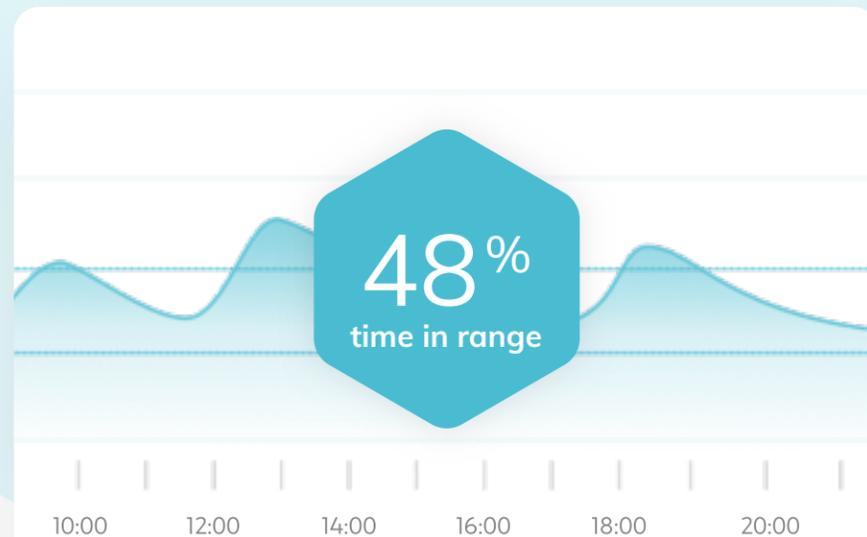


The Science



1

Measure Time in Range (TIR) during 3 consecutive days

2



Optimise therapy and consult on modifications to diet and exercise

3



Together improve therapeutic outcomes

A picture is worth 1000 words

TIR (Time-in-Range) is the percentage of time that a person spends with their glucose levels within a target range.

Spending more TIR helps minimize both short and long-term health complications. TIR goals are different for every person and may depend on medication, type of diabetes, diet, age, general health, and risk of hypoglycaemia. In general, people with diabetes should aim to spend as much Time-in-Range as possible, taking care to avoid low blood sugars and too much burden. Studies highlight that even a 5% change in TIR is significant, which is equal to approximately one more hour per day spent in-range.

Experts recommend following target ranges for people with diabetes:

Type 2 diabetes: At least 70% of the day in 3.9-10.0mmol/L (70-180 mg/dl)

Those who are older or at high risk: At least 50% of the day in 3.9-10.0 mmol/L (70-180 mg/dl)

Every 10% increase in time spent in range results in a 0.5% (5.5 mmol/mol) improvement in HbA1c.

