**Online Supplement**

# Early treatment with GLP-1 following severe trauma preserves renal function in obese Zucker rats

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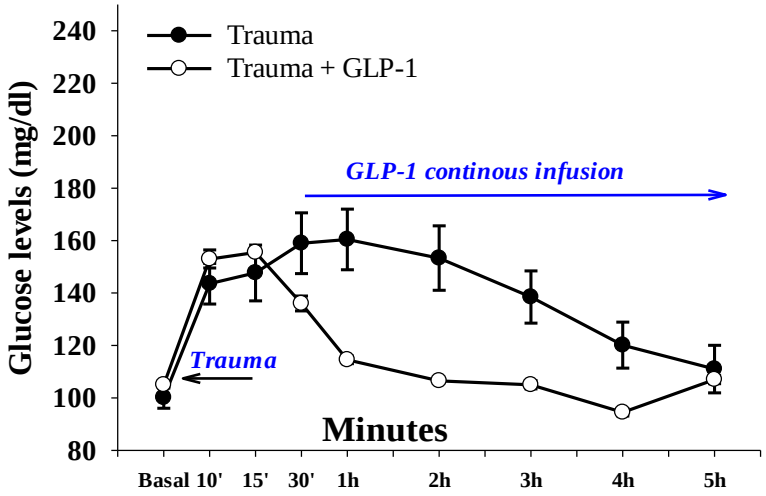


**Figure S1:** Post-trauma plasma glucose in lean Zucker rats (fasted) with and without GLP-1 treatment. n = 5 for each group, mean ± SE. Blood was sampled from the tail tips pretreated with 0.25% bupivacaine. Glucose levels were measured using a glucometer (On Call Plus, ACON Laboratories, San Diego, CA). The trauma control data (black circles) is redrawn from our previously published paper (Xiang L, Lu S, Mittwede PN, Clemmer JS, Husband GW, and Hester RL. $\beta_2$-Adrenoreceptor blockade improves early posttrauma hyperglycemia and pulmonary injury in obese rats. *Am J Physiol Heart Circ Physiol* 307: H621-627, 2014. doi:10.1152/ajpheart.00208.2014).

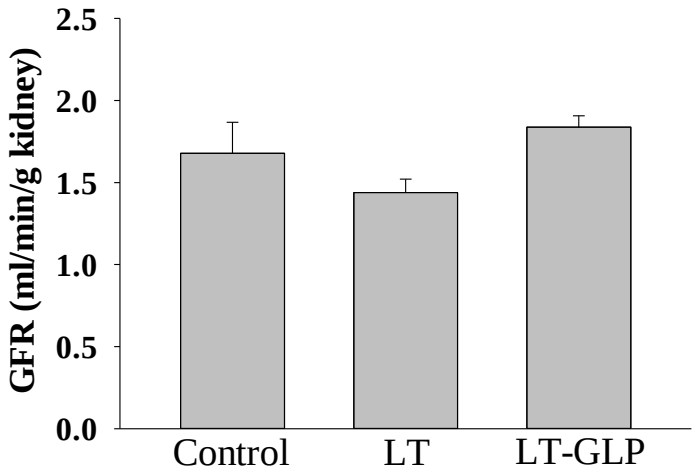


**Figure S2:** Glomerular filtration rate (GFR) in control, trauma, and trauma with GLP-1 treatment. GFR was measured 24 hours after orthopedic trauma with the inulin clearance method. There were no statistically significant differences. Control, lean Zucker rat control; LT, lean Zucker rats treated with trauma; LT-GLP, lean Zucker rats treated with trauma and GLP. n = 6 for each group, data reported in mean ± SE. The GFR of Control and LT are adapted from our previously published paper (Mittwede PN, Xiang L, Lu S, Clemmer JS, and Hester RL. Oxidative stress contributes to orthopedic trauma-induced acute kidney injury in obese rats. *Am J Physiol Renal Physiol* 308: F157-163, 2015. doi:10.1152/ajprenal.00537.2014).

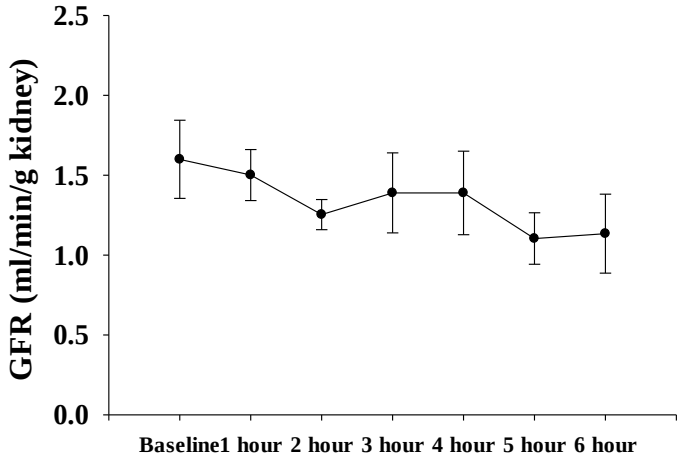


**Figure S3:** Glomerular filtration rate (GFR) during the first 6 hours after orthopedic trauma in obese rats (n = 6). There were no statistically significant differences. GFR was measured via the inulin clearance method and normalized by kidney weight (mean ± SE). Briefly, a scintillation counter (LS 6500, Beckman Coulter, Brea, CA) was used to determine levels of tritiated inulin (3H; Perkin-Elmer Health Sciences, Shelton, CT) that was infused through the left internal jugular vein and measured from the right femoral artery.

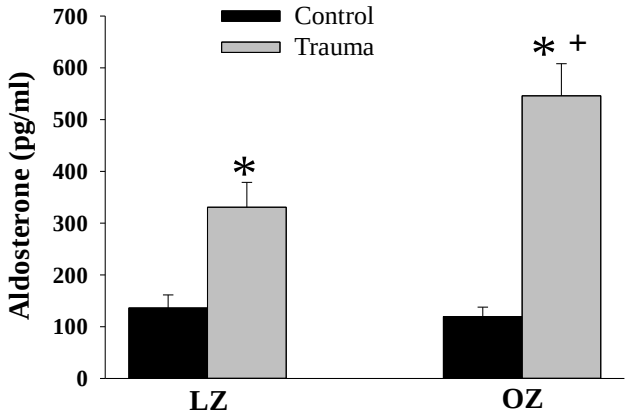


**Figure S4:** Circulating aldosterone levels in lean and obese Zucker rats before and one day after orthopedic trauma. Aldosterone was measured via ELISA from plasma samples using a commercial kit (Cayman Chemical Co., Ann Arbor, MI). *P < 0.01 Trauma vs. Control, + P > 0.05 LZ vs. OZ; n = 5 -6 for each group (mean ± SE).

**Table S1:** Bodyweight, food intake, and urine flow 24 hours after trauma in obese Zucker rats (mean ± SE).

| | **Control** | **OT** | **OT-GLP** |
|---|---|---|---|
| **Bodyweight (g)** | 527 ± 9 | 516 ± 26 | 490 ± 16 |
| **Food intake (mg/h)** | 905.3 ± 36.5 | 101.0 ± 51.1* | 261.0 ± 27.8*$^{+}$ |
| **Urine flow (µl/h)** | 590.0 ± 88.6 | 275.8 ± 51.2* | 216.0 ± 32.3* |

OT, orthopedic trauma animals; OT-GLP, orthopedic trauma animals treated with GLP-1.*P < 0.01 OT or OT-GLP vs Control, + P > 0.05 OT vs. OT-GLP; n = 8 for Control, n = 6 for OT, n = 7 for OT-GLP.