



## NHS Tayside Diabetes Managed Clinical Network Patient Information Leaflet

### Continuous Glucose Monitoring

#### What is Continuous Glucose Monitoring System (CGMS)?

Continuous glucose monitors are devices that help people with Type 1 diabetes track their blood glucose levels over 3-6 days. This consists of a sensor worn under the skin that transmits information about the body's glucose levels to a receiver. The receiver displays frequently updated glucose readings and stores information about changes in glucose levels over time. CGMS devices can also be programmed to set off alarms when glucose levels become too low or too high.

#### How Does the CGMS Work?

A tiny glucose-sensing device called a "sensor" is inserted just under the skin of your abdomen. The insertion is quick, and is usually not painful. It's very similar to an insulin injection. Tape is used to hold it in place.

The sensor measures the level of glucose in the tissue every 10 seconds and sends the information via wireless connection to a pager-sized device called a "monitor" that you attach to a belt or the waistline of your clothes. The system automatically records an average glucose value every 5 minutes for up to 144 hours.

Whilst the monitor is in place you need to monitor your blood glucose level with your usual blood glucose meter four times daily. The results from these tests are entered into the CGMS device. You also need to keep a food and activity diary.

#### When Is the Continuous Glucose Monitor Used?

CGMS is not intended for day-to-day monitoring or long-term self-care and it is not a replacement for standard blood glucose monitoring. It is only intended for use to discover trends in glucose levels. This helps your diabetes team make the most appropriate decisions regarding your treatment plan.

The main advantage of CGMS is that it can help identify fluctuations and trends that would otherwise go unnoticed with standard HbA1c tests and intermittent finger stick measurements.

For example, the device can:

- capture low overnight blood glucose levels which often go undetected
- reveal high blood glucose levels between meals
- show early morning spikes in blood glucose
- evaluate how diet and exercise affect blood glucose
- provide up to a 72-hour complete review of the effects of changes made to therapy by the diabetes health care team.

### **When would CGMS be used?**

The reasons for using CGMS are:

- Hypoglycemia unawareness
- Nocturnal hypoglycemia
- Review of insulin pump therapy
- Pre pregnancy if target HbA1c not achieved
- During pregnancy if there are concerns regarding blood glucose levels
- Assessment of effect of exercise on blood glucose levels
- Assessment of effect of nutrition on blood glucose levels

### **Diabetes Nurses Contact Numbers**

(during working day hours Monday to Friday 9am – 5pm)

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Last update: July 2010

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