



Supplemental Figure S1. Consort Design – Study Participants

Supplemental Table S1. Baseline daily dietary intake of children in four acanthosis nigricans groups

Nutrient/Food Group	Never (n=508) $\bar{x} \pm SE^1$	Chronic (n=12) $\bar{x} \pm SE$	Develop (n=22) $\bar{x} \pm SE$	Remission (n=16) $\bar{x} \pm SE$
Energy (kcal)	1888.9 \pm 23.7	2116.3 \pm 133.3	1886.1 \pm 127.3	1729.9 \pm 114.2
Carbohydrate (g)	253.1 \pm 3.3	265.7 \pm 19.6	239.9 \pm 17.3	234.4 \pm 16.5
Protein (g)*	69.8 \pm 0.9	87.0 \pm 5.2	73.6 \pm 4.7	66.9 \pm 4.3
Fat (g)	66.8 \pm 0.9	76.8 \pm 4.8	69.0 \pm 5.0	59.4 \pm 4.6
Added Fat (g)	32.7 \pm 0.4	38.8 \pm 2.4	32.9 \pm 2.5	28.3 \pm 1.7
Added Sugar (tsp)	11.6 \pm 0.2	9.8 \pm 1.7	9.8 \pm 0.8	9.3 \pm 1.0
Milk	1.2 \pm 0.03	1.2 \pm 0.2	1.0 \pm 0.1	1.1 \pm 0.1
Total Dairy	1.4 \pm 0.0	1.5 \pm 0.1	1.3 \pm 0.1	1.3 \pm 0.1
Citrus (servings)	0.27 \pm 0.01	0.33 \pm 0.07	0.26 \pm 0.05	0.22 \pm 0.06
Other Fruit (servings)	0.80 \pm 0.02	0.92 \pm 0.18	0.66 \pm 0.08	0.70 \pm 0.13
Total Fruit (servings)	1.15 \pm 0.03	1.34 \pm 0.23	0.95 \pm 0.10	0.99 \pm 0.17
Non-Whole Grain (servings)	6.46 \pm 0.10	7.26 \pm 0.58	6.77 \pm 0.53	6.41 \pm 0.52
Whole Grains (servings)	0.38 \pm 0.02	0.31 \pm 0.11	0.45 \pm 0.09	0.33 \pm 0.12
Total Grain (servings)	7.01 \pm 0.10	7.75 \pm 0.57	7.38 \pm 0.55	6.97 \pm 0.50
Egg (oz equivalent)	0.49 \pm 0.02	0.44 \pm 0.12	0.60 \pm 0.08	0.51 \pm 0.09
Red Meat (oz)**	0.78 \pm 0.03	1.30 \pm 0.27	0.81 \pm 0.14	0.79 \pm 0.14
All Meat	4.67 \pm 0.08	6.51 \pm 0.52	5.21 \pm 0.40	4.33 \pm 0.34
Animal Sourced Food*	6.98 \pm 0.15	8.74 \pm 0.98	7.65 \pm 0.84	6.26 \pm 0.71
Potato (servings)*	0.08 \pm 0.00	0.12 \pm 0.04	0.14 \pm 0.02	0.13 \pm 0.04
Starchy Veggies (servings)	0.07 \pm 0.01	0.09 \pm 0.02	0.11 \pm 0.02	0.04 \pm 0.02
Total Vegetables (servings)	0.7 \pm 0.02	0.9 \pm 0.08	0.8 \pm 0.08	0.7 \pm 0.10
Starch Rich Foods (servings)	18.2 \pm 0.30	17.3 \pm 2.2	16.8 \pm 1.2	15.9 \pm 1.3
Sugar Sweetened Beverages (g)	187.4 \pm 7.4	182.3 \pm 59.0	153.0 \pm 25.4	101.4 \pm 31.8
Water (g)	354.6 \pm 10.8	474.7 \pm 101.0	401.9 \pm 61.6	392.4 \pm 53.4

¹ Mean and Standard Error; * p \leq 0.05; ** p \leq 0.01

Supplemental Table S2. Change in dietary intake of children in four acanthosis nigricans groups

