



Marco  
In better control with his pump since 2011

## I WISH THERE WAS ANOTHER WAY TO MANAGE HYPOGLYCAEMIA



MiniMed® Veo™



Hypoglycaemia can be one of the **biggest concerns** for people with Type 1 diabetes, especially during the night, when it is more difficult to recognise low levels of blood glucose (lows).

Anyone with Type 1 diabetes can experience unexpected lows. One of the **main goals** of diabetes management is to **achieve target HbA1c** levels safely, without increasing the risk of hypoglycaemia (hypos).

**Read the real-life stories** of other people with Type 1 diabetes and discover how they have found their way to better control and fewer hypos.

*“At the beginning, when I was on MDI, I could never tell when my hypos were coming. Once, in town, I just fell to the pavement. I still remember people avoiding me and walking away, probably thinking I was drunk. I had to drag myself home all alone. I had heard about many positive experiences with pump therapy so, after a long period of having hypos, I asked my doctor if I could try it. Now, I wear a MiniMed Veo all the time and I’ve almost forgotten what hypos are.” **Marco, Italy***

## Type 1 diabetes and hypoglycaemia

Experiencing hypoglycaemia can be frightening and can result in a real fear of further hypoglycaemic events.

Hypoglycaemia can occur for a variety of reasons, and is usually caused because there is excessive insulin in the body. This excess of insulin moves too much glucose from the bloodstream into the cells, taking away the critical source of energy that the body and the brain need to function.

Some of the main factors that can lead to hypoglycaemia are:

- Delayed or skipped meals
- Low carbohydrate meals or overestimation of meal carb content
- High fat meals
- Over bolusing
- Alcohol consumption
- Exercise
- Inappropriate basal insulin dose

*“I opted for the pump after a long period of hypos, which would also occur at night. My girlfriend woke up one night because I had convulsions. She dragged me to a cold shower, gave me some sugar. After that I asked my doctor to try the pump, since I read a lot of positive experiences about it on the internet. I then started wearing it.” **Marco, Italy***



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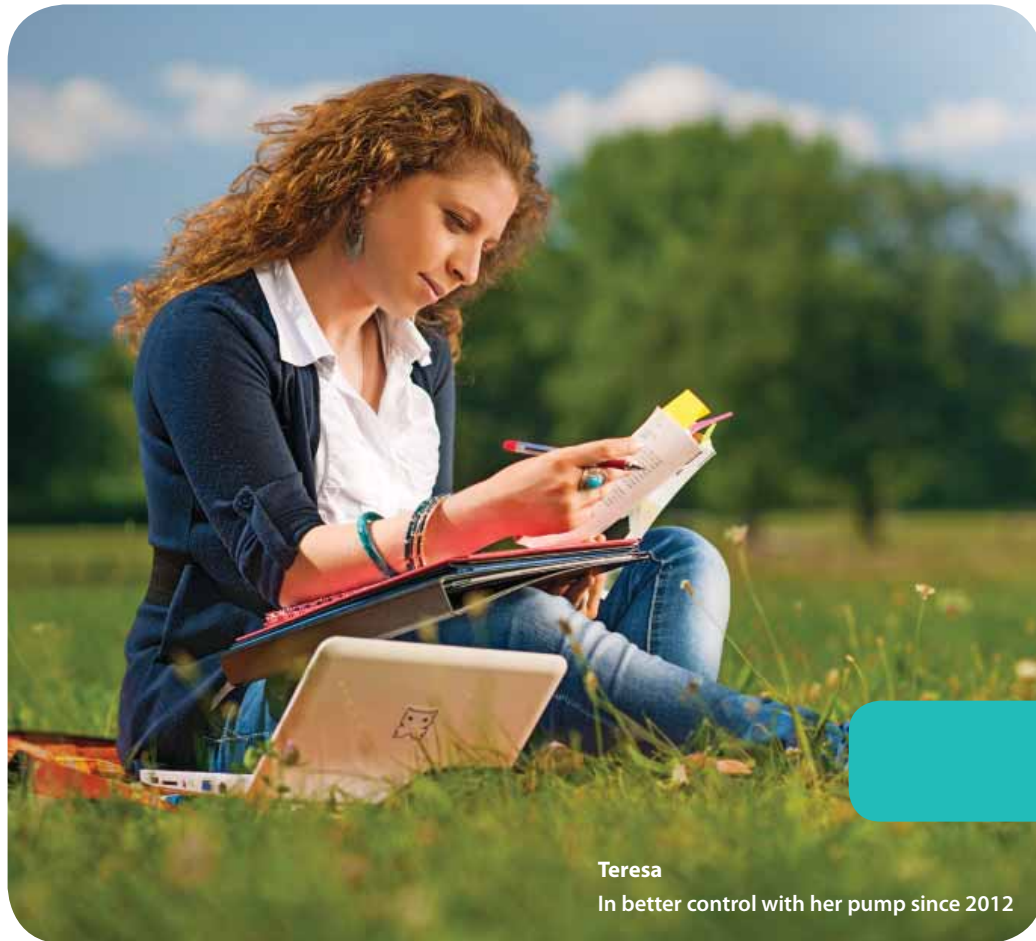
## Mild and severe hypoglycaemia

**Hypoglycaemia** (“hypos”) refers to when the blood glucose levels go **below 3.5mmol/L**, but can vary depending on the individual. Hypoglycaemia can be mild, or severe.

