Supplementary material corresponding to the manuscript:

Metformin potentiates the benefits of dietary restraint: a metabolomic study

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Supplementary material and methods S1: Food intake measurement

Food intake measurement was performed as previously reported [1]. Mice were group housed and given a known, pre-weighed amount of food in their home cage hopper. Once a week, the remaining food is weighed. Then, new amount of food is administered. Calculations were performed as follow: Food intake = Food provided – Food ingested – food wasted. Food intake measurements were divided by the number of animals per home cage, so assuming a mean-intake per animals, and represented in g, although it can be easily converted to kcal, by using data on Table S1.

[1] Ellacott KLJ et al., Cell Metab, 2010.

Table S1: Nutritional composition of experimental diets..

	CD (Chow diet)	HFD (High-fat diet)
Crude Nutrients		
Crude protein (%)	16.1	24.10
Crude fat (%)	3.1	34.60
Crude fibre (%)	3.9	7.2
Carbohydrate (available) (%)	71.8	24.80
Crude ash (%)	4.2	8.5
Nitrogen free extracts (%)	43.5	23.30
Energy		
Energy density (Kcal/g (Kj/g))	3.3 (13.97)	5.70 (24)
Calories from protein (%)	19.3	19
Calories from fat (%)	8.4	60
Calories from carbohydrate (%)	72.4	21
Minerals		
Calcium (%)	1.38	0.98
Phosphorus (%)	0.99	0.65
Sodium (%)	0.47	0.20
Magnesium (%)	0.34	0.17
Potassium (%)	1.45	0.98
Chloride (%)	0.69	-
Fatty acids		
Caprid acid (C10:0) (%)	ND	0.04
Lauric acid (C12:0) (%)	ND	0.07
Myristic acid (C14:0) (%)	ND	0.44
Palmitic acid (C16:0) (%)	0.87	7.72
Palmitoleic acid (C16:1) (%)	0.03	0.94
Margaric acid (C17:0) (%)	ND	-
Stearic acid (C18:0) (%)	0.08	4.34
Oleic acid (C18:1) (%)	0.53	13.57
Linoleic acid (C18:2) (%)	1.34	4.75
Linolenic acid (C18:3) (%)	0.15	0.51
Arachidic acid (C20:0) (%)	ND	0.02
Paullinic acid (C20:1) (%)	ND	0.01
Arachidonic acid (C20:4) (%)	ND	0.53
Cholesterol (mg/kg)	ND	265
Amino acids		
Lysine (%)	3.9	1.98
Methionine (%)	1.49	0.83
Cystine (%)	1.08	0.46
Met+Cys (%)	ND	1.28
Threonine (%)	ND	1.07
Tryptophan (%)	0.88	0.31
Arginine (%)	4.75	0.88
Histidine (%)	ND	0.76
Valine (%)	ND	1.64
Isoleucine (%)	ND	1.25
Leucine (%)	ND	2.36
Phenylalanine (%)	ND	1.29
Phe+Tyr (%)	ND	2.57
Glycine (%)	0.41	0.50
Glutamic acid (%)	ND	5.41
Aspartic acid (%)	ND	1.79
Proline (%)	ND	2.76
Alanine (%)	ND	0.79
Serine (%)	ND	1.43
Vitamins		
Vitamin A (IU/kg)	7500	15000
Vitamin D_3 (IU/kg)	1000	1500
Vitamin E (IU/kg)	120	225
Vitamin K (as menadione) (mg/Kg)	2.5	20
Vitamin C (mg/Kg)	ND	30
Thiamin (B_1) (mg/Kg)	7	16
Riboflavin (B_2) (mg/Kg)	6.5	16
Pyridoxime (B_6) (mg/Kg)	2.6	18
Cyanocobalamin (B_{12}) (µg/Kg)	20	30
Nicotinic acid (mg/Kg)	75	45
Pantothenic acid (mg/Kg)	17	55
Folic acid (mg/Kg)	0.5	19
Biotin (µg/Kg)	40	310
Choline-Chloride (mg/Kg)	1600	2300
Inositol (mg/Kg)	ND	80
Trace elements		
Iron (mg/Kg)	280	139
Manganese (mg/Kg)	90	82
Zinc (mg/Kg)	64	56
Copper (mg/Kg)	18	12
Iodine (mg/Kg)	ND	0.97
Selenium (mg/Kg)	ND	0.13
Cobalt (mg/Kg)	ND	0.13