Health Canada licenses world's first and only infusion set that doubles wear time up to 7 days with Medtronic insulin pumps

Medtronic Canada is pleased to announce Health Canada has licensed the Medtronic Extended infusion set – the first and only infusion set that can be worn for up to 7 days with Medtronic insulin pumps. An infusion set is the tubing and cannula that delivers insulin from the insulin pump to the body and typically requires a set change every few days. The Medtronic Extended infusion set, created in an exclusive partnership with Convatec Group*, is licensed for subcutaneous infusion of insulin in the management of diabetes mellitus, and is compatible with Medtronic MiniMed™ 630G, 670G, and 770G insulin pumps.

This innovation **doubles the length of time an infusion set can be worn**so users can safely stay on insulin pump technology with fewer interruptions and insertions[1] while introducing enhanced convenience and comfort[2] to their diabetes management routine.

"When patients first begin using a pump, doctors and other healthcare providers reinforce the need to change their infusion set every two to three days to limit the risk of infection and other safety concerns. For many people, this means scheduling life around infusion set changes, which may not be at the most convenient times– turning around as you are headed out the door when you suddenly remember to change your infusion set or adding a few minutes to a tired child's bedtime routine with an infusion set change," said Dr. Robert Vigersky, Chief Medical Officer, Medtronic Diabetes. "With the Medtronic Extended infusion set, these life interruptions are reduced with an innovation that doubles the wear."

The innovative design of the Medtronic Extended infusion set stems from advanced materials that help reduce insulin preservative loss and maintains insulin flow and stability. The new tubing connector improves physical and chemical stability of insulin[3], ensures reliability of infusion site performance, and reduces the risk of infusion set occlusion[1]. The adhesive patch has an adhesive layer that extends wear time and provides comfort[2] and durability for up to 7 days. In addition to the new infusion set, the Medtronic Extended reservoir is also tested and approved to keep insulin stable and safely used for up to 7 days.

In clinical studies of the Medtronic Extended infusion set, study participants observed a decrease in the number of times an infusion set needed to be changed by 50% and the number of infusion set failures associated with high glucose levels was lowered.[3,4] Study participants using the Medtronic Extended infusion set commented on the new infusion set being more comfortable to wear compared to their previous infusion sets and were happy with the longer wear feature in helping reduce the overall burden of insulin pump therapy.[3,4]

Additionally, the reduced number of infusion set and reservoir changes can result in annual costs savings of insulin due to a reduction in unrecoverable insulin, as well as plastic waste reduction of up to 50%.[5,6]

“We’re thrilled to deliver this unique innovation in our mission to help ease the burden of living with type 1 diabetes,” says Laura Cameron, senior director of Endocrinology at Medtronic Canada. “The Medtronic Extended infusion set will help increase convenience, simplicity and sustainability, and our insulin pump customers can keep the infusion sites they prefer working longer.[1] With all the daily decisions and actions required to manage this chronic condition, we’re pleased to have an option that can help make life a little easier.”

The Medtronic Extended infusion set was developed in partnership with Convatec Infusion Care, the world's leading developer and manufacturer of infusion solutions. Product availability is expected in the Spring of 2023.

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* The Medtronic Extended Infusion set is licensed to Unomedical A/S, a subsidiary of Convatec Group Plc.

[1]Zhang G, et al. Development of the Extended Infusion Set and Its Mechanism of Action. J Diabetes Sci Technol. 2022 Jul 25:19322968221112120. doi: 10.1177/19322968221112120. Epub ahead of print. PMID: 35876264.

[2]Zhang G, et al. 986-P - Assessment of adhesive patches for an extended wear infusion set. 80th ADA International Conference, June 2020.

[3] Brazg R, et al, Diabetes Technol Ther. 2022; Mar 24. doi: 10.1089/dia.2021.0540.

[4] Ilany J, et al. Abstract 416 - Clinical study of a new extended wear infusion set design. 13th ATTD International Conference. February 2020.

[5] Kwa et al, The improved survival rate and cost-effectiveness of a 7-day continuous subcutaneous insulin infusion set, J Med Econ. Jan-Dec 2021 ;24(1):837-845.

[6] Fusselman et al. The Extended Wear Infusion Set- A Design for Plastic Waste Reduction, Journal of Diabetes Science and Technology, 2021, 15 (3), 397–477.

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