SUPPLEMENTARY METHODS

Surgical Model

Pre-operatively, all animals were caged overnight on a wire tray and fasted. Animals then underwent either a vagal-sparing RYGB, or a sham laparotomy. Animals were maintained on wire trays for 5 days post-operatively, and provided ad libitum access to tap water and a liquid diet (Chocolate-flavored nutritional supplement drink, 250kCal/ 250mL; Walgreens, Deerfield, IL). Animals were pair or single-caged. Subsequently, animals were provided excess high-carbohydrate diet at night-time only (43% carbohydrate, 41% fat; Western Diet, Research Diets, New Brunswick, NJ). Nightly food intake was recorded, and animals were weighed daily at HALO-0.

In each case, animals were anesthetized with 1-2% isoflurane in oxygen, and an upper midline laparotomy (3-4cm incision) performed. For RYGB animals, the stomach was mobilized by opening the lesser sac through the greater omentum. The vagus nerve and accompanying right and left gastric vasculature were gently dissected from the lesser curve, and the body of the stomach divided between two hemostats, leaving a 1-2mL gastric pouch including an area of glandular mucosa (See Figure 1A). The ends were oversewn with 4/0 PDS and then 6/0 running sutures, before tacking the gastric pouch and remnant together at the greater and lesser curves using 4/0 vicryl. A 1cm gastrotomy was made, and a Roux-en-Y reconstruction created with a 10cm length Roux limb, and a biliopancreatic (BP) limb extending 16cm from the ligament of Trietz. The proximal cut end of the BP limb was secured with a 4/0 vicryl tie, and drained into the Roux limb using a side-to-side anastomosis with 1cm lumen. All anastomoses were completed with 6/0 PDS continuous sutures. The completed operative procedure is

shown in Figure 1B. The abdomen was lavaged, before closing the abdomen in two layers with 3/0 vicryl. Median operative time was approximately 65 minutes. For sham animals, after performing the laparotomy, the intestine was gently handled for 60 minutes before lavage and closure of the incision as above. Post-operatively, animals were recovered in a warm box before return to the animal facility. All animals were provided 0.05mg/kg buprenorphine subcutaneously twice a day for 48 hours.

Primers for qPCR

Sglt1 Sense	CCAAGCCCATCCCAGACGTACACC
Sglt1 Antisense	CTTCCTTAGTCATCTTCGGTCCTT
Actin Sense	GGATCAGCAAGCAGGAGTACGA
Actin Antisense	AACGCAGCTCAGTAACAGTCCG

Thermal cycler conditions used were 2 min 50˚C; 10 min 95˚C; followed by 40 cycles of 15 sec at 95˚C and 1 min 60˚C. Dissociation curves were obtained to ensure generation of a single, authentic amplicon.