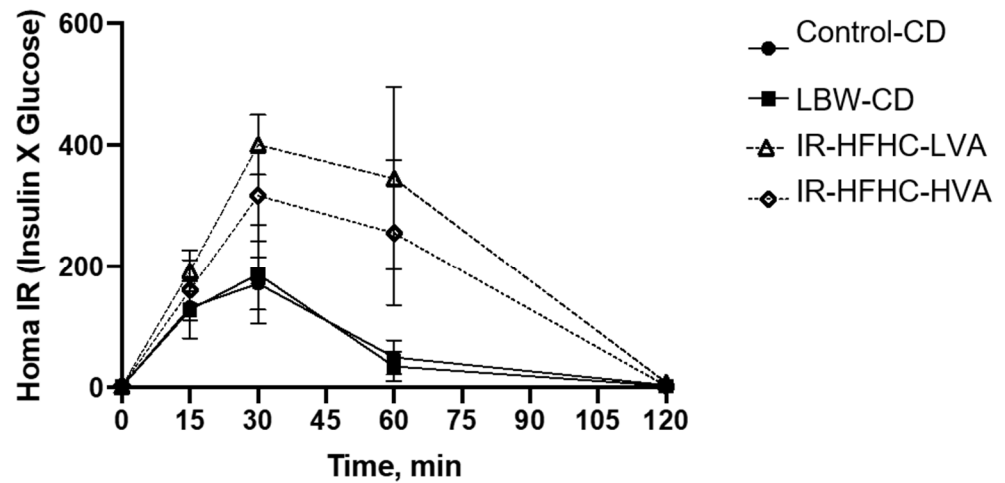


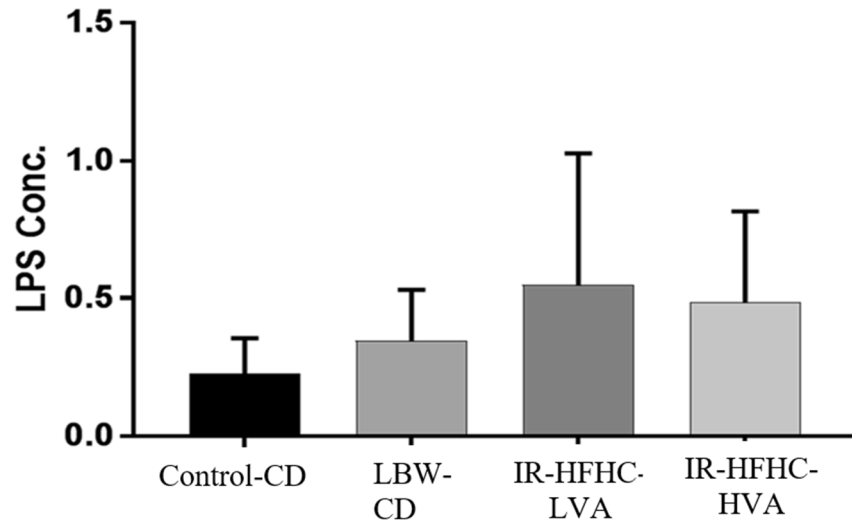
## Supplementary Materials

**Table S1.** Equations for the (Appearance 0-30 min) and clearance (30-120 min) phases of the postprandial glucose insulin and triglyceride curves. \* denotes significance compared to LBW-CD, \*\* denotes significance compared to IR-HFHC-LVA

Groups	Glucose		Insulin		Triglyceride	
	Appearance (0-30 min)	Clearance (30-120 min)	Appearance (0-30 min)	Clearance (30-120 min)	Appearance (0-30 min)	Clearance (30-120 min)
Control-CD	$0.174x + 5.60$	$-0.0484x + 10.80$	$0.551x + 2.08$	$-0.166x + 19.30$	$0.0439x + 3.39$	$0.0022x + 7.89$
LBW-CD	$0.136x + 5.35$	$-0.043x + 9.59$	$0.605x + 2.13$	$-0.182x + 20.60$	$0.0665x + 4.43$	$0.00442x + 12.50$
IR-HFHC-LVA	$0.257x + 4.96^*$	$-0.0729x + 15.30$	$1.06x + 1.80^*$	$-0.354x + 44.70^*$	$0.0756x + 12.40$	$-0.0555x + 26.50^*$
IR-HFHC-HVA	$0.198x + 4.78$	$-0.0668x + 13.30$	$0.58x + 18^{**}$	$-0.199x + 25.40^{**}$	$-0.0168x + 11.50^{**}$	$0.00459x + 8.43^{**}$



**Figure S1.** Homeostatic Model of Assessment of Insulin Resistance (HOMA IR). Assessed by product of postprandial blood glucose and plasma insulin concentration for determination of insulin resistance.



**Figure S2.** Concentration of serum lipopolysaccharide (LPS) in control and LBW pigs on control diet, HFHC-LVA or HFHC-HVA diet. HFHC-HVA did not affect LPS in IR swine. Values are means  $\pm$  SD. CD, control diet; IR, Insulin resistant; HFHC, high-fat, high-carbohydrate diet; HFHC-HVA, high-fat, high-carbohydrate diet enriched with vaccenic acid, ( $p = 0.852$ ).