Continuous Intraperitoneal Insulin Infusion – A Valuable Option When Subcutaneous Insulin Delivery Fails
Continuous intraperitoneal insulin infusion (CIPII) – a valuable option when subcutaneous insulin delivery fails

Insulin delivered by CIPII acts faster than insulin administered by continuous subcutaneous insulin infusion (CSII) or multiple daily injections (MDI). Therefore, CIPII more closely mimics physiological insulin secretion.

CIPII offers an effective and more physiological way of delivering insulin than CSII or MDI. Insulin administered intraperitoneally rapidly enters the portal venous system. Thus, insulin concentrations are high in the portal circulation while avoiding peripheral hyperinsulinemia, resulting in fewer severe hypoglycemic events and less glucose variability.
The Accu-Chek DiaPort system enables a fast and effective method of insulin delivery

Faster insulin delivery through intraperitoneal infusion results in a more physiological profile of plasma insulin levels compared with subcutaneous insulin delivery.¹⁴⁵

When delivering insulin via the Accu-Chek DiaPort system, the onset of insulin action occurs within a few minutes. It more closely mimics normal physiological delivery of insulin, which may assist in improving the blood glucose profile.⁴
Improved medical outcome: $^{1,2,3,6,7,8}$

The incidence of severe hypoglycemia with CIPII was less than half of the incidence with CSII. $^1$

![Bar chart showing the comparison of severe hypoglycemia between CSII and CIPII.](image)

**Continuous subcutaneous insulin infusion (CSII) using short-acting insulin lispro**

**Continuous intraperitoneal insulin infusion (CIPII) using the Accu-Chek DiaPort system and regular insulin**

**Substantial improvements in quality of life with the Accu-Chek DiaPort system:** $^1$

- For the overall diabetes quality of life (DQoL) score
- Less weight gain
Therapeutic advantages with the Accu-Chek DiaPort system

Intraperitoneal insulin therapy with the Accu-Chek DiaPort system offers a solution when subcutaneous insulin is not tolerated or reliably absorbed. 3,4,5,6

- **More rapid onset of insulin action** 4,5
  Insulin administered intraperitoneally rapidly enters the portal venous system. Therefore, it reaches the liver first without being distributed in the peripheral circulation. Insulin action starts much faster than with insulin delivered subcutaneously.

- **Reduction of the frequency of severe hypoglycemia** 1,2

- **Lower HbA1c values** 2,3,6,8

- ** Beneficial for those suffering from subcutaneous site issues** 6,7,8,9
  Such as allergic reactions to tape, nickel or Teflon®, as well as insulin absorption issues (e.g. real subcutaneous insulin resistance or insulin-induced lipodystrophy).

- **Improved quality of life** 1,2,3,6,8

Before port therapy

5 months after starting port therapy
Is the Accu-Chek DiaPort system right for your patient?

The port may be a suitable solution for your patients presenting with one of the following indications while on optimized subcutaneous insulin pump therapy:

- Frequent severe hypoglycemia
- Hypoglycemia unawareness
- Subcutaneous insulin resistance
- Not reaching HbA1c targets or only with increased frequency of hypoglycemic episodes
- Lipoatrophy
- Insulin-associated lipohypertrophy not controlled by injection site rotation
- Subcutaneous site issues, such as allergic reactions to tape, nickel or Teflon®, as well as insulin absorption issues[^3]^[^6]^[^7]^[^8]
- Marked fluctuations of glucose levels and insulin requirements during subcutaneous insulin therapy

[^3]: 3[^6]^[^7]^[^8]
Input from healthcare professionals and port users has led to major technical improvements of the second-generation system*

A larger handling aid makes it easier to connect and disconnect the infusion set.

The infusion set connects the port to an Accu-Chek insulin pump. Only Accu-Chek pumps are intended for use with the port.**
Clearer tubing makes it easier to see bubbles. The infusion set has a ball-shaped cannula, which avoids needle stick injuries.

The membrane seals the port, enabling patients to disconnect for showers, water activities or sports. It needs to be changed only every 6 months.

A more flexible fixation disc provides greater comfort.
The fixation disc is placed around the outer end of the port body, resting on top of the skin to increase stability. It is important to wear the disc at all times to avoid stress on the tissue that surrounds the port.

A flatter flower-shaped plate (diameter of 26 mm) placed under the skin helps to securely anchor the port body to the abdominal wall, supported by a newly integrated polyester felt band. The top of the port (with a diameter of 9 mm) extends approximately 5 mm above the surface of the skin.

The system now has a single, more soft and flexible catheter, which decreases discomfort and the risk of adhesions. A larger inner diameter and new trumpet-shaped tip reduce the risk of occlusions. It is available in 9 cm, 15 cm and 25 cm lengths.

* Compared with the first generation of the DiaPort device.
** The port is intended for use with the Accu-Chek Spirit Combo insulin pump.
Where is the Accu-Chek DiaPort system available?

Starting therapy with the Accu-Chek DiaPort system is only possible through dedicated centers, known as the “Accu-Chek DiaPort Centers of Excellence”.

**Australia:**
To obtain further information about **Australian Centers of Excellence** for the Accu-Chek DiaPort system, please contact our Accu-Chek Pump Careline on:
P +61 (0) 8 0063 3457

**Belgium:**
To obtain further information about **Belgian Centers of Excellence** for the Accu-Chek DiaPort system, please contact our hotline on:
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References

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CIPII - A Valuable Option When Subcutaneous Insulin Delivery Fails \(^{1,2,3}\)

**Improved diabetes treatment through continuous intraperitoneal insulin infusion with the Accu-Chek DiaPort system: \(^{1,2,3}\)**

Assisting in reaching therapy goals despite severe hypoglycemia, subcutaneous insulin resistance, lipohypertrophy/lipoatrophy, skin problems or allergies to needles

**Improved medical outcome: \(^{1,2,3,6,7,8}\)**

- Quality of life improvements
- Significant reduction in severe hypoglycemia
- Less weight gain
- Improved HbA\(_{1c}\) values

**Improved mode of action: \(^{4,5}\)**

- More rapid uptake of insulin into the liver
- Closely mimics physiological insulin delivery

The Accu-Chek DiaPort system offers a valuable solution when subcutaneous insulin is not tolerated or reliably absorbed. It can also assist those suffering from subcutaneous site issues – such as allergic reactions to tape, nickel or Teflon\(^{\circ}\). \(^{4,5,6,7,8}\)