Supplemental Data

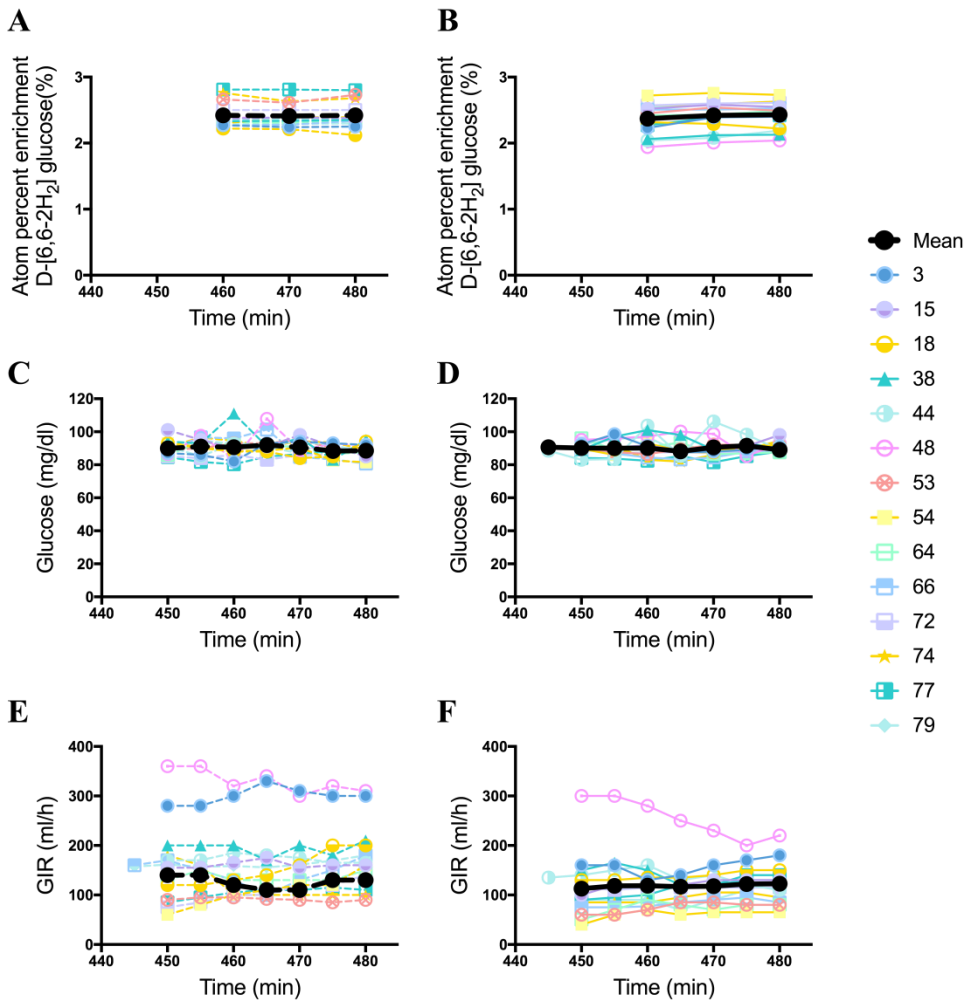

Figure S1: Steady state parameters during hyperinsulinemic-euglycemic clamp experiments in humans. Steady state was reached between 450 and 480 minutes of the experimental procedure. Dashed lines represent conditions after administration of VCL, whereas continuous lines represent conditions after PO. The thicker black line in each graph represents the mean, while each participant is represented by a different color and symbol combination. Between 450 and 480 minutes, atom percent enrichment of D-[6,6-$2H_2$] glucose equilibration was reached after VCL (A) and PO (B), as was steady state of glucose after VCL (C) and PO (D). GIR also reflects steady state after VCL (E) and PO (F). VCL: vehicle, PO: palm oil, GIR: glucose infusion rate.

