

**Table S7. w<sup>1118</sup> Strain Females Diet Response Surfaces Raw Data**

	Yeast g·dl <sup>-1</sup>	2.5 g·dl <sup>-1</sup> Sugar			5 g·dl <sup>-1</sup> Sugar			10 g·dl <sup>-1</sup> Sugar			20 g·dl <sup>-1</sup> Sugar			40 g·dl <sup>-1</sup> Sugar		
		mean	s.e.	n	mean	s.e.	n	mean	s.e.	n	mean	s.e.	n	mean	s.e.	n
TAG/fly (µg)	40	38.2	4.09	5	30.5	5.21	4	44.8	1.25	5	41.8	2.51	5	54.6	1.78	6
	20	42.8	2.31	6	43.1	4.22	5	48.9	6.30	5	44.2	2.34	6	58.9	2.01	5
	10	34.2	4.97	6	51.5	3.60	6	55.8	3.97	5	56.5	3.18	7	66.0	5.64	5
	5	44.7	1.52	6	43.8	2.24	5	52.5	1.78	6	50.7	1.63	7	47.3	3.34	6
	2.5	42.4	1.95	6	53.1	5.22	6	47.4	3.11	5	54.0	1.73	6	44.3	4.65	6
Prot./fly (µg)	40	95.1	3.57	5	70.5	21.33	4	94.6	1.40	5	88.9	3.79	5	87.8	1.25	6
	20	85.2	2.26	6	75.5	11.34	5	91.1	6.10	5	85.9	3.85	6	80.6	5.29	5
	10	59.4	10.63	6	59.1	11.45	6	65.5	6.68	5	58.9	3.86	7	60.3	14.52	5
	5	48.5	6.87	6	70.4	7.30	5	75.5	4.98	6	54.5	5.05	7	55.2	3.23	6
	2.5	52.6	6.56	6	64.1	11.43	6	58.8	7.47	5	58.0	4.78	6	26.0	4.20	6
(TAG/ Prot.)	40	0.40	0.04	5	0.90	0.52	4	0.47	0.02	5	0.47	0.04	5	0.62	0.02	6
	20	0.50	0.02	6	0.60	0.06	5	0.53	0.04	5	0.52	0.02	6	0.74	0.06	5
	10	0.62	0.06	6	1.11	0.31	6	0.87	0.05	5	0.97	0.06	7	2.43	1.46	5
	5	1.03	0.16	6	0.65	0.07	5	0.71	0.06	6	0.96	0.07	7	0.86	0.04	6
	2.5	0.89	0.16	6	1.18	0.43	6	0.87	0.14	5	0.97	0.09	6	1.81	0.16	6
Food/fly /6 hr (µg)	40	3.4	0.9	5	4.3	2.4	4	0.7	1.1	5	4.1	1.8	5	1.0	1.5	6
	20	5.4	3.3	6	4.9	1.9	5	8.9	1.4	5	4.7	1.5	6	21.1	6.5	5
	10	10.3	3.5	6	0.3	0.8	6	13.4	2.5	5	14.1	2.0	7	22.9	8.5	5
	5	41.3	2.9	6	33.5	2.3	5	26.8	3.3	6	25.5	2.3	7	27.4	3.2	6
	2.5	88.1	5.9	6	39.2	10.5	6	43.4	1.5	5	40.7	1.6	6	36.6	2.7	6
calories/ fly/6hr	40	4.0E-03	1.1E-03	5	5.4E-03	3.0E-03	4	9.0E-04	1.4E-03	5	6.2E-03	2.8E-03	5	1.9E-03	2.6E-03	6
	20	4.0E-03	2.4E-03	6	3.9E-03	1.5E-03	5	8.2E-03	1.3E-03	5	5.4E-03	1.7E-03	6	3.2E-02	9.8E-03	5
	10	4.6E-03	1.6E-03	6	1.5E-04	4.1E-04	6	8.9E-03	1.7E-03	5	1.3E-02	1.9E-03	7	3.1E-02	1.1E-02	5
	5	1.2E-02	8.1E-04	6	1.2E-02	8.5E-04	5	1.4E-02	1.7E-03	6	2.0E-02	1.9E-03	7	3.4E-02	4.0E-03	6
	2.5	1.7E-02	1.1E-03	6	1.1E-02	2.9E-03	6	1.9E-02	6.7E-04	5	3.0E-02	1.2E-03	6	4.4E-02	3.2E-03	6

Summary of mean and standard error (s.e.) values obtained during 25 nutritional treatments of adult female, w<sup>1118</sup> strain flies. Triglycerides (TAG) per fly, protein (Prot.) per fly, scaled triglycerides (TAG/Prot.), and food consumption data are representative of at least 2 independent trials. n represents the number of replicates per treatment, each replicate containing 5 flies.