



Sabine

In better control with her pump since 2010

## WHAT CAN I DO TO HAVE A HEALTHY PREGNANCY WITH TYPE 1 DIABETES?



MiniMed® Veo™



For women with Type 1 diabetes, **preparing for pregnancy** or an **impending delivery** requires good planning and preparation. There will inevitably be many questions.

Having decided to start a family, the primary concern of every potential parent with Type 1 diabetes is the health of their future child. The key to a healthy pregnancy is to keep glucose levels under control, which can be challenging during pregnancy due to constantly changing hormone levels.

**Read the real-life stories** of other women with Type 1 diabetes and discover how they have found their way to a happy pregnancy thanks to better glucose control.

*“Two years ago, we decided that we would like to have a baby. Unfortunately, my blood glucose levels were not good enough at that time, which was a huge disappointment. Then, my doctor recommended insulin pump therapy to help me achieve the necessary HbA1c. Well, after just a short time with the pump my values were so good he said I could start trying for my baby. And very soon after that, I was pregnant! I think of my MiniMed Veo pump as a little miracle. But of course, the real miracle is my beautiful, healthy son.”* **Sabine, The Netherlands**



## Type 1 diabetes and pregnancy

With proper care and management, a healthy pregnancy and delivery are perfectly possible for women with Type 1 diabetes.

Whether **thinking about becoming pregnant** or if **already pregnant**, dedication and careful planning can help ensure a healthy baby. For a woman with Type 1 diabetes, there are additional factors worth considering before, during and after delivery.

### The body changes during pregnancy

During pregnancy, the body goes through many changes affecting insulin requirements, during which **it is essential to keep blood glucose levels under tight control**. This is critical because pregnant women can be subject to the following:

- **Hypoglycaemia:** pregnant women can be more prone to low blood glucose levels, especially while sleeping and overnight\*
- **Hyperglycaemia:** high blood glucose levels before and during early pregnancy are linked to a higher risk of miscarriage, birth defects and can create additional risks for the baby\*
- **Glucose instability:** morning sickness, post-prandial hyperglycaemia and changing hormone levels can disrupt a pregnant woman's eating and injection schedule, making it harder to stay within the target range, which can affect the growing baby\*

Every day can be different with diabetes. It is important to understand how the body changes over the course of the pregnancy in order to take better control.

*“To become pregnant, they say that you should have a nearly perfect HbA1c and unfortunately, mine was not. I was greatly disappointed at the start.”*

**Sabine, The Netherlands**

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

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## Insulin requirements may change through pregnancy\*

**Pre-Conception and 1st Trimester:** Maintaining the best possible glucose control before and at the start of pregnancy can reduce the risk of complications for the baby. However, it is also a time of increased risk of hypoglycaemia for the mother.

**2nd Trimester:** At this point, the placenta is fully developed and hormone levels begin to rise steadily, causing insulin requirements to increase as well. In particular the pre-meal boluses may have to be increased to keep tight glucose control after meals.

**3rd Trimester:** Maintaining tight glucose control throughout the last trimester can help to enhance the baby's final organ development, maintain a normal birth-weight and reduce the risk of hypoglycaemia for the baby.

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

**Labour and Delivery:** During delivery, glucose levels will be closely monitored to ensure they remain within the target range. Small boluses of insulin may be required, with many women opting to continue insulin pump therapy during delivery.

Immediately after delivery and up to 24 hours post-delivery, insulin requirements can decrease significantly and blood glucose target levels may be changed.

**Back at home:** Adjusting to life with the new baby often means unpredictable sleeping and eating schedules, which can be a challenge when also managing diabetes.

For breast feeding mothers glucose levels may drop quickly during and after feeding, making it important to check blood glucose levels regularly and reduce insulin doses when required.

