# **LIVING** with **DM**

# How to monitor and adjust the basal insulin dose in type 2 diabetes



# Coordinator:

### Dr Antonio Pérez Pérez

Head of Unit. Endocrinology and Nutrition Department. Hospital de la Santa Creu i Sant Pau, Barcelona. Lecturer, Universitat Autònoma de Barcelona. CIBERDEM

## Authors

# Claudia Rodríguez Hernández

Diabetes nurse educator at the Hospital de la Santa Creu i Sant Pau. Researcher at the Research Institute (IIB Sant Pau). Barcelona

### María José Martínez Roldán

Diabetes nurse educator at the Hospital de la Santa Creu i Sant Pau and the Basic Health Area. Barcelona

In collaboration with



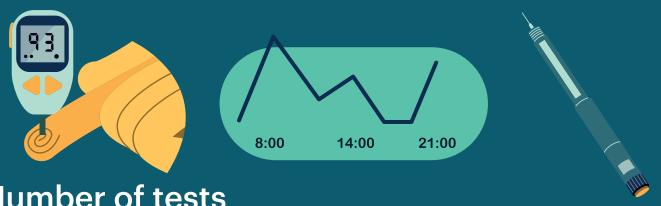


#### **Capillary blood glucose monitoring**

is an essential part of comprehensive diabetes management and involves measuring the patient's blood glucose at a certain time of day. This information will help both the patient and the healthcare team make decisions about the diabetes treatment.

# **Basal insulin**

Basal insulins are considered to be those that cover the continuous insulin requirements in a fasting situation (overnight and before meals). Ideally, they should have a duration of 24 hours or more and currently several insulins are available with these characteristics.



# Number of tests and self-adjustment of insulin dose

As can be seen in the following examples, **pre-breakfast blood glucose monitoring is essential for adjusting the basal insulin dose**. If the insulin dose has already been adjusted, it is advisable to monitor levels again during the day, e.g. before dinner, to find out whether the basal insulin dose needs adjusting.

# Example 1

Breakfast	Lunch	Dinner
160		
177		
180		

If pre-breakfast blood sugar levels are above 130 mg/dl, for 2 days in a row, **increase** the evening basal insulin dose by 2 units or 20% of the dose, once or twice a week.

# Example 2

Breakfast	Lunch	Dinner
70		
65		
88		

If pre-breakfast blood sugar levels are below 100 mg/dl for 2 days in a row, or hypoglycaemia occurs during the night, **reduce** the basal insulin dose by 2-4 units or 10-20%.

# Example 3

Breakfast	Lunch	Dinner
90	180	
120		200
95	269	
130		304

If blood glucose levels start to become high during the course of the day, contact your healthcare team to discuss treatment. Until the appointment, if possible, increase the number of checks so that healthcare staff have more data and can make better treatment decisions.

# Remember...

Monitoring is an essential part of managing patients with diabetes.

To achieve better glycaemic control, whenever possible, insulin doses should be self-adjusted. If you have any queries, please consult your referring medical team.