

SUPPLEMENTARY DATA

Supplementary Table 1. Diet ingredients with AIN-93G diet as a reference

	<i>Diet Ingredients (g/kg)</i>		
	<b>AIN-93G</b>	<b>Ctrl</b>	<b>EPA</b>
<b>Casein</b>	200	200	200
<b>L-Cysteine</b>	3	3	3
<b>Corn Starch</b>	397	397	395
<b>Maltodextrin</b>	132	132	132
<b>Sucrose</b>	100	100	100
<b>Soybean Oil</b>	70	11.2	11.2
<b>Coconut Oil</b>	0	58.8	58.8
<b>Cellulose</b>	50	50	50
<b>Mineral Mix</b>	35	35	35
<b>Vitamin Mix</b>	10	10	10
<b>Choline Bitartrate</b>	2.5	2.5	2.5
<b>TBHQ, Antioxidant</b>	0.02	0.02	0.02
<b>EPA</b>	0	0	2

Supplementary Table 2. Fatty acid composition of chow, control, and eicosapentaenoic acid (EPA) diets

	<i>% of Total Fatty Acids</i>		
	<b>Chow</b>	<b>Control</b>	<b>EPA</b>
<b>8:0</b>	0.00	1.17	1.88
<b>10:0</b>	0.03	5.13	4.97
<b>12:0</b>	0.11	47.74	44.37
<b>14:0</b>	0.30	18.20	16.97
<b>16:0</b>	13.45	9.55	9.12
<b>16:1 (n-7)</b>	0.15	0.03	0.03
<b>18:0</b>	2.96	2.83	2.77
<b>18:1 (n-9)</b>	18.16	7.03	6.91
<b>18:1 (n-7)</b>	0.95	0.20	0.21
<b>18:2 (n-6)</b>	56.91	7.01	7.12
<b>18:3 (n-6)</b>	0.00	0.00	0.00
<b>18:3 (n-3)</b>	6.11	0.94	0.94
<b>20:0</b>	0.26	0.07	0.08
<b>20:1 (n-9)</b>	0.35	0.06	0.06
<b>20:3 (n-6)</b>	0.00	0.00	0.00
<b>20:4 (n-6)</b>	0.00	0.00	0.03
<b>20:5 (n-3)</b>	0.00	0.00	4.50
<b>22:0</b>	0.21	0.04	0.04
<b>22:1 (n-9)</b>	0.04	0.00	0.00
<b>22:6 (n-3)</b>	0.00	0.00	0.00

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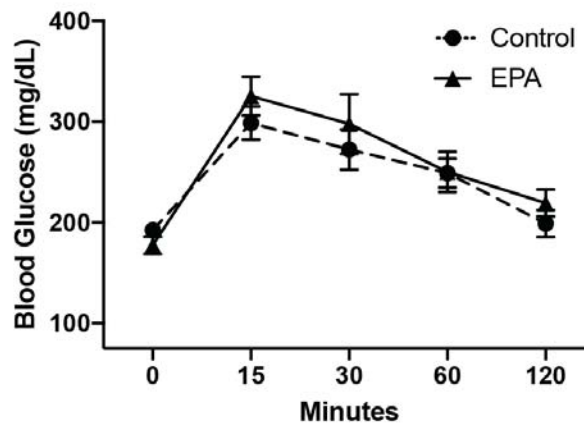
**Supplementary Table 3. Phospholipid composition of BTBR-Wt mice fed a control (Ctrl) or eicosapentaenoic acid (EPA) enriched diet.** Data were compared by an unpaired *t* test within each species (n = 6) \**P* < 0.05.

	% of Total Fatty Acids ± SEM				
	Ctrl		EPA		
<b>8:0</b>	0.00	± 0.00	0.00	± 0.00	
<b>10:0</b>	0.50	± 0.11	0.56	± 0.09	
<b>12:0</b>	3.03	± 0.56	3.48	± 0.52	
<b>14:0</b>	7.96	± 1.38	10.89	± 1.01	
<b>16:0</b>	18.45	± 0.30	20.94	± 1.24	
<b>16:1 (n-7)</b>	0.93	± 0.05	1.06	± 0.05	
<b>18:0</b>	21.02	± 0.58	20.39	± 0.80	
<b>18:1 (n-9)</b>	10.98	± 0.28	11.14	± 0.50	
<b>18:1 (n-7)</b>	3.42	± 0.13	2.79	± 0.16	
<b>18:2 (n-6)</b>	4.38	± 0.24	4.84	± 0.29	
<b>18:3 (n-6)</b>	0.00	± 0.00	0.00	± 0.00	
<b>18:3 (n-3)</b>	1.32	± 0.09	1.66	± 0.16	
<b>20:0</b>	0.29	± 0.02	0.15	± 0.03	
<b>20:1 (n-9)</b>	0.20	± 0.09	0.07	± 0.05	
<b>20:3 (n-6)</b>	0.89	± 0.09	0.83	± 0.08	
<b>20:4 (n-6)</b>	21.33	± 1.20	9.27	± 0.71	*
<b>20:5 (n-3)</b>	0.00	± 0.00	4.20	± 0.31	*
<b>22:0</b>	0.38	± 0.03	0.46	± 0.06	
<b>22:1 (n-9)</b>	0.57	± 0.06	0.72	± 0.10	
<b>22:6 (n-3)</b>	4.34	± 0.27	6.55	± 0.56	

\*, *P* < 0.05

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**Supplementary Figure 1. Feeding EPA-enriched diet does not change glucose tolerance of BTBR-WT mice.** Male BTBR-WT mice fed either the defined control diet or EPA-enriched diet were fasted for 4-6 h before oral administration of 1 g/kg glucose. There was no significant difference between the glucose tolerance of the two groups. N=6 mice/group.



**Supplementary Figure 2. Neither PGE2 nor PGE3 affects GSIS from BTBR-WT islets.** Isolated BTBR-WT islets were stimulated with increasing concentrations of PGE2 or PGE3 for 45 min. Data are represented as a fold change to maximal stimulation at 16.7 mM glucose. Dose-response curves were compared by a two-way ANOVA followed by a Sidak post-test. N = 4-5; P=not significant.

