should be 6g or more, and sodium should be 350mg or less. If the products Sam and her family check meet these requirements they can go ahead and buy them as they are not going to impair their health as for example, consuming a great amount of something very high in saturated fat (well over 10g per 100g) could cause obesity and hypertension.

3

Energy and sports drink advertising: Advertisements of sports drinks and energy drinks are used to distort society's view on what they should and should not be consuming and what is

good for you and what isn't. Advertisements on television, posters and in magazines can deceive society into buying their products when it may not be as beneficial as they claim.

Sports drinks: High energy users throughout the community such as Sam must be hydrated and adequately fuelled during exercise for optimal performance. Sports drinks contain carbohydrates such as glucose and fructose which provide a fuel source for the muscles and brain and contribute to the flavour. Sports drinks also contain electrolytes such as sodium and potassium. The sodium stimulates the absorption of carbohydrate and water through the small intestine, stimulates thirst which encourages you to drink more and therefore replace fluid faster.

4

The coach has recommended that Sam and her team mates only need to drink water at training and during their weekly games. He suggested that they should only consider buying a sports drink if they are playing in a tournament. However they are keen to have some of the Powerade that is widely advertised at their sports grounds.

5

Research by Sports Dieticians have shown that sports drinks also known as carbohydrate electrolyte drinks are one of the most beneficial nutrition supplements available to athletes. Powerade is a well-known sports drink advertised to society through posters and television commercials. Their main target markets is high energy users which need the extra fuel to replace fluid and sodium loss through sweating during high intensity exercise although Powerade has begun to appeal to young adults as having Powerade is now associated with looking 'fit' which is very desirable along with adults. Advertising techniques include the slogan 'Powerade. The power to reach your goal'. This sends messages to society that if you want to feel empowered and accomplish goals you have to buy Powerade. Television commercials are also made to entice society with celebrity endorsements of the All Blacks, New Zealand's most looked up to sports team by many New Zealanders. This sends messages to society that if you want to be like the All Blacks you have to drink Powerade like they do in the advertisements.

6

Energy Drinks... Healthy Food Magazines...

Dieticians: Dieticians are also a great option for members of the community to gain advice, shopping and eating tips and meal plans that will ensure they are getting the right amount of nutrients they need from the four food groups to feel sustained throughout the day.

Dieticians are a great strategy as they help high energy users so they are provided with the energy they need to perform daily routines. They give us knowledge that we need in order to live a healthy and positive life.