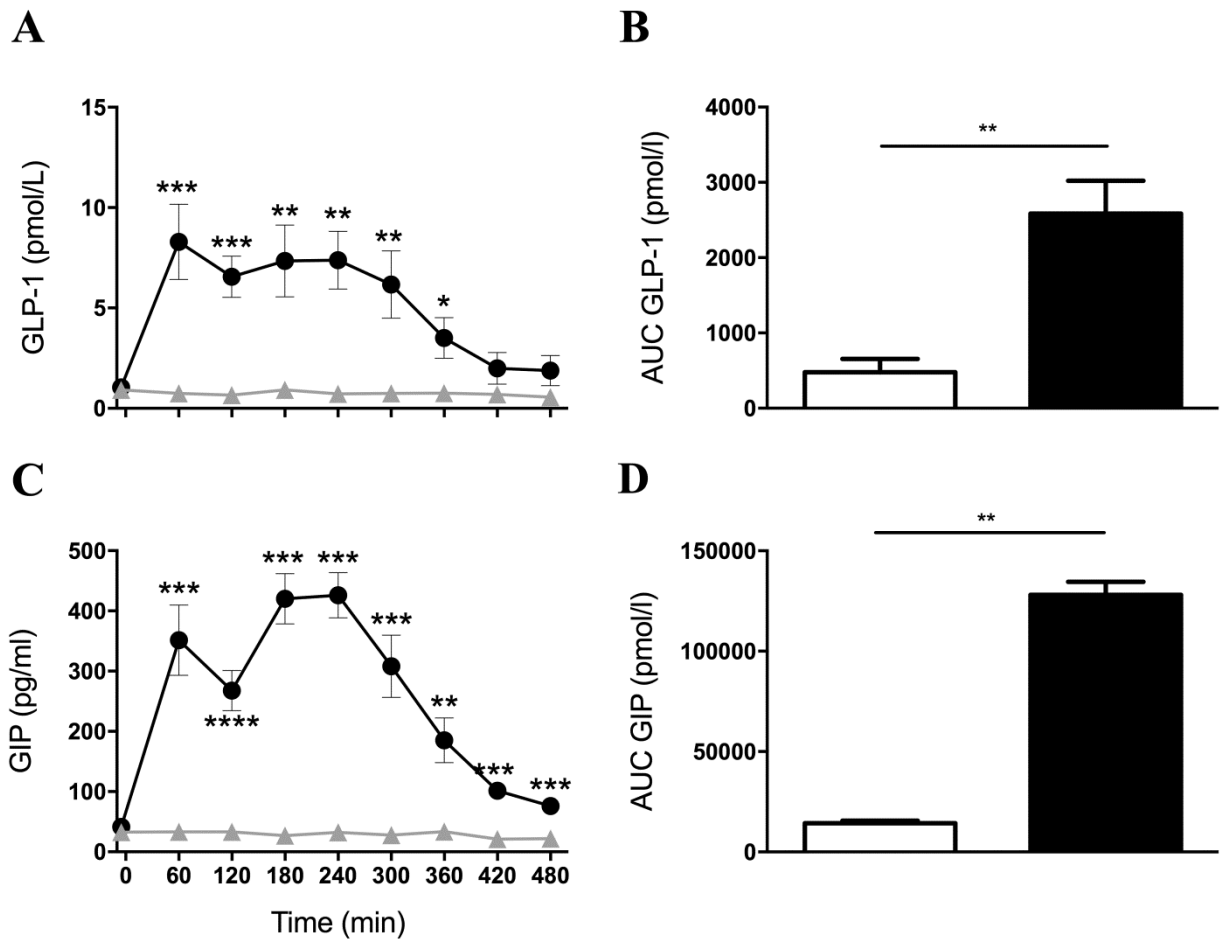

Figure S2 Circulating incretin concentrations in humans. Incretins were measured at -5 min of VCL/PO administration, and every hour until the end of the experimental procedure. Hyperinsulinemic-euglycemic clamp took place from 360-480 min. Represented are the time course (A) and AUC of GLP-1 (B), as well as time course (C) and AUC of GIP (D) after ingestion of VCL (gray triangles and empty bars respectively) and of PO (black circles and black bars respectively). Data are shown as mean ± SEM, n=8, **p<0.005. GLP-1: glucagon like peptide 1, GIP: gastric inhibitory peptide, VCL: vehicle, PO: palm oil, AUC: area under the curve.

