

## LEICESTERSHIRE ADULT EATING DISORDERS SERVICE

### Information leaflet

### **HYPOGLYCAEMIA (Low Blood Sugar)**

This leaflet provides information for patients about some of the problems that may result from hypoglycaemia. The aim of this leaflet is to provide you with information that is important to you, not to worry you or upset you. The information in this leaflet may raise questions to discuss with your doctor. It will help explain why you may need certain blood tests or other investigations.

#### **Introduction:**

Hypoglycaemia is a medical term that literally means low blood sugar. It can produce a variety of symptoms and effects and is often associated with prolonged dietary restriction and states of malnutrition. Hypoglycaemia can be a feature of other medical problems such as diabetes, but on the whole it is uncommon in people who are a healthy weight.

#### **How does the body use carbohydrates?**

Glucose itself is the main source of energy in the body and is derived from carbohydrates in the diet, examples of which are bread, beans, potatoes, pasta etc. The body ultimately breaks down carbohydrates into glucose energy which is essential for the functioning of cells and vital organs, especially the brain. Glucose that is not required immediately can be stored in the liver as glycogen. The liver in this respect is an important source of stored glucose and this can be called upon as necessary when immediate glucose levels in the blood become low. The liver acts as a reservoir and helps to manage changes in blood glucose especially to prevent levels getting too low. Normally glucose levels in the blood are tightly controlled by hormones in the body, such as insulin and glucagon.

#### **Why does hypoglycaemia happen?**

In eating disorders low sugar levels can result from starvation itself but can also occur on re-feeding at unexpected times for example after meals. In the first case where carbohydrates are restricted availability of glucose is low from the diet and although the breakdown of body proteins and fats can to some degree, make up for this, this way of making glucose can be inefficient. As a result there may be times when blood sugars are low.

The second scenario that is low glucose levels after meals in those who have started regular eating may at first glance seem odd but can be explained as follows: - carbohydrate is taken in as a meal and this is broken down into glucose. The pancreas releases insulin, which helps cells to take up and use glucose but this in turn, lowers blood sugar levels. The liver tries to respond to the low levels of glucose by releasing stored glucose but because stores are low the liver is not able to make the necessary correction. An episode of hypoglycaemia can occur up to 2 hours after eating.

### **What are the symptoms of hypoglycaemia?**

The early warning signs of mild hypoglycemia may include:

- feeling hungry
- sweating
- dizziness
- tiredness (fatigue)
- blurred vision
- headache
- trembling or shakiness
- anxiety or irritability
- going pale
- fast pulse or palpitations
- tingling of the lips
- ringing in the ears

Signs of more severe hypoglycaemia include:

- difficulty concentrating
- confusion
- disorderly or irrational behaviour, which may be mistaken for drunkenness (slurred speech, difficulty walking properly etc)
- seizures or coma

Many patients who have restricted their dietary intake for some time may not recognise the symptoms especially milder symptoms, and may interpret this as their normal day to day state.

### **What are the associated risks?**

The risks of hypoglycaemia range from mild to serious and from immediate to longer term. At the milder end the symptoms of hypoglycaemia are usually experienced as unpleasant and affect quality of life. The impact on mental functioning can make it difficult to think about problems and can hamper recovery. It may be difficult to manage the usual activities of daily living and there may be issues of personal safety, for example when cooking, driving, the increased possibility of accidents and falls etc. An episode of hypoglycaemia in itself may not cause harm but the consequences of prolonged starvation may have far reaching effects e.g. thinning of

bones, poor healing due to malnutrition which may lead to increased disability later in life.

In serious cases a prolonged episode of severe hypoglycaemia can cause irreversible damage to the brain and nervous system.

### **How can the problem be managed?**

#### Detection:

- The early detection of hypoglycaemia is important and this can be achieved by an increased awareness of the symptoms and the underlying causes of hypoglycaemia. In-patients are encouraged to bring physical concerns to the attention of staff. Staff on the ward will watch out for signs of hypoglycaemia especially early in treatment. They will also monitor glucose levels as necessary through blood investigations and through pin prick testing, also called BM stix.

#### Treatment:

- Staff will offer advice on the management of hypoglycaemia depending on symptoms and blood results which might include offering a sugary drink, such as orange juice, or a medication called Dextrostop, which contains glucose in a gel form. A snack might also be offered and may be brought forward from the next meal. Where patient safety is an issue staff will offer appropriate advice (e.g. remaining ward based, resting, exercising caution especially if dizzy or unsteady to manage the risks of falls etc). Broadly patients will be supported to eat regularly and restore weight.