

## Supplement

### *Baseline metabolic data reveal low-normal C-peptide and glucagon and vitamin D insufficiency*

The baseline metabolic profiles, as displayed in **Supplemental Table 1** and **Supplemental metabolic markers** of most participants were mostly unremarkable, and overall indicate this group of medical students are in good metabolic health. No participants exhibited serum markers of metabolic syndrome, including 13/13 with fasting glucose <100 mg/dl, TG <150 mg/dl, and HDL-C >50mg/dl for all women and >40mg/dl for all men, and 11/13 exhibited TG/HDL-C ratio <1.35.

Interestingly, glucagon levels ran low, with almost half of students reporting levels below the reference range and 3 reporting levels below the threshold of detection. C-peptide also ran low, with 8 of 13 students registering C-peptide below reference range. Insulin similarly ran low, with mean level of 4.5. Finally, 25-OH vitamin D levels were low, with the majority, 9/13 students, exhibiting levels considered to be insufficient (<30 ng/dl).

<i>Marker (reference range)</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Range</i>
<b><i>Blood markers</i></b>			
<i>Total cholesterol (&lt;200 mg/dl)</i>	160.7	30.5	109-240
<i>LDL-C (&lt;100 mg/dl)</i>	84.9	26.5	47 - 152
<i>HDL-C (&gt;40 mg/dl)</i>	60.2	9.7	40 - 73
<i>Triglycerides (&lt;150 mg/dl)</i>	71.2	27.3	48 - 137
<i>Glucose, fasting (65 – 99 mg/dl)</i>	76	8	60 - 86
<i>HbA1c (&lt;5.7%)</i>	5.1	0.2	4.7 – 5.4
<i>TSH (0.4 - 4.5 mIU/l)</i>	2.7	1.8	1.37 – 8.02

<i>T4, total (5.1 - 11.9 ug/dl)</i>	6.5	1.5	3.8 – 9.7
<i>T4, free (0.8 - 1.8 ng/dl)</i>	1.2	0.1	1.1 – 1.4
<i>Testosterone, free (Male, n = 8 : 46 - 224 pg/ml)</i>	82	23	35 - 104
<i>Estradiol, free (Female, n = 5)</i>	1.0	0.5	<0.02 – 1.63
<i>Glucagon (11 - 78 pg/ml) θ</i>	<b>12.3</b>	6.8	<6 - 28
<i>C-peptide (0.80 - 3.85 ng/ml) ϕ</i>	<b>0.7</b>	0.2	0.5 – 1.2
<i>Insulin (&lt;19.6 mIU/l)</i>	4.5	1.8	1.8 – 9.0
<i>25-OH Vit D, total (30-100ng/dl) ϕ</i>	<b>24.1</b>	7.9	14 - 38
<b>Continuous glucose monitors</b>			
<i>Avg glucose (mg/dl)</i>	115	10	99 - 129
<i>Coefficient of Variation (%)</i>	15.2	2.8	10 - 20
<i>Time in range (70-180 mg/dl, %)</i>	98.5%	0.8%	97 – 99%

**Table 1. Metabolic markers metrics.** Mean with standard deviation and range for blood markers metrics in the core cohort. Reference ranges designated by the report are provided in parenthesis. For glucagon, θ one participant did not have a value reported, 5 of the remaining 12 had levels <11 pg/ml, with 3 having levels below 6 pg/ml. For these, 6 pg/ml was used to calculate the mean and standard deviation. For C-peptide, ϕ 8 of 13 participants had C-peptide below reference range. For 25-OH vitamin D ϕ, 9 participants had levels <30 ng/dl and 4 had levels below 20 ng/dl. Measures

are not inclusive of all markers drawn; comprehensive results can be found in **Supplemental metabolic markers**.

Supplemental Figure 1. Baseline glucagon, fasting glucose, C-peptide, 25-OH vitamin D.

Reference ranges are indicated in green shading, with values inside the reference range indicated by blue circles, and values outside the reference range indicated by red circles. Values for glucagon below level of detection are ellipses. For glucagon, participant five did not have a value reported, 5 of the remaining 12 had levels <11 pg/ml, with 3 having levels below 6 pg/ml. For C-peptide, 8 of 13 participants had C-peptide below reference range. For 25-OH vitamin D, 9 participants had levels <30 ng/dl and 4 had levels below 20 ng/dl.