**Mild hypoglycaemia:** Where its symptoms are felt and action can be taken by eating or drinking something containing carbohydrate.

**Severe hypoglycaemia:** Requires assistance from another person and may need treatment at a hospital.

The fear of having lower blood glucose and the risk of hypoglycaemia can result in some people with Type 1 deliberately keeping glucose levels high to avoid going too low. However over long periods of time, this self-induced hyperglycaemia can lead to complications. Better control of glucose levels, will help avoid both highs and lows.



**Teresa**  
In better control with her pump since 2012

## Reduce HbA1c, reduce complications

**HbA1c:** An **important measure** of how effectively diabetes is being managed using a measure of the amount of glucose that has attached itself to each red blood cell over the preceding 2-3 months to assess the level of diabetes control.

The DCCT (Diabetes Control and Complications Trial) study confirms that **lowering HbA1c by just 1%** can decrease the risk of developing microvascular complications by up to 40%.\* HbA1c should be monitored every 3 months with **the goal of keeping it below 7% (53mmol/mol)**, or at the target set by your physician.\*

Normal glucose values vary between 4.0 and 7.8 mmol/L, and you may want to consider trying to achieve these targets in daily life with self-monitoring of blood glucose (SMBG) levels using a personal glucose meter.\*

Many people find it a challenge to keep HbA1c in target range without increasing the risk of hypoglycaemia. Insulin pump therapy enables them to adjust the insulin requirements instantly.

Achieving blood glucose control is therefore important. Some of the best ways to do this while minimising hypoglycaemia are:

- Dosing insulin more regularly in smaller amounts\*
- Balancing glucose levels before and after exercise
- Adjusting insulin dose to match the carbohydrate in meals
- Adjusting insulin dosing according to daily activities
- Knowing when and how to adjust therapy by monitoring glucose levels throughout the day

It can be a challenge to reach and maintain the HbA1c goal whilst minimising the risk of hypoglycaemia. Insulin pump therapy enables adjustment of the insulin requirements to the body's needs.

*So, what else can someone living with Type 1 diabetes do to minimise hypoglycaemia?*

\*references kept on file and are available on request; please contact your local Medtronic representative.

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## For many, an insulin pump offers an ideal solution

To deal with the challenges of **keeping blood glucose levels under better control**, many people with Type 1 diabetes **rely on insulin pumps**.

An insulin pump is a **small device**, about the size of a mobile phone that can be **easily carried** on a **belt**, inside a **pocket**, or even attached to a **bra**.

An insulin pump can help you and your healthcare team to more closely **mimic the way a healthy pancreas delivers the basal insulin to the body** by providing small amounts of rapid acting insulin during the day and night.

It can **help to better manage the need for insulin dose adjustment**, particularly after meals and overnight and can thus **help to achieve better glucose control**.

Instead of frequent injections, all that is needed on pump therapy is a **change of infusion set every few days**.



Marco's real size pump

*"I tested an insulin pump for some time and recognised that it did not bother me in daily life and activities such as sports. So decided to use a pump permanently." **Simon, Germany***



## How does the MiniMed® Veo™ help control glucose levels?

The MiniMed® Veo™ allows for **better glucose control** due to the ability to adjust insulin delivery, reducing the risks of hypes and hypos. With insulin pump therapy users can benefit from:

- **Easier dosing:** calculating insulin requirement can be a complex task with many different aspects to be considered. In the MiniMed Veo, the built-in **Bolus Wizard®** feature helps to ensure **accurate dosing** by taking into account the insulin already in the system, the current glucose levels, carbohydrate intake and personal insulin settings to determine the right dose
- **Fewer injections:** **precise** amounts of rapid acting insulin are delivered throughout the day by the infusion set which is easily removed and replaced every 2 to 3 days
- **Greater flexibility:** the MiniMed Veo can be **instantly adjusted** to allow for exercise, during illness or to deliver small boluses to cover snacks. This can be easily done with a **touch of a button**, rather than with an injection. There is even a **temporary basal rate** option to proportionally reduce or increase the basal insulin rate, an option that can be used during exercise or illness, for example

*"The pump changed a lot in my life, I can do all I want. I can also take it off... when I take a shower, at the seaside or when I exercise." **Teresa, Italy***

