

Supplemental Table S1. Significant effects of diet and exercise at different levels of taxonomy.

	Main effects 2-way ANOVA			post-hoc testing				
	High fat diet		exercise	interaction	ND vs HFD	ND+ex vs HFD+ex	ND vs ND+ex	HFD vs HFD+ex
Phylum								
Bacteroidetes	↓	****	↓	**	****	****	*	*
Firmicutes	↑	****	↑	**	****	****	*	*
Tenericutes	↓	**					*	
Proteobacteria	↑	*	↑	*				
Actinobacteria			↑	*				
Class								
Bacteroidia	↓	****	↓	***	****	****	*	*
Clostridia	↑	****	↑	**	****	****	*	*
Erysipelotrichia	↓	****			**	***		
Mollicutes	↓	**		*	**		*	
Bacilli	↑	**						
Gammaproteobacteria	↑	*						
Negativicutes	↑	*						
Betaproteobacteria			↑	**				*
Actinobacteria			↑	*				
Sphingobacteria			↑	*		*		*
Flavobacteria			↑	*				*
Alphaproteobacteria			↑	*				*
Order								
Bacteroidales	↓	****	↓	***	****	****	*	*
Clostridiales	↑	****	↑	**	****	****	*	*
Erysipelotrichales	↓	****			**	***		
Lactobacillales	↑	***				*		
Anaeroplasmatales	↓	**		*	**		*	
Bacillales	↓	**						
Pseudomonadales	↑	*	↑	*		*		*
Enterobacteriales	↑	*						
Selenomonadales	↑	*						
Burkholderiales			↑	**				*
Actinomycetales			↑	*				
Coriobacteriales			↑	*			*	
Sphingobacteriales			↑	*		*		*
Flavobacteriales			↑	*				*
Caulobacterales			↑	*				*
Rhizobiales			↑	*				*