SUPPLEMENTARY DATA

Glucose and insulin concentrations during the hyperinsulinemic-euglycemic clamp studies

There were no significant differences in mean glucose concentration between non-GC users before and after acute prednisolone administration during the steady state period of the low-dose clamp (4.8±0.2 mmol/L vs 4.9±0.1 mmol/L, p=0.17) or the high-dose clamp (4.9±0.2 mmol/L vs 4.9±0.2 mmol/L, p=0.91) (Supplementary Fig. 1). Glucose concentrations were not significantly different between non-GC users before prednisolone and GC users during the steady state period of the low-dose clamp (4.8±0.2 mmol/L vs 4.8±0.2 mmol/L, p=0.83) or the high-dose clamp (4.9±0.2 mmol/L vs 5.0±0.2 mmol/L, p=0.89) (Supplementary Fig. 1).

There were no significant differences in mean insulin concentrations between non-GC users before and after acute prednisolone administration during the steady state period of the low-dose clamp (49±12 µU/mL vs 54±8 µU/mL, p=0.051) or the high-dose clamp (286±46 µU/mL vs 285±57 µU/mL, p=0.77) (Supplementary Fig. 2). Insulin concentrations were not significantly different between non-GC users before prednisolone and GC users during the steady state period of the low-dose clamp (49±12 µU/mL vs 51±17 µU/mL, p=0.83) or the high dose clamp (286±46 µU/mL vs 293±65 µU/mL, p=0.83) (Supplementary Fig. 2).

Glucose enrichment

There was a slight but statistically significant increase in glucose enrichment during the basal phase and low-dose clamp (Supplementary Table 2 and Supplementary Fig. 3). For example, during the basal phase there was a 0.0015% increase in $6,6\text{-}^2H_2$ glucose enrichment per minute that was statistically significant. There were no group effects (p≥0.16, ANOVA).

Supplementary Table 1. Non-esterified fatty acids (mmol/L) during each phase of the hyperinsulinemic-euglycemic clamp studies. Data are mean ± standard deviation, p-value > 0.05 for all between group comparisons.

|	**Non-GC users**	**Non-GC users post-prednisolone**	**GC users**
Basal	0.42±0.16	0.36±0.12	0.36±0.16
Low-dose clamp	0.05±0.01	0.06±0.02	0.06±0.05
High-dose clamp	0.03±0.01	0.02±0.01	0.03±0.01

SUPPLEMENTARY DATA

Supplementary Table 2. $6,6-^2H_2$ glucose enrichment slopes during the steady state period of each phase of the hyperinsulinemic-euglycemic clamp studies in all subjects. Slope represents percent change in $6,6-^2H_2$ glucose enrichment per minute. P-value is derived from t-test versus zero.

	Slope	**SD**	**p-value**
Basal	0.0015	0.0011	0.00000009
Low-dose clamp	0.0005	0.0008	0.0018
High-dose clamp	0.0001	0.0008	0.5280

Supplementary Figure 1. Glucose concentration during steady state period of low-dose and high-dose clamp studies in non-glucocorticoid (GC) users pre- and post- administration of low-dose prednisolone for 7-10 days, and in chronic GC users. Time reflects number of minutes after commencement of estimation of endogenous glucose production. Data are mean ± SD. LDC = low-dose clamp, HDC = high-dose clamp. p-value > 0.05 for mean glucose concentration in each steady state period between all groups.
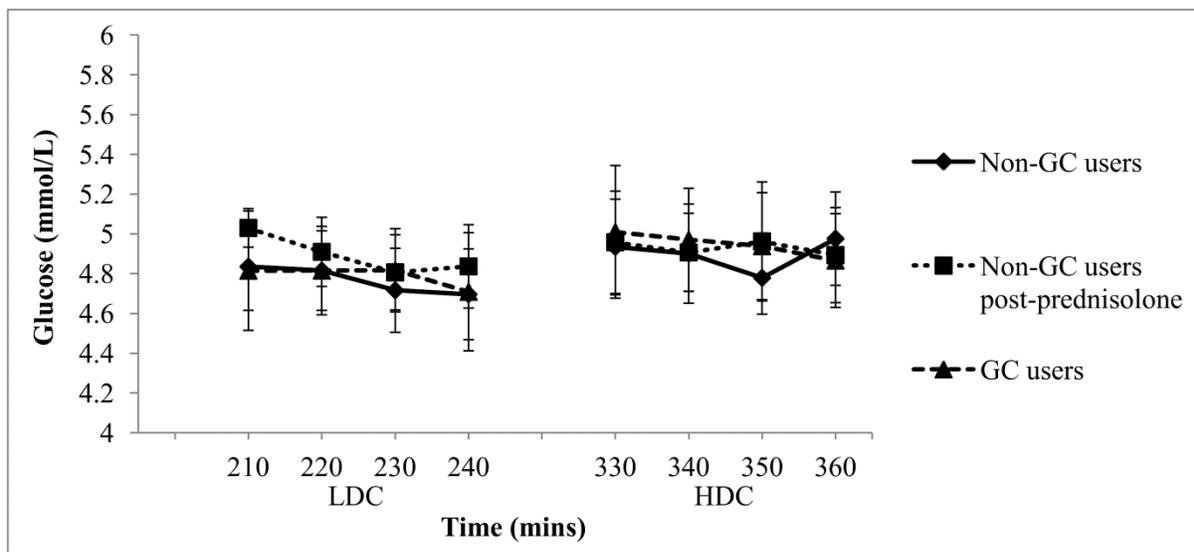
SUPPLEMENTARY DATA

