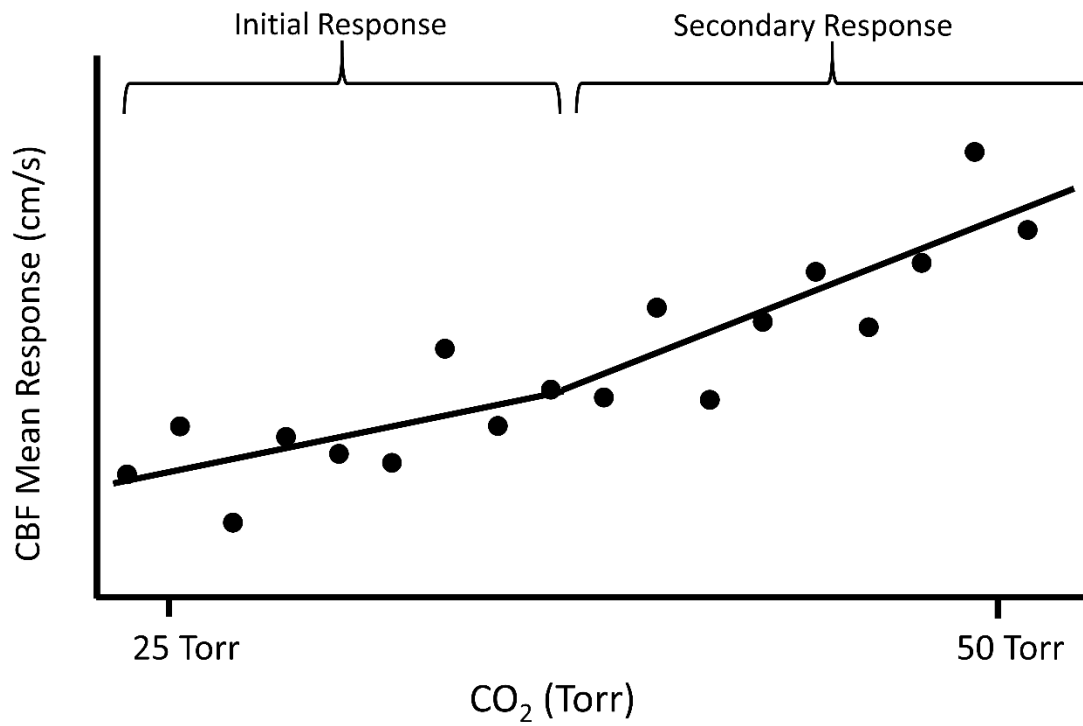


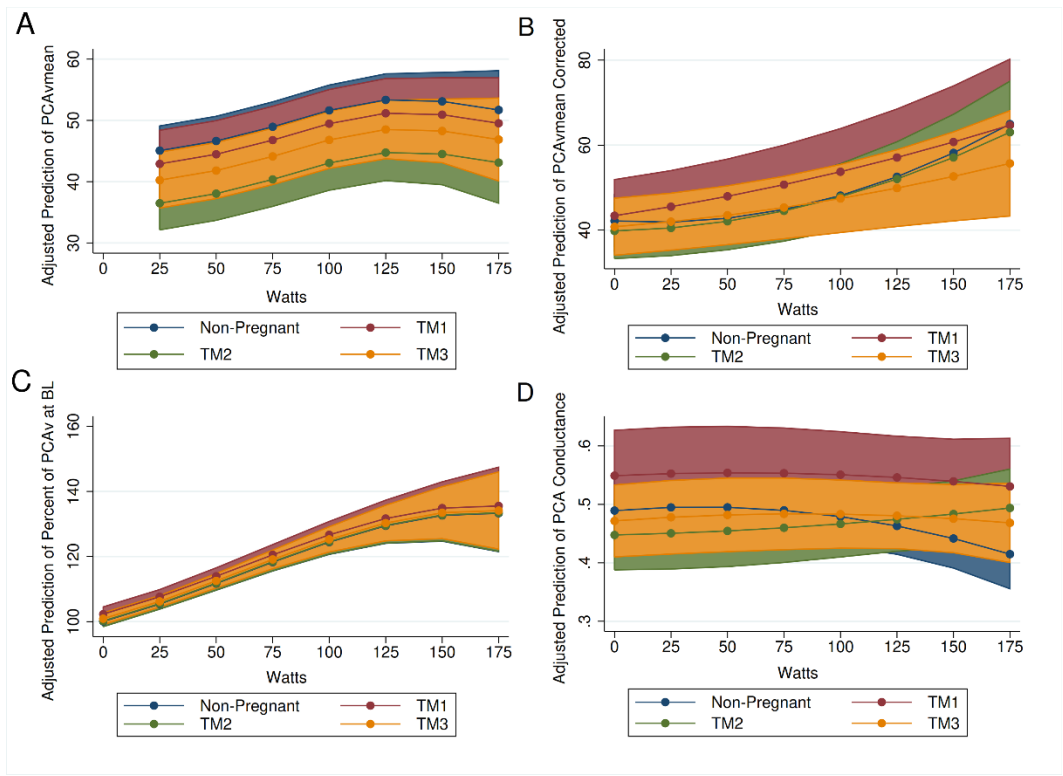
## **Online Supplement**

**OS Table 1.** Tabulation of assessments collected per individual participant.

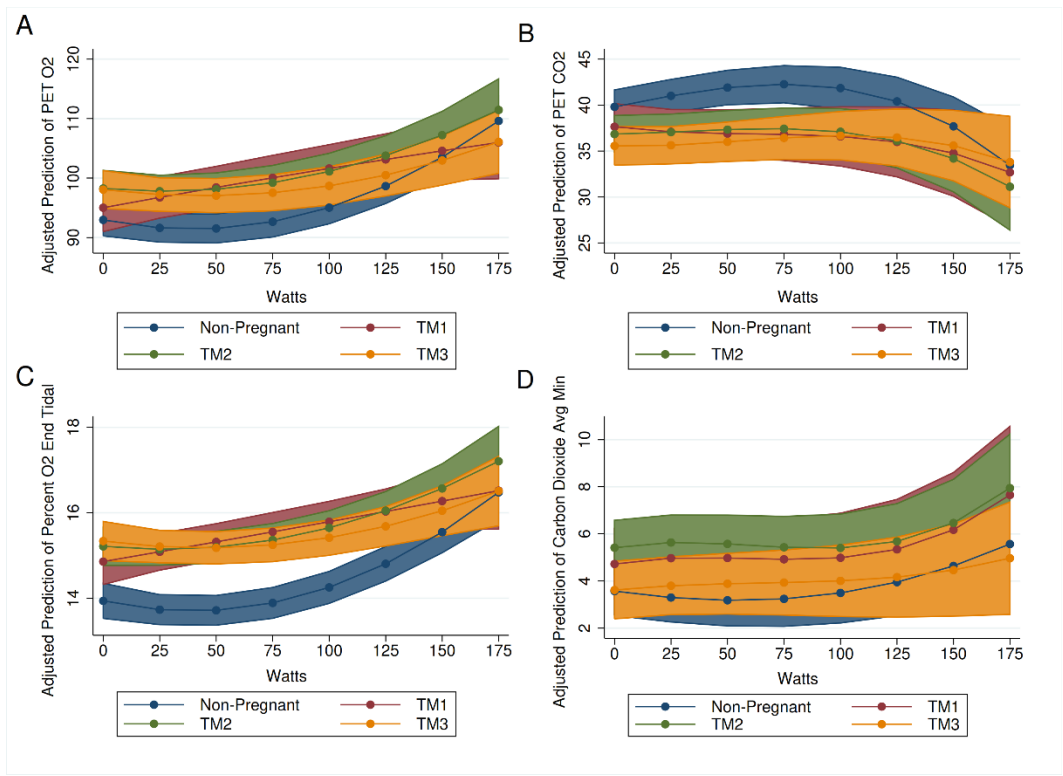
<i>PARTICIPANT</i>	NVC TEST				MODIFIED DUFFIN CO <sub>2</sub> REBREATHE TEST				INCREMENTAL EXERCISE TEST			
	NP	TM1	TM2	TM3	NP	TM1	TM2	TM3	NP	TM1	TM2	TM3
1		•	•	•	•	•	•	•	•	•	•	•
2	•	•	•	•	•	•	•	•	•	•	•	•
3	•				•				•			
4					•							
5				•	•			•				
6					•				•			
7					•				•			
8	•											
9	•				•				•			
10	•		•		•		•		•		•	
11	•				•				•			
12	•				•				•			
13				•				•				
14	•				•				•			
15	•				•				•			
16	•				•				•			
17	•				•				•			
18					•				•			
19	•				•				•			
20		•	•	•		•	•	•			•	•
21	•								•			
22		•				•				•		
23			•				•				•	
24			•				•				•	
25	•				•				•			
26	•				•				•			
27		•	•	•		•	•	•		•	•	•
28	•				•				•			
29		•	•			•		•			•	•
30			•									
31		•	•	•		•	•	•			•	•
32			•				•				•	
33			•	•			•	•			•	•
34					•			•	•			•
35				•				•				•
36	•		•	•	•	•	•	•	•	•	•	•
37	•								•			
38		•	•	•		•	•	•		•	•	•
39		•	•	•		•	•	•		•	•	•
40			•	•			•	•				
41		•	•	•		•	•	•		•		
42			•				•	•			•	•
43	•				•				•			
44		•	•	•		•	•	•		•	•	•
45			•	•			•	•			•	•
46			•	•			•	•			•	•
47		•				•				•		
<b>TOTAL NUMBER OF ASSESSMENTS</b>	<b>19</b>	<b>12</b>	<b>21</b>	<b>17</b>	<b>25</b>	<b>13</b>	<b>19</b>	<b>20</b>	<b>23</b>	<b>10</b>	<b>18</b>	<b>16</b>



**OS Figure 1.** The response of mean cerebral blood flow (CBF) to the increase in CO<sub>2</sub> (Torr) during the modified Duffin hyperoxic rebreath test. The slope of the initial response was measured and then compared between participants.



