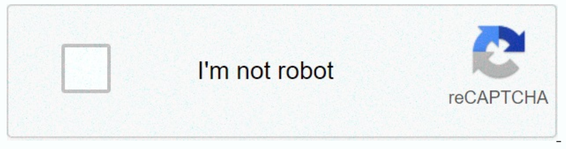

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Dawn phenomenon and somogyi effect pdf

We include products that we think are useful to our readers. If you purchase this page through links, we may earn a small reward. Here's our process. The somogyi effect leads to high blood sugar levels in people with diabetes. It occurs when low blood sugar triggers a rebound effect, leading to high blood sugar. If a person detects high blood sugar levels in the morning, the Somogyi effect may be responsible, but the increase may have been due to a similar effect called the dawn phenomenon. Many people know about the Somogyi effect, but it is still controversial due to a lack of scientific evidence. People with type 1 diabetes are more likely to experience it than people with type 2 diabetes. Distinguishing between the Somogyi effect and the dawn phenomenon is important because it may indicate that a person needs to adapt their treatment plan. The Somogyi effect is named after the Hungarian American researcher Michael Somogyi, who first described it. It occurs when the body's defenses respond to long periods of low blood sugar. This can happen when a person trains a lot, goes a long time without a snack or takes more insulin before going to bed than they need. Insulin reduces blood glucose levels. If glucose levels fall too far, blood sugar drops. The medical term for low blood sugar is hypoglycaemia. Hypoglycaemia causes stress in the body, and this can trigger the release of hormones. These include stress hormones:cortisololepine (adrenaline) growth hormone gulucagonGlucagon triggers the liver to convert stocks of glycogen into glucose. This can cause blood glucose levels to rise to high levels. Stress hormones keep glucose levels high because cells don't respond as well to insulin. This is insulin resistance. According to the National Institute of Diabetes and Digestive and Kidney Diseases, blood sugar levels should be: Just before eating: 80-130 milligrams per deciliter (mg/dl)Two hours after the start of a meal: less than 180 mg/dl For glucose, there is no single target in the morning. The doctor will help determine each person's goals. Bloodlucose monitor kits can be purchased online. ControversyDoctors and people with diabetes often point to the Somogyi effect, but there is little scientific evidence for the theory. For example, one small study found that hyperglycaemia — high blood sugar — is likely to occur if a person does not take enough insulin before bedtime. The researchers also found that participants who appeared to have rebound hyperglycaemia did not have higher levels of growth hormone, cortisol or gllucagon than others. A 2007 study included 88 participants with type 1 diabetes who underwent continuous glucose monitoring (CGM). Researchers found that participants who experienced hyperglycaemia when awakened were not hypoglycaemia during the night. In other words, there was no evidence of the Somogyi effect. However, in another study, researchers analyzed glucose profiles, glucose profiles, in 85 people with type 1 diabetes, data for 255 nights. They found that 61.2% of participants had low blood sugar overnight and that 82.4% of participants had high levels in the morning. The researchers determined that:60% of participants, high morning glucose was caused by Somogyi effectIn 27.1% it was due to poor glucose controlIn 12.9% it was due to the dawn phenomenon. They concluded that the Somogyi effect was the most common cause of morning hyperglycaemia in people with type 1 diabetes who did not treat their blood sugar effectively. The dawn phenomenon or dawn effect is similar to the Somogyi effect, since people experience hyperglycaemia in the morning, but the causes differ. Dawn is accompanied by an increase in blood sugar in the early morning. This is due to a decrease in insulin levels and an increase in growth hormones. Everyone experiences higher blood sugar levels in the morning, regardless of whether they have diabetes or not. If a person does not have diabetes, the body can respond to an increase in blood sugar by releasing insulin, which maintains a stable glucose level. This essentially invalidates the phenomenon of dawn. The difference between the Somogyi effect and the dawn phenomenon is that the Somogyi effect is the answer to low blood sugar during the night. Testing blood sugar levels at 3.m and again in the morning can help distinguish between different types of changes. Blood sugar, which is low at 3.m suggests a Somogyi effect, while