Supplementary Figure 2. Insulin concentration during steady state period of low-dose and high-dose clamp studies in non-glucocorticoid (GC) users pre- and post- administration of low-dose prednisolone for 7-10 days, and in chronic GC users. Time reflects number of minutes after commencement of estimation of endogenous glucose production. Data are mean ± SD. LDC = low-dose clamp, HDC = high-dose clamp. p-value > 0.05 for mean insulin concentration in each steady state period between all groups.
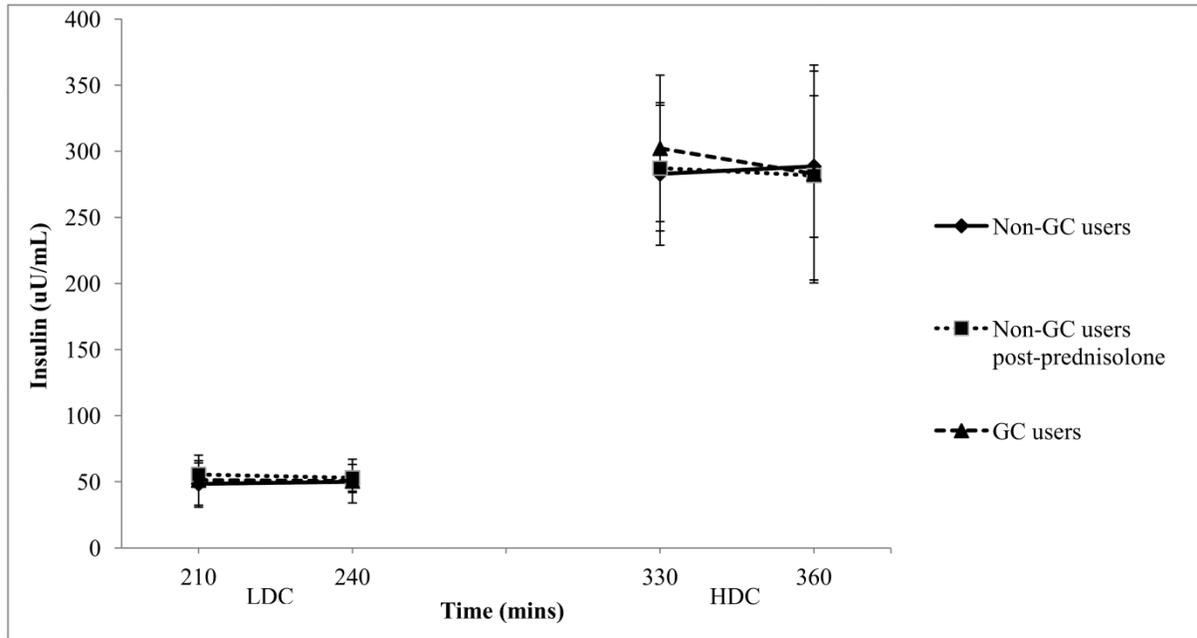
SUPPLEMENTARY DATA

Supplementary Figure 3. $6,6\text{-}^2H_2$ glucose enrichment during steady state period of estimation of endogenous glucose production (EGP), low-dose and high-dose clamp studies in non-glucocorticoid (GC) users pre- and post- administration of low-dose prednisolone for 7-10 days, and in chronic GC users. Time reflects number of minutes after commencement of estimation of endogenous glucose production. Data are mean ± SD. B = basal EGP, LDC = low-dose clamp, HDC = high-dose clamp. *P*-values are as per Supplementary Table 2.