**OS Figure 2.** PCA during incremental exercise to volitional fatigue. TM1, trimester 1; TM2, trimester 2; TM3; trimester 3.



**OS Figure 3.** Respiratory outcomes during incremental exercise to volitional fatigue. TM1, trimester 1; TM2, trimester 2; TM3; trimester 3.

**OS Table 2.** Non-CBF variables from exercise test.

Variable	Constant term	TM1	TM2	TM3	Significant Interaction with Time Component
Systolic BP (mm Hg)	116.66 (113.42, 119.91)	-2.67 (-8.35, 3.02)	-11.33‡ (-16.16, -6.49)	-7.46† (-12.37, -2.56)	TM3
Diastolic BP (mm Hg)	74.26 (71.65, 76.87)	-6.13* (-10.77, -1.48)	-8.17‡ (-12.11, -4.23)	-6.16† (-10.16, -2.16)	TM2 TM3
MAP (mm Hg)	91.23 (88.53, 93.93)	-3.63 (-8.25, 0.99)	-10.67‡ (-14.59, -6.75)	-8.18‡ (-12.16, -4.20)	
CO Mean	5.88 (5.08, 6.67)	0.99 (-0.41, 2.40)	0.81 (-0.39, 2.01)	1.71† (0.49, 2.92)	TM1
P <sub>ET</sub> O <sub>2</sub>	92.97 (90.27, 95.66)	2.05 (-2.64, 6.73)	5.29† (1.39, 9.19)	5.09* (1.09, 9.10)	TM1
P <sub>ET</sub> CO <sub>2</sub>	39.81 (37.97, 41.65)	-2.16 (-5.02, 0.69)	-2.96* (-5.42, -0.51)	-4.25† (-6.75, -1.75)	TM1 TM2 TM3
Respiratory Rate	18.91 (17.59, 20.23)	-0.87 (-2.92, 1.19)	-1.20 (-2.97, 0.58)	-0.58 (-2.38, 1.23)	TM1 TM2
Tidal Volume	0.82 (0.71, 0.93)	0.03 (-0.14, 0.21)	0.07 (-0.07, 0.22)	0.12 (-0.02, 0.27)	
Min Ve Mean V	15.76 (13.17, 18.35)	-1.22 (-5.43, 2.98)	-0.71 (-4.29, 2.87)	0.44 (-3.18, 4.06)	TM1 TM2 TM3
Oxygen Avg Max	140.86 (139.05, 142.68)	-0.39 (-3.65, 2.87)	0.15 (-2.56, 2.86)	2.35 (-0.45, 5.15)	
CO <sub>2</sub> Avg Max	3.57 (2.54, 4.61)	1.15 (-0.63, 2.93)	1.84* (0.35, 3.34)	0.05 (-1.49, 1.58)	TM1 TM2 TM3
Percent O <sub>2</sub> End Tidal	13.94 (13.53, 14.35)	0.92† (0.34, 1.50)	1.27‡ (0.77, 1.78)	1.40‡ (0.89, 1.91)	TM1
Percent CO <sub>2</sub> End Tidal	6.01 (5.74, 6.28)	-0.25 (-0.68, 0.18)	-0.34 (-0.71, 0.02)	-0.54† (-0.91, -0.16)	TM1 TM2 TM3
Percent O <sub>2</sub> inspired	20.69 (20.48, 20.91)	-0.42* (-0.81, -0.04)	-0.43† (-0.75, -0.11)	-0.20 (-0.53, 0.14)	
Percent CO <sub>2</sub> inspired	0.50 (0.35, 0.65)	0.19 (-0.06, 0.44)	0.30† (0.09, 0.51)	0.04 (-0.18, 0.26)	
VO <sub>2</sub>	1.06 (0.85, 1.27)	-0.30* (-0.59, -0.01)	-0.32* (-0.57, -0.06)	-0.16 (-0.42, 0.09)	
VCO <sub>2</sub>	0.81 (0.67, 0.95)	-0.02 (-0.22, 0.18)	-0.09 (-0.26, 0.08)	-0.03 (-0.20, 0.15)	
RER	0.86 (0.83, 0.90)	0.07† (0.01, 0.13)	0.08‡ (0.03, 0.13)	0.05‡ (0.0002, 0.10)	TM1
HR	71.94 (68.20, 75.67)	8.68‡ (4.57, 12.79)	9.45‡ (5.81, 13.09)	14.64‡ (10.98, 18.31)	TM1 TM2 TM3

**Notes:** Multilevel model adjusted for random intercept at the participant and (nested) participant x phase of pregnancy levels. Data are presented as adjusted means (for reference term),  $\beta$  coefficients, and 95% Confidence Intervals. Analyses were adjusted for clustering by participant. BP, blood pressure; MCA, middle cerebral artery; NP, nonpregnant; TM1, first trimester; TM2, second trimester; TM3, third trimester; PCA, posterior cerebral artery.

\* Significant difference vs NP ( $p < 0.05$ ).

† Significant difference vs NP ( $p < 0.01$ ).

‡ Significant difference vs NP ( $p < 0.001$ ).