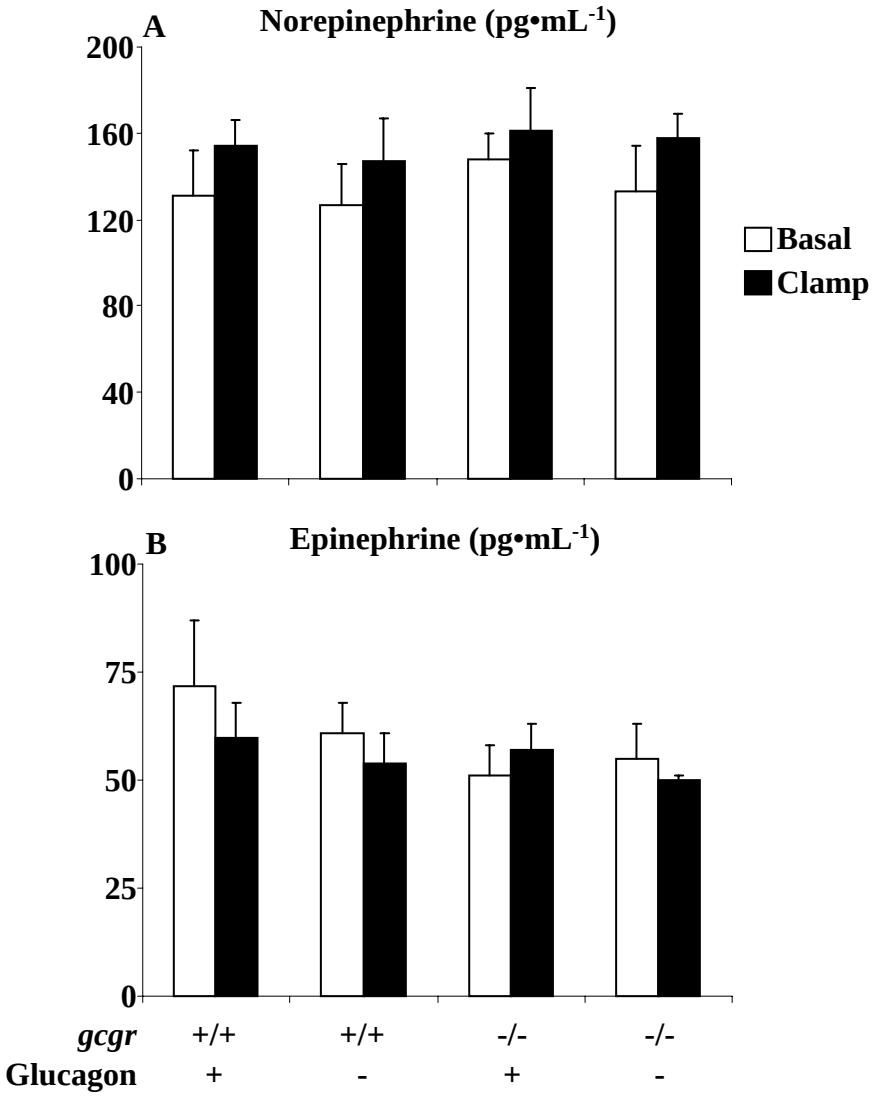
A
Norepinephrine (pg•mL-1)
200
160
120
80
40
0
Basal
Clamp
B
Epinephrine (pg•mL-1)
100
75
50
25
0
gcgr
+/+
+/+
-/-
-/-
Glucagon
+
-
+
-

Supplementary Figure 1 – Basal and clamp (A) norepinephrine and (B) epinephrine measured by HPLC in 5h fasted, 12 week-old wild-type (*gcgr*$^{+/+}$) and glucagon receptor null (*gcgr*$^{-/-}$) littermate mice on a C57BL/6 background during a hyperglucagonemic-euglycemic clamp (n = 7-9 in each group). At t = -60 min (equilibration), mice were infused with phloridzin (80 μg•kg^{-1}•min^{-1}) and a variable GIR to achieve and maintain euglycemia (~8.0 mmol•L^{-1}). At t = 0 min, glucagon (10 ng•kg^{-1}•min^{-1}) was infused during a 120 min experimental period. Blood glucose was measured every 5 min during equilibration and every 10 min during the experimental period. Basal samples taken at t = -15 min. Clamp samples taken at t = 110 min.

	ATP	ADP	AMP	TAN	AMP:ATP	EC
Fed	6.21±0.31	1.04±0.05	0.21±0.05	7.45±0.25	0.04±0.01	0.90±0.02
18h Fast	6.04±0.41	1.11±0.09	0.36±0.09	7.34±0.36	0.04±0.01	0.91±0.03
Sedentary	6.06±0.24	1.15±0.09	0.34±0.06	7.07±0.39	0.04±0.01	0.91±0.04
Exercise	5.87±0.32	1.08±0.12	0.56±0.13	7.21±0.44	0.05±0.01	0.88±0.06
Vehicle	5.59±0.49	1.11±0.13	0.38±0.19	7.08±0.43	0.12±0.06	0.85±0.03
STZ	5.58±0.47	0.96±0.11	0.57±0.23	7.11±0.33	0.07±0.04	0.88±0.03
Chow	5.02±0.28	1.11±0.10	0.24±0.04	6.37±0.28	0.05±0.01	0.87±0.01
HFD	4.42±0.17	1.13±0.10	0.22±0.06	6.07±0.28	0.05±0.01	0.87±0.01

Supplementary Table 1 – Skeletal muscle (gastrocnemius) adenine nucleotides measured by HPLC in mice following a 5 or 18h fast (n = 6-8/group); maximal treadmill exercise (start 10 $m \bullet min^{-1}$ + 4 $m \bullet min^{-1}$ every 3 min after 5h fast; n = 6-8/group); streptozotocin-induced diabetes (1 injection s.c. 150 $mg \bullet kg^{-1}$; n = 6/group) or vehicle-injected control mice fasted for 5h; and high-fat diet fed (HFD; 60% fat by kcal for 9 wks) or chow fed control mice fasted for 5h (n = 4/group). Total adenine nucleotide (TAN) content is the sum of ATP+ADP+AMP. Hepatic AMP:ATP and energy charge [EC = (ATP+½ADP)+(ATP+ADP+AMP)] are shown for each condition. All mice were 12 weeks of age and on a C57BL/6 background

	AMP	ADP	AMP	TAN	AMP:ATP	EC
			Gcgr$^{+/+}$			
Saline	6.35±0.24	1.07±0.09	0.25±0.07	7.55±0.32	0.05±0.01	0.94±0.02
Glucagon	6.61±0.14	1.16±0.10	0.28±0.12	7.41±0.28	0.06±0.01	0.95±0.03
			Gcgr$^{-/-}$			
Saline	6.09±0.41	1.19±0.17	0.19±0.05	7.24±0.39	0.05±0.01	0.94±0.04
Glucagon	6.25±0.28	0.99±0.09	0.29±0.03	7.44±0.53	0.05±0.01	0.95±0.05

Supplementary Table 2 – Skeletal muscle (gastrocnemius) adenine nucleotides measured by HPLC in 5h fasted, 12 week-old wild-type (*gcgr*$^{+/+}$) and glucagon receptor null (*gcgr*$^{-/-}$) littermate mice on a C57BL/6 background following a hyperglucagonemic-euglycemic clamp (n = 7-9 in each group). Total adenine nucleotide (TAN) content is the sum of ATP+ADP+AMP. Hepatic AMP:ATP and energy charge [EC = (ATP+½ADP)+(ATP+ADP+AMP)] are shown for each condition.