## Reduce HbA1c, reduce complications

Maintaining tight blood glucose control is one of the objectives for all women with Type 1 diabetes during pregnancy. 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.\*

Because of this, women often find they need to intensify their therapy to achieve their glycemic targets without hypoglycaemia. This can include:

- Small correction boluses throughout the day when blood glucose is out of range, requiring more injections
- More accurate pre-meal insulin doses to help maintain tight glucose levels after meals and avoid additional corrections
- Frequently checking blood glucose levels to help guide therapy adjustments

*So, as a woman with Type 1 diabetes who wants to become pregnant or is already pregnant, how can you better keep your glucose level under tight control when your body's hormones are constantly changing?*

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



**Maria**  
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## For many women, an insulin pump offers an ideal solution

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

An insulin device 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**.

*“From my experience, I would advise all women with Type 1 diabetes who want children to inform themselves at an early stage about the possibility of using a pump, it makes pregnancy much easier.”* **Lydia, Germany**



Sabine's real size pump



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

The MiniMed® Veo™ allows for **better glucose control** as it **gives you 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
- **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.*

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

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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**.

- **The Bolus Wizard®** feature makes calculating the amount of insulin needed easier, as it **does the maths** based upon: carbohydrate intake, blood glucose levels, insulin to carb ratios and the amount of active insulin in your body. This can help to ensure you are getting precisely the right amount of insulin to manage your glucose levels
- **The MiniMed Veo pump** has a **sophisticated network of safety checks and systems**. If the safety network detects anything unusual, the pump notifies you of conditions that require your immediate attention

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Lydia  
In better control with her pump since 2011

## Infusion sets and pregnancy

The MiniMed® Veo™ has infusion sets and automatic inserters, with unique technology tailored to your body and lifestyle.

**Successful insulin delivery** relies on proper infusion set management. Changing your infusion set every 2 to 3 days can optimize the effectiveness of your therapy.



*"After a month of pump therapy my A1c dropped from 8,3 to 6,2 and I also found out I was pregnant! Changing from MDI to CSII I got a better glycemic control and also a new level of freedom I never thought I could have reached before!" **Maria, Italy***

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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 get 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 the therapy as needed. The MiniMed® Veo™ the use of the Bolus Wizard® can make these calculations and adjustments to help improve glucose control.

*"Thanks to the insulin pump, I gave birth to a healthy daughter- this was a miracle for me! Right now, I would never want to give my pump back."*

**Cindy, The Netherlands**

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

## Additional options available with the MiniMed® Veo™

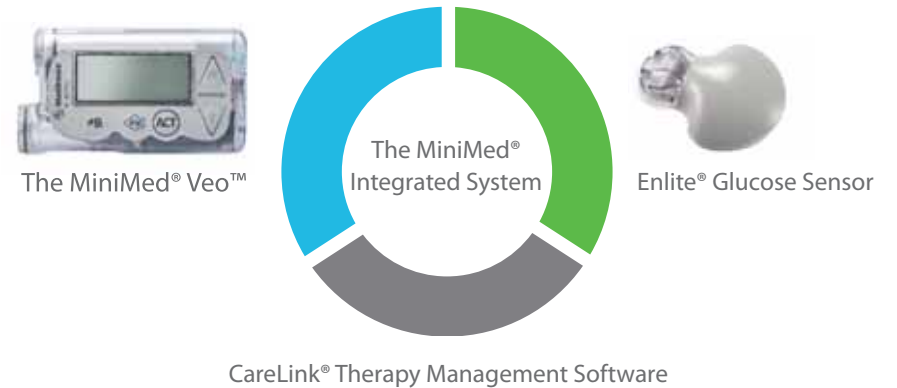
The MiniMed® Veo™ is also available with the additional integrated function of Continuous Glucose Monitoring (CGM) and CareLink® Therapy Management Software.

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.

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## The MiniMed® Integrated System




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WHAT CAN I DO TO REDUCE MY RISK OF DEVELOPING THE COMPLICATIONS OF TYPE 1 DIABETES?










MY CHILD HAS TYPE 1 DIABETES

I HAVE JUST BEEN DIAGNOSED WITH TYPE 1 DIABETES

I WISH THERE WAS ANOTHER WAY TO MANAGE HYPOGLYCAEMIA

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