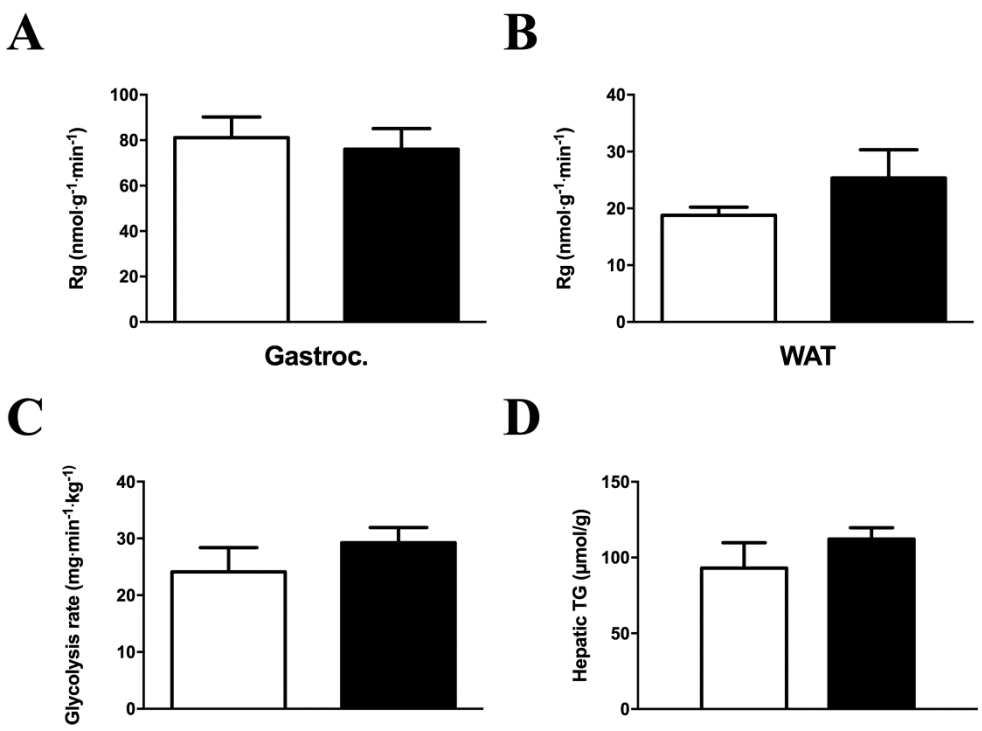

Figure S3 Parameters of glucose uptake, disposal and TG handling in mice. 2-[^{14}C]deoxyglucose was administered to mice after conclusion of clamp steady state at minute 240 of the experimental procedure. Tissue specific glucose (Rg) uptake in mice was then calculated from plasma and tissue 2-[^{14}C]deoxyglucose content. Rg was unchanged in the gastroc. muscle (A) and in WAT (B) after PO (black bars) or VCL (empty bars). Glycolysis rate was calculated from the quantification of ^{3}H and ^{14}C radioactivity after evaporation of $^{3}H_2O$ and are depicted in(C). Hepatic TG were biochemically estimated (D). Data are mean ± SEM, n=6-10. Gastroc.: gastrocnemius muscle, WAT: white adipose tissue, TG: triglycerides, VCL: vehicle, PO: palm oil.

Table S1 Time course of inflammatory and stress biomarkers

Time (min)	TNFα (pg/ml)		IL-6 (pg/ml)		Fetuin A (ng/ml)		Chemerin (ng/ml)		Omentin (ng/ml)		Cortisol (µg/dl)	
	VCL	PO	VCL	PO	VCL	PO	VCL	PO	VCL	PO	VCL	PO
-5	1.4±0.1	1.4±0.2	3.6±0.9	4.0±1.4	564±26	564±24	106±6	112±7	345±35	346±35	17±1.5	17±0.8
120	1.4±0.2	1.4±0.2	4.0±0.6	3.6±0.7	560±26	565±23	99±6	106±6	339±36	339±33	12±1.6	12±1
240	1.3±0.1	1.4±0.2	3.7±0.7	6.8±3.9	555±24	558±25	97±5	103±8	330±31	337±36	8.4±1	11.5±1.6
360	1.2±0.1	1.3±0.2	2.8±0.3	4.0±1.0	562±25	562±21	98±6	101±7	328±31	327±34	9.7±1	11±0.7

Data are represented as mean ± SEM, n=14. TNFα: tumor necrosis factor alpha, IL-6: interleukin 6, VCL: vehicle, PO: palm oil.