Supplemental Table 1. Baseline Pre-Randomization Volunteer Characteristics

General	PRE (N = 20)	POST (N = 22)	P Value
Age (yr)	24 ± 0.65	63 ± 1.3	P < 0.001
BMI (kg/m^2)	24 ± 0.67	25 ± 0.81	P = 0.26
AVF (cm^2)	30 ± 4.1	76 ± 9.6	P < 0.01
Hormones			
LH (IU/L)	5.2 ± 0.74	38 ± 2.5	P < 0.001
FSH (IU/L)	4.3 ± 0.54	80 ± 5.6	P < 0.001
E_2 (pg/mL)*	92 ± 16	< 35	P < 0.001
SHBG (nmol/L)	82 ± 11	58 ± 8	P = 0.064
T (ng/dL)**	30 ± 3.1	20 ± 2.8	P = 0.004
Prolactin (µg/L)	11 ± 1.3	7 ± 0.34	P = 0.008
Albumin (g/L)	4.6 ± 0.05	4.3 ± 0.036	P < 0.001
IGF-I (µg/L)	446 ± 27	210 ± 18	P < 0.001
IGFBP-1 (µg/L)	13 ± 2.3	24 ± 3.6	P = 0.030
IGFBP-3 (mg/dL)	5.5 ± 0.16	4.6 ± 0.20	P = 0.002

* Multiply by 3.68 for pmol/L.

**Multiply by 0.0347 for nmol/L.

Supplemental Table 2. Summary of three-way ANCOVA estimates of the individual and joint effects of age,

E_2 status and peptidyl secretagogue on pulsatile GH secretion

P values		A. *Post hoc* Tukey's HSD for Age and E_2 Comparisons			
Overall	< 0.001		POST + E_2	POST - E_2	PRE + E_2	PRE - E_2
Age	< 0.001	POST + E_2	1.0			
E_2 status	0.006	POST - E_2	NS	1.0		
Peptide	< 0.001	PRE + E_2	< 0.001	< 0.001	1.0	
Age x E_2	0.674	PRE - E_2	0.097	< 0.001	0.094	1.0

		B. *Post hoc* Tukey's HSD for Age and Peptide Comparisons			
Age x Peptide	0.014					
E_2 x Peptide	0.117		POST/GHRH	POST/GHRP-2	PRE/GHRH	PRE/GHRP-2
All 3 factors	0.181	POST/GHRH	1.0			
*Covariate	0.002	POST/GHRP-2	NS	1.0		
		PRE/GHRH	0.028	NS	1.0	
		PRE/GHRP-2	< 0.001	< 0.001	< 0.001	1.0

C. *Post hoc* Tukey's HSD for E_2 and Peptide Comparisons

	GHRH + E_2	GHRP-2 + E_2	GHRH - E_2	GHRP-2 - E_2
GHRH + E_2	1.0			
GHRP-2 + E_2	< 0.001	1.0		
GHRH - E_2	NS	< 0.001	1.0	
GHRP-2 - E_2	NS	0.011	0.027	1.0

*covariate = mean of intrasubject GH concentrations prior to secretagogue infusion

NS denotes $P > 0.05$

HSD denotes (multiple-comparison) honestly significantly different.

Supplemental Table 3. Regression analysis

A. Pulsatile GH secretion as dependent variable

Regression Model	Independent Variables(s)	Stimulus	R^2 value	P value
Univariate	AVF	GHRH	0.22	0.002
		GHRP-2	0.28	< 0.001
	BMI	GHRH	0.17	0.006
		GHRP-2	0.10	0.038
Multivariate*	AVF	GHRH	0.22	0.002
	AGE + E_2	GHRP-2	0.60	< 0.001
			Age	< 0.001
			E_2	< 0.001

B. Basal GH secretion as dependent variable

Regression Model	Independent Variables(s)	Stimulus	R^2 value	P value
Multivariate*	Age + E_2	No stimulus	0.22	0.009
			Age	0.037
			E_2	0.039

*allowable covariates were age, AVF and E_2 concentrations