

TECHNOLOGY OFFER

IMPROVED GLUCOSE MONITORING DURING EXERCISE USING WEARABLE DEVICES

Continuous measurement of blood glucose can improve the quality of life of people with type 1 diabetes. However, Current continuous glucose monitors (CGM) show a greater measurement error during aerobic exercise periods. The use of increasingly accessible physical activity monitoring devices opens up new possibilities to improve accuracy during these periods. Specifically, the method and system suggested helps to avoid hypoglycaemic situations due to a greater accuracy of glucose measurement, allowing better glucose control during exercise.

DESCRIPTION OF THE TECHNOLOGY

In the proposed measurement method, metabolic equivalent signals (MET) or normalized measure of energy expenditure, and skin temperature, are used to derive a static regression between the estimation error and said signals, which is subsequently used to make corrections. Thus, the system can be integrated with the current CGM generation, only by implementing the sensors present in the physical activity monitoring devices integrated in a single device together with the CGM.

APLICATIONS

Manufacturers of continuous glucose monitors and artificial pancreas systems can use the current technology

COMPETITIVE ADVANTAGES

- Greater accuracy in glucose estimates than other market devices during exercise.
- Possibility of integration into different monitoring systems: artificial pancreas, automatic pump suspension systems and CGM-based decision support systems for glycemic control.
- Improving the quality of life of people with diabetes by reducing the risks of hypoglycemia during physical exercise.



IP PROTECTION

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TIME-TO-MARKET

Prototype

BUSSINES OFFER

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RESEARCH GROUP

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