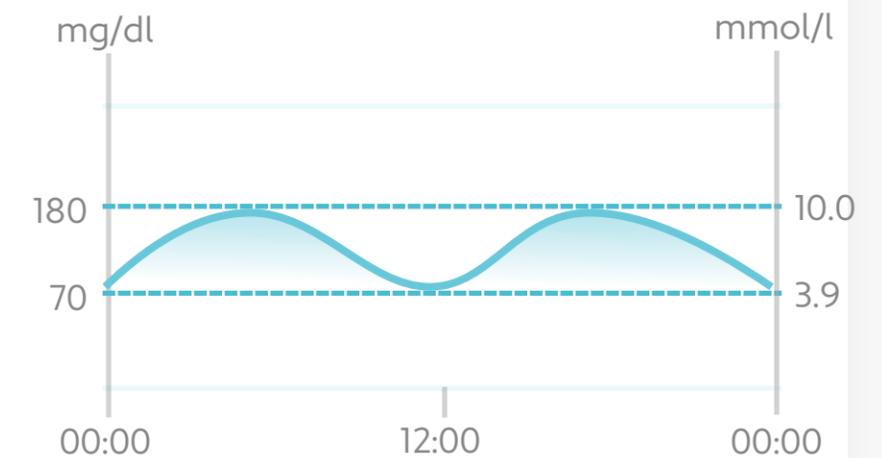
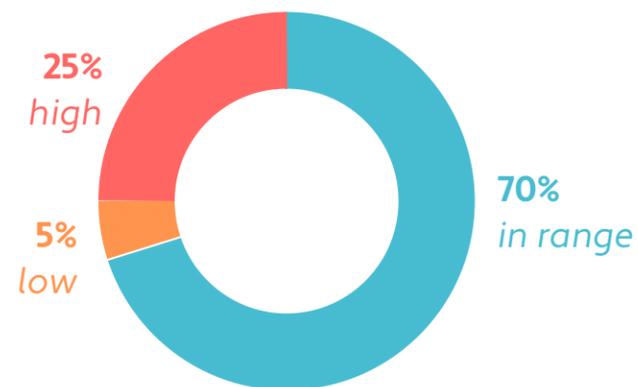
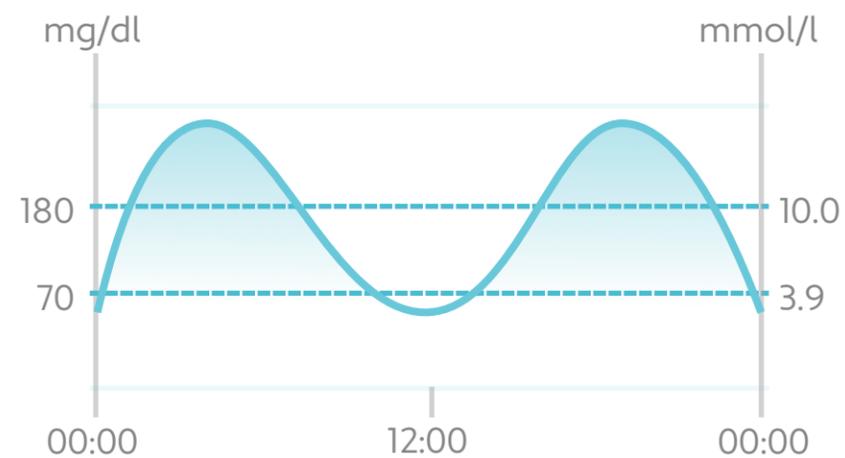
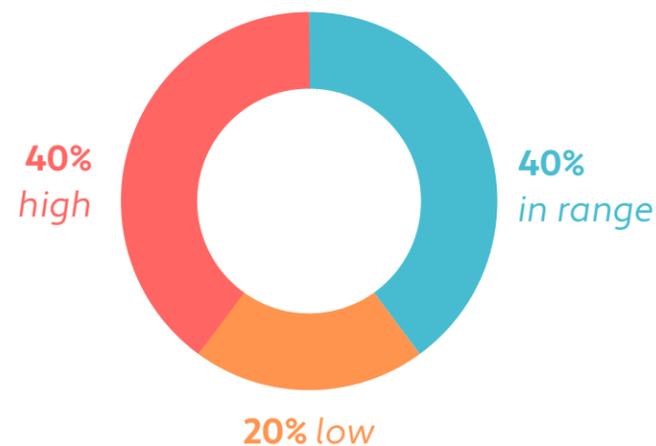
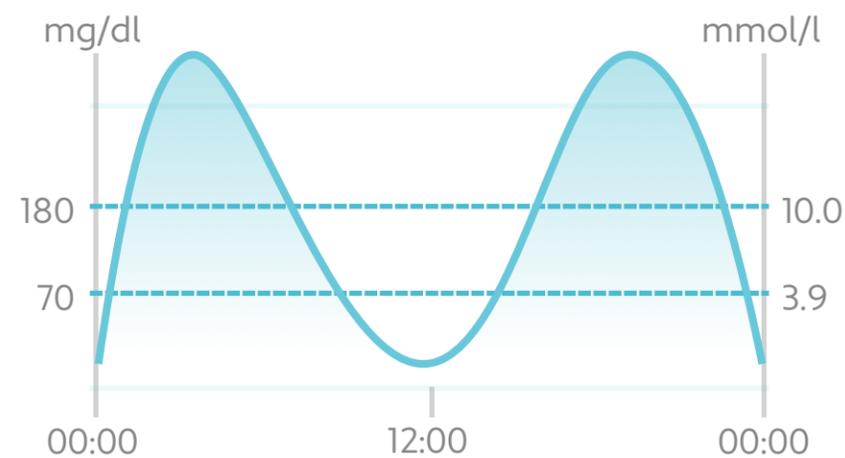
Put simply, spending more time in range has a positive impact on HbA1c:

Percent of time in range 3.9-10.0 mmol/L (70-180 mg/dL)	Approximate HbA1c (%)
70%	53 mmol/mol (7%)
50%	64 mmol/mol (8%)

The advantages of TIR vs. HbA1c

HbA1c is the average blood sugar over a two-to-three-month period. As an average it cannot show time spent out of range; in fact an average hides the time spent out of range. Here an illustration:

The same HbA1c presented differently



Benefits of spending greater Time-in-Range

Time-in-range is a predictor of long-term diabetes complications. Researchers found a strong correlation between different levels of time-in-range and diabetes late-stage complications such as: retinopathy (eye disease), neuropathy (nerve disease), cardiovascular (heart and blood vessel) disease and microalbuminuria (kidney disease). As time-in-range increased, complications decreased

A recent study by Beck et al., showed a strong correlation between TIR and the development of microvascular complications

Spending just 10% less Time in Range (TIR) increases the risk of retinopathy progression and microalbuminuria development by 64% and 40% respectively

sugarBEAT® CGM can be used to effectively diagnose and monitor glycemic excursions with people with Type 2 diabetes and Pre-diabetes to better control and treat the disease before major damage occurs to the microvasculature



100%
in range

Reasons why CGM should be used to support blood glucose management in people with diabetes

A person with Type 2 or Pre-diabetes using sugarBEAT® real-time CGM can better understand how variables like food, exercise and sleep directly impact and affect blood glucose in real time and can use this knowledge to change behaviour to more effectively control their diabetes.

Healthcare Professionals can use TIR to gain valuable insights on a person's glucose levels and fluctuations to make better decisions on diabetes therapy, e.g. type of oral hypoglycaemic agents.

Together improve therapeutic outcomes.

Sources

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