- **More convenience:** the MiniMed Veo offers the additional convenience of a **wirelessly connected blood glucose meter**. This meter automatically sends blood glucose values to the pump, allowing **more accurate Bolus Wizard calculations**. It also **stores this information in a digital diary** along with your insulin doses

*Clinical studies\* confirm that many Type 1 patients of all ages who switch from MDI to insulin pump therapy report improvements in their quality of life and increased satisfaction with their treatment.*

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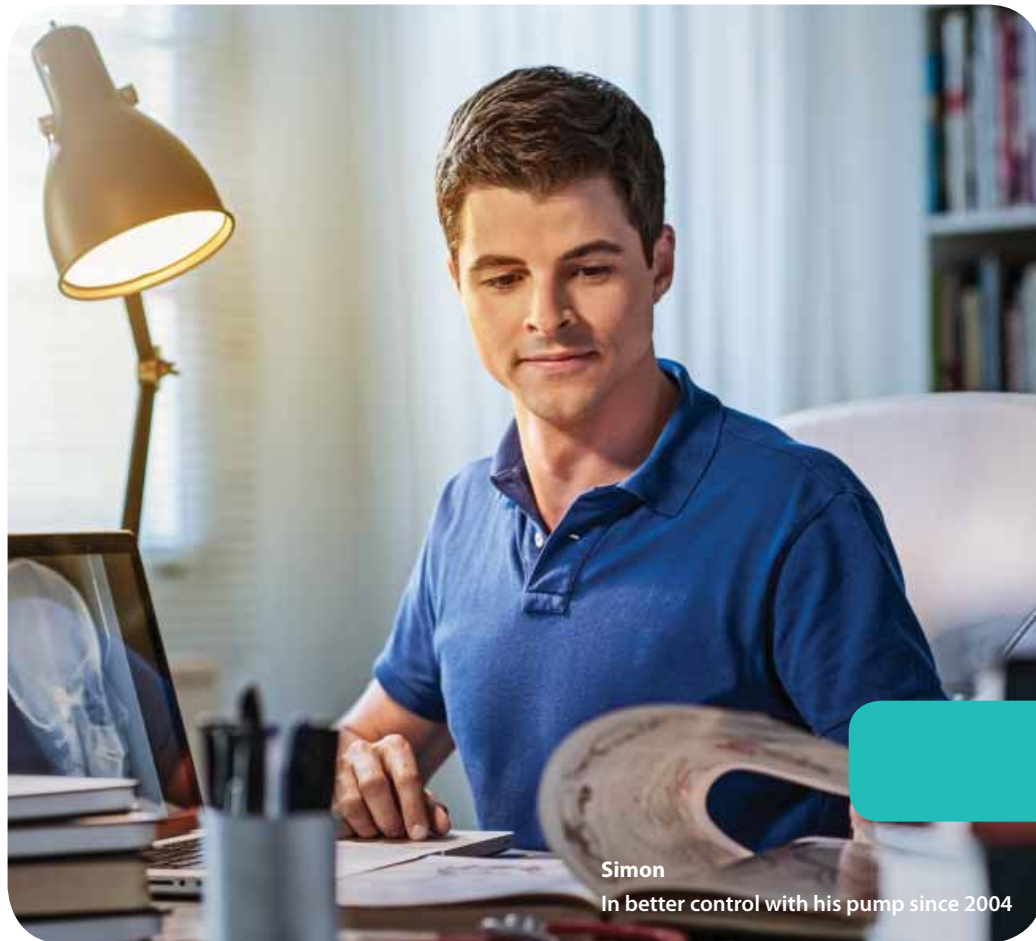
## How the MiniMed® Veo™ can help in daily life

The MiniMed® Veo™ can **help maintain target levels** and reduce hypoglycaemia\*. Easily managing your insulin needs can allow a more **flexible lifestyle**.

### MiniMed® Veo™ and Food

Food plays a central role in diabetes management. If you are using frequent injections, it can be more difficult to manage delayed meals, skipped meals or diverse diets. With the MiniMed Veo **balancing insulin requirements with food can be easier**, for example the different bolusing options can be used **to match the needs of the situation and the meal type**.

\*references kept on file and are available on request; please contact your local Medtronic representative.



**Simon**  
In better control with his pump since 2004

The **Bolus Wizard®** feature makes calculating the amount of insulin needed easier, as it **does the maths** based on: carbohydrate intake, blood glucose levels, insulin to carb ratios and the amount of active insulin in your body. This helps to ensure you are getting precisely the right amount of insulin to manage your glucose levels.