Nutrient/Food Group	Never (n=508) $\bar{x} \pm SE$	Chronic (n=12) $\bar{x} \pm SE$	Develop (n=22) $\bar{x} \pm SE$	Remission (n=16) $\bar{x} \pm SE$
Energy (kcal)*	130.87 \pm 25.60	-124.75 \pm 204.71	429.65 \pm 161.22	303.47 \pm 150.36
Carbohydrate (g)**	16.20 \pm 3.77	-31.35 \pm 27.41	72.11 \pm 23.03	37.65 \pm 26.09
Protein (g)*	6.01 \pm 0.96	-1.73 \pm 8.05	10.98 \pm 5.37	9.82 \pm 4.74
Fat (g)	4.72 \pm 1.08	0.36 \pm 8.32	11.83 \pm 6.28	10.99 \pm 5.04
Added Fat (g)	2.82 \pm 0.54	-1.67 \pm 4.16	6.70 \pm 3.65	6.36 \pm 2.40
Added Sugar (tsp) ***	0.50 \pm 0.30	-1.92 \pm 1.39	6.31 \pm 1.64	2.10 \pm 1.47
Milk	0.04 \pm 0.03	0.07 \pm 0.26	0.25 \pm 0.17	0.14 \pm 0.21
Total Dairy	0.06 \pm 0.04	-0.02 \pm 0.26	0.30 \pm 0.18	0.12 \pm 0.22
Citrus (servings)	0.04 \pm 0.02	-0.15 \pm 0.07	-0.04 \pm 0.08	0.03 \pm 0.08
Other Fruit (servings)	-0.01 \pm 0.03	-0.30 \pm 0.28	-0.08 \pm 0.12	0.02 \pm 0.21
Total Fruit (servings)	-0.00 \pm 0.03	-0.47 \pm 0.32	-0.09 \pm 0.14	-0.03 \pm 0.27
Non-Whole Grain (servings)	0.54 \pm 0.11	-0.57 \pm 0.72	1.68 \pm 0.67	0.68 \pm 0.60
Whole Grains (servings)	0.10 \pm 0.03	0.25 \pm 0.22	-0.02 \pm 0.11	0.22 \pm 0.18
Total Grain (servings)	0.67 \pm 0.11	-0.37 \pm 0.70	1.64 \pm 0.67	0.94 \pm 0.64
Egg (oz equivalent)	-0.14 \pm 0.05	-0.78 \pm 0.43	-0.06 \pm 0.32	-0.37 \pm 0.29
Red Meat (oz)	0.22 \pm 0.04	0.35 \pm 0.35	0.32 \pm 0.16	-0.05 \pm 0.22
All Meat	0.41 \pm 0.09	0.07 \pm 0.44	0.56 \pm 0.48	0.98 \pm 0.51
Animal Sourced Food	-0.09 \pm 0.18	-1.28 \pm 1.36	0.20 \pm 0.98	0.80 \pm 1.00
Potato (servings)*	0.01 \pm 0.01	-0.02 \pm 0.04	-0.06 \pm 0.03	-0.06 \pm 0.05
Starchy Veggies (servings)	0.02 \pm 0.01	-0.02 \pm 0.04	-0.02 \pm 0.04	-0.02 \pm 0.03
Total Vegetables (servings)	0.11 \pm 0.02	-0.02 \pm 0.12	-0.04 \pm 0.12	0.01 \pm 0.11
Starch Rich Foods (servings)***	1.07 \pm 0.34	-2.53 \pm 1.92	7.92 \pm 2.00	2.74 \pm 1.93
Sugar Sweetened Beverages (g)*	-0.54 \pm 8.96	-125.0 \pm 69.5	95.45 \pm 42.47	37.93 \pm 26.87
Water	55.93 \pm 13.84	100.29 \pm 140.68	117.31 \pm 85.37	66.92 \pm 67.60

¹ Mean and Standard Error; * $p \leq 0.05$; ** $p \leq 0.01$; *** $p \leq 0.001$