high or normal levels at the time suggest that the dawn phenomenon causes high morning blood sugar. Share PinterestChecking low glucose levels at 3 a.m.m high concentration awakening can help identify the Somogyi effect. The symptoms of somogyi effect begin when they wake up from high blood glucose levels that do not respond to increased insulin doses. Symptoms also include low blood sugar levels at 2.m or 3:00 a.m, as well as the following symptoms of low blood sugar:night sweats a quick heart rate wakes up with a headache full of headaches filled with vision-filled mouthfatigueincreased appetitethirstHere, to learn more about high blood sugar or hyperglycaemia. The somogyi effect occurs in people with diabetes who use insulin therapy to control their condition. It can happen when a person: taking too much insulin at night does not eat enough before going to bed These factors can cause blood glucose levels to drop too low. The body then reacts by releasing hormones to raise levels. Sometimes, however, blood sugar becomes too high. If a person experiences one or both of the following, they should see a doctor: low blood sugar around 3.m.high blood sugar in the morning The doctor will help the person adjust their treatment plan. A person may have a Somogyi effect if they:have an unexplained high level of glucose in the morning with hyperglycaemia in the morning, which resists treatment with increased insulin Before a doctor can diagnose the Somogyi effect, the person must take blood sugar over several nights. They should check their blood sugar levels:before going to bed at 3 a.m.m.when they wake up at 3:00 a.m.m and high readings when they wake up indicate the Somogyi effect. Regular glucose monitoring using the CGM system can be useful as it records changes over time. It can indicate other episodes of low blood sugar that can lead to rebound hyperglycaemia. This can help a person manage the risks associated with high blood sugar. Some people do not experience typical symptoms of low blood sugar and may be unaware that they have it. If your blood sugar drops too low, there can be serious consequences. Read more here about the effect of low blood sugar. The only way to prevent the Somogyi effect is to keep blood sugar stable with the help of effective glucose control. Anyone who has difficulty controlling blood sugar fluctuations should talk to a doctor who will help adjust the treatment plan. Treatment options include: changing the timing of insulin reduction before switching insulin to a snack at an evening insulin dose, taking into account lifestyle factors such as stress and exercise The doctor may recommend CGM for long-term treatment of diabetes and the effect of Somogyi. The CGM system can alert people when their blood sugar drops too high or low. A person may need to adjust the insulin dose, and taking a higher dose at night may increase the risk of Somogyi effect. For this reason, your doctor may recommend checking blood sugar at 3.m 00 in the evenings following the increased dosage. If significant fluctuations occur, the doctor may recommend gradually increasing the meaa dumours to give the body more time to adapt. What are the best bedtime snacks for people with diabetes? Find out here. Adjusting the diabetes treatment plan to better control blood sugar levels can help solve the Somogyi effect. Anyone with glucose and high blood sugar fluctuations in the morning should consult a doctor before changing insulin therapy. In addition to insulin control, diet, exercise and other lifestyle factors can help control glucose levels and affect the outlook for people with diabetes. I've recently been diagnosed with type 1 diabetes. I am aware that I have high blood sugar in the morning, but I do not know whether it is the Somogyi effect or the dawn phenomenon. Does it matter what it is? Either can be a sign that a person's diabetes medication may need to be adjusted. Separating the Somogyi effect and the dawn phenomenon is important because it can show how medication needs to be adjusted. Considering that there is no noticeable low blood sugar during the night in the dawn phenomenon, a person may need additional medication that has timed to lower their morning level. Treatment would be different if the Somogyi effect were In this case, it may indicate that: should be adjusted to prevent hypoglycaemia during the night. Deborah Weatherspoon, PhD, RN, CRNA Responses represent the opinions of our medical experts. All content is strictly information and should not be considered as medical advice. Advice.