### MiniMed® Veo™ and Exercise

Regular exercise is important for body and mind and is recommended by most physicians. Exercise may also lower blood glucose levels. The MiniMed Veo offers **the ability to adjust the basal rate** of insulin as needed for the activity; from a competitive match to a gentle hike, and helps reduce the risk of post exercise hypoglycaemia. **Many athletes** with Type 1 diabetes use an insulin pump to gain better glucose control.

### MiniMed® Veo™ and Night Hypos

Basal needs may change over the course of 24 hours. With Multiple Daily Injections (MDI) long acting insulin doses are usually matched to the average need and typically do not cover for these fluctuations. With the MiniMed Veo, **different basal rates matched to hourly personal requirements can be set**, which could help to minimise hypoglycaemia, especially overnight when sleeping.\*

Following several years of diabetes, patients may lose their ability to sense impending hypoglycaemia (hypo-unawareness). The use of the MiniMed Veo **could help improve hypoglycaemia awareness** by reducing the mild hypoglycaemic events and reducing spikes in glucose levels, during the day and at night.\*

\*references kept on file and are available on request; please contact your local Medtronic representative.



*"Since going on a pump, Lara's blood glucose levels became stable and she had less hypos. It meant for me; less worries and more quality of life." **Andrea (Lara's mother), Germany***

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## Is an insulin pump right for me?

Many people with Type 1 diabetes may **benefit** from an insulin pump without even knowing it. In general if they experience any of the following, they could achieve better control with an insulin pump:

- Concerns about long-term complications
- Fear of needles
- Difficulty in managing highs and lows
- Fear of hypoglycaemia, especially at night
- HbA1c outside target range
- Reduced hypoglycaemia awareness
- Seeking more flexibility in everyday life

The best way to stay within a healthy glucose range is to test blood glucose levels (SMBG) at least 4 times per day and make adjustments to insulin as needed. The MiniMed Veo with the use of the Bolus Wizard® can make these calculations and **help you to make adjustments to improve glucose control.**

*“What shall I say? Now with the pump it’s no longer diabetes controlling me, but it’s me having control on diabetes.”* **Teresa, Italy**

Talk to your physician about insulin pump therapy and whether it may be right for you.

## Additional options available with the MiniMed® Veo™

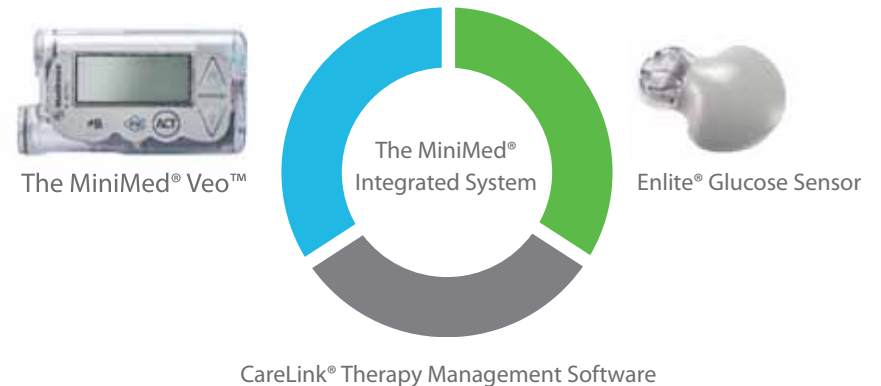
The MiniMed® Veo™ is also available with **the additional integrated** function of Continuous Glucose Monitoring (CGM) and CareLink® Therapy Management Software.

The MiniMed Veo when coupled with CGM is the **only insulin pump** with a feature which can **help reduce the impact of hypoglycaemia\***. If the glucose level falls too low, the MiniMed Veo can turn off insulin delivery for up to 2 hours. It can also **indicate if glucose levels are rising or dropping quickly by sounding an alert**. This can be a big advantage compared to SMBG alone as the MiniMed® Integrated System will also alert when crossing pre-set threshold limits and shows current glucose trends.

To learn more about these additional options and how they can improve diabetes therapy, please visit our website [www.medtronic-diabetes.co.uk](http://www.medtronic-diabetes.co.uk), or speak to your healthcare team.

\*references kept on file and are available on request; please contact your local Medtronic representative.

## The MiniMed® Integrated System



**Believe in Better Control**

If you have a question about insulin pump therapy or you would like to learn more about how a Medtronic insulin pump could give you Better Control then you can contact us by:

email: [believeinbettercontrol.uk@medtronic.com](mailto:believeinbettercontrol.uk@medtronic.com)

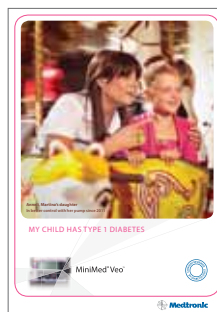
Phone: **01923 205167** Press option 3

or visit [www.medtronic-diabetes.co.uk](http://www.medtronic-diabetes.co.uk)



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