Curing diabetes? New therapy: The how well the min

New therapy: That is how well the minor bowel intervention works Bank saved! Discussion with Commerzbank CEO Manfred Knof



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Restart for the bowel

A procedure in the digestive tract **brings new hope to diabetics.** Its effect is similar to that of the Fat-Dissolving injection

alad with tuna and olive oil are recently more often on the menu of Karsten Reiners, 61, from Krefeld. Victor Weichenrieder from Fuhlendorf near Hamburg of the same age rather sticks with corned beef, steak, and fish. Both men say that they were no longer hungry after that, although they largely omit the typical fillers like potatoes and rice. They do not consume highly processed foods such as frozen pizza or chocolate bars at all. The doctors strictly instructed them on this. If they eat too many carbohydrates too quickly that increase blood glucose, they put the success of the intervention that Reiners and Weichenrieder underwent at risk.

The new method is called duodenal mucosal resurfacing and can virtually cure people with diabetes. That is a bold statement and also requires some limitations. Thus, the procedure potentially only benefits type 2 diabetics, so the large majority of the at least eight million diabetics in Germany. In them, the metabolic disorder develops only over the course of their life. The wrong diet and insufficient exercise are common causes.

The anti-diabetes intervention has not vet established itself. The statutory health insurances reimburse the costs of about 6,000 Euros under the title "New examination and treatment method" only upon request. In any case, the blood glucose decreased in patients Reiners and Weichenrieder to values that allowed them to omit some medicines. At the same time, they lost weight within only a few months, from 105 to 92 and 116 to 106 kilograms, respectively. "The metabolism works perfectly again", Reiners says.

With heat against the mucous membrane

The researchers were not yet able to clarify in detail what exactly changes in the organism during the almost two-hour intervention. But some fundamental studies and also systematic evaluations of patient stories support that it works. The principle: When physicians ablate superfluous mucous membrane in a short section of the bowel, this initiates a chain of hormonal reactions that lower the blood glucose.

Diabetes, in which the glucoseregulating hormone insulin fulfils its function more and more sluggishly, changes the body in many ways. Diabetics

Clean-up in the intestines

This graphic illustrates the DMR procedure. The operator pushes a catheter into the duodenum. Strongly heated liquid in a balloon ablates a part of the mucous membrane

become more susceptible to infections, their blood flow is affected, their vision decreases, their kidneys suffer injuries. Digestion also changes. In the duodenum, the first, about 30 cm long section of the small intestine, the thickness of the mucous membrane increases two to This threefold. process apparently stimulates adverse substances and diminishes favorable hormones at the same time.

Humans need these hormones for a healthy metabolism. They block the appetite, are involved in the release of insulin and the timespan in which the stomach empties.

The intervention improves the situation. The physician pushes a thin tube through the esophagus and stomach into the duodenum. The patient lies there anesthetized but does not need to be ventilated. Once the target has been reached, saline solution is sprayed from tiny nozzles. That loosens the mucous membrane. Then, the physician heats water in a balloon at the catheter multiple times to 90 degrees for several seconds. Thus, the mucous membrane is atrophied and eroded, or as medical professionals say, ablated.

Medical professionals have been following the concept since about the year 2015. In Germany, the DMR, duodenal mucosal resurfacing, had its premier only last February. In the meantime, the operator during this premier, Torsten Beyna from the Protestant Hospital in Düsseldorf, has treated 18 people with DMR. There were no complications, he says. The risks - in the worst case internal injury - were comparable to that of a gastroscopy.

Beyna cannot say much about the record of success. That is understandable, because the so-called follow-up period is short. In his first patient, diabetes had been so advanced that he had to inject insulin. Six weeks after the DMR, the man was able to omit it and he also no longer had to take relevant medicines. "The DMR procedure apparently reduced blood glucose more strongly than most diabetes medicines", Beyna says, but he also cautions: "A lot depends on whether the patient goes back to old, unhealthy habits." They should change their diet, for example eat more high-fiber whole grain products, legumes, fruit, and vegetables.

The gastroenterologist Wolfgang Schepp, who has performed duodenal mucosal resurfacing five times so far in München-Bogenhausen, estimates that the duodenum remains in its restored condition for one to two years, "maybe even a bit longer". Then, the procedure may have to be repeated. Schepp thinks this is acceptable.

Alternative to Fat-Dissolving injection?

The surgical restart in the intestine may also alleviate a grievance that that has seriously worried diabetologists and their patients since the success of the fatdissolving injections (FOCUS 12/23). The injections namely do not only help obese people. They originally been approved and are very effective in the treatment of diabetes. "We have difficulties to obtain these agents for our patients", Stephan Martin, Director of the West German Diabetes and Health Center in Düsseldorf

Images

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Away from the injections About 1.5 million type 2 diabetics in Germany inject themselves with insulin.

complains. The reason for this is, among other things, that non-specialists are prescribing the fat-dissolving substances semaglutide and tirzepatide for healthy overweight people. The one or other batch may have gone to well-paying buyers abroad. The internet trade appears to worsen the shortage in addition. The DMR method can be an alternative here. Martin recommends it to certain patients, sends them to operator Beyna, and also cares for them after the procedure.

Medicine and intervention appear to have a very similar effect. One of the hormones that increasingly occur after the DMR procedure and curb the appetite, is called GLP-1. Semaglutide und tirzepatide imitate exactly this substance. The parallel affirms that the mucosal ablation is beneficial. It is well possible that it even turns out to be superior to the pharmaceuticals in some patients. Some the fat-dissolving do not tolerate injections. In addition, the weight usually increases again as soon as they are discontinued.

In the meantime, a solution is imminent in the conflict between diabetics and obese people. Semaglutide supposedly will soon be available also in Germany under the trade name Wegovy for people wanting to lose weight. Then, the diabetics will likely have enough batches their medicine left. Several of manufacturers furthermore work on GLP-1 analogs for obese people in tablet form. If they meet expectations, the curve of new type 2 diagnoses, which had been increasing for years, could finally point downward.

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