

Table S1: Mixed effects linear regressions examining associations between APOE4, eosinophil count, and cognitive performance Z scores (n=242 adults aged 30+). Village ID is also included as a random effect (not shown).

Cognitive Performance Outcome	ApoE4 carrier (vs. not)		ApoE4 *Eosinophil Count (x1000)		Eosinophil Count (x1000)		Age		Sex		Education		Spanish	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Short Term Recall	-0.737	0.004	0.584	0.001	-0.116	0.229	-0.030	0.000	0.029	0.783	0.122	0.120	-0.054	0.248
Long Term Recall	-0.656	0.020	0.517	0.013	-0.122	0.264	-0.029	0.000	-0.148	0.222	0.015	0.852	0.163	0.001
Tsimane Digit Forward	-0.668	0.024	0.362	0.097	-0.087	0.437	-0.011	0.018	0.511	0.000	0.146	0.089	0.034	0.503
Spanish Digit Forward	-0.367	0.208	0.343	0.112	-0.106	0.338	-0.013	0.008	0.583	0.000	0.089	0.294	0.023	0.646
Tactile Digit Forward	-0.078	0.779	0.270	0.194	-0.132	0.218	-0.012	0.008	0.274	0.020	0.293	0.000	0.072	0.141
Composite D Forward	-0.525	0.068	0.415	0.051	-0.133	0.229	-0.015	0.002	0.608	0.000	0.189	0.023	0.045	0.363
Category Fluency	-0.468	0.096	0.170	0.420	-0.069	0.519	-0.007	0.162	0.432	0.000	0.094	0.263	0.039	0.438
Visual Scan	0.088	0.696	0.219	0.208	-0.030	0.732	-0.039	0.000	0.360	0.000	0.204	0.004	0.096	0.022
Composite Fluid	-0.760	0.003	0.555	0.004	-0.151	0.152	-0.024	0.000	0.438	0.000	0.139	0.048	0.085	0.086

Table S2: Mixed effects linear regressions examining associations between APOE4, eosinophil count, and cognitive performance Z scores (n=124 children < age 18). Village ID is also included as a random effect (not shown). Note anthropometric measurements were only available for n=85 children.

Outcome	ApoE4 carrier (vs. not)		Eosinophil Count (x1000)		Age		Sex		Education		Spanish	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Short Term Recall	0.184	0.441	-0.001	0.987	0.057	0.105	-0.442	0.036	0.162	0.333	-0.329	0.000
Long Term Recall	-0.116	0.585	0.118	0.137	0.103	0.001	-0.551	0.003	-0.023	0.874	0.138	0.065
Tsimane Digit Forward	0.090	0.679	0.005	0.954	0.081	0.013	0.447	0.020	-0.030	0.841	0.056	0.470
Spanish Digit Forward	0.356	0.150	-0.070	0.452	0.026	0.489	0.437	0.045	-0.070	0.681	0.070	0.427
Tactile Digit Forward	0.444	0.045	-0.017	0.837	0.043	0.197	0.205	0.293	0.073	0.631	0.083	0.289
Composite D Forward	0.334	0.113	-0.037	0.637	0.062	0.049	0.485	0.009	-0.030	0.834	0.082	0.270
Category Fluency	0.163	0.441	-0.029	0.702	0.103	0.001	0.299	0.110	-0.181	0.222	-0.084	0.262
Visual Scan	0.366	0.060	-0.031	0.672	0.047	0.104	0.070	0.682	0.224	0.094	0.037	0.587
Composite Fluid	0.255	0.231	-0.063	0.937	0.095	0.003	0.178	0.343	0.038	0.792	0.34	0.649
HAZ	0.155	0.647	-0.343	0.007	-0.109	0.030	-0.061	0.838	-0.315	0.175	0.141	0.237
WAZ	0.039	0.916	-0.345	0.010	-0.077	0.160	-0.058	0.858	-0.346	0.172	0.023	0.857

Table S3: Mixed effects linear regressions examining associations between APOE4, eosinophil count, and cognitive performance Z scores (n=124 children < age 18). Village ID is also included as a random effect (not shown). Note anthropometric measurements were only available for n=85 children.

Cognitive Performance Outcome	ApoE4 carrier (vs. not)		ApoE4 *Eosinophil Count (x1000)		Eosinophil Count (x1000)		Age		Sex		Education		Spanish	
	β	p	β	p	β	p	β	p	β	p	β	p	β	p
Short Term Recall	0.177	0.708	-0.044	0.863	-0.065	0.946	0.062	0.092	-0.296	0.177	0.138	0.429	-0.354	0
Long Term Recall	0.568	0.16	-0.448	0.042	0.148	0.073	0.092	0.003	-0.444	0.016	0.001	0.995	0.152	0.039
Tsimane Digit Forward	0.615	0.136	-0.339	0.13	0.031	0.71	0.066	0.038	0.451	0.016	-0.013	0.931	0.075	0.315
Spanish Digit Forward	0.387	0.405	-0.005	0.986	-0.079	0.407	0.022	0.539	0.452	0.032	-0.052	0.754	0.067	0.427
Tactile Digit Forward	0.761	0.071	-0.158	0.491	-0.026	0.765	0.037	0.258	0.205	0.287	0.113	0.458	0.105	0.178
Composite D Forward	0.678	0.089	-0.203	0.348	-0.031	0.703	0.052	0.094	0.492	0.007	-0.003	0.986	0.096	0.188
Category Fluency	0.360	0.358	-0.083	0.694	-0.062	0.444	0.097	0.002	0.302	0.107	-0.155	0.302	-0.095	0.215
Visual Scan	0.706	0.054	-0.206	0.301	-0.023	0.764	0.040	0.16	0.098	0.555	0.247	0.058	0.048	0.468
Composite Fluid	0.740	0.066	-0.298	0.175	0.013	0.876	0.077	0.014	0.218	0.234	0.034	0.813	0.043	0.562
HAZ	0.524	0.465	-0.223	0.56	-0.320	0.015	-0.113	0.026	-0.044	0.884	-0.300	0.198	0.144	0.226
WAZ	0.296	0.706	-0.155	0.711	-0.339	0.019	-0.080	0.149	-0.046	0.887	-0.335	0.188	0.026	0.844

Table S4: Mixed effects linear regressions examining associations between ApoE4, eosinophil count, and cognitive performance Z scores (n=138 adults aged 45+). Village ID is also included as a random effect (not shown).

Outcome	ApoE4 carrier (vs. not)		ApoE4 *Eosinophil Count (x1000)		Eosinophil Count (x1000)		Age		Sex		Education		Spanish	
	β	p	β	p	β	p	β	p	β	p	β	p	β	p
Short Term Recall	-0.753	0.013	0.695	0.002	-0.035	0.755	-0.016	0.010	-0.017	0.888	-0.067	0.480	-0.046	0.350
Long Term Recall	-0.674	0.101	0.482	0.110	-0.194	0.209	-0.020	0.015	-0.155	0.346	-0.217	0.082	0.249	0.000
Tsimane Digit Forward	-0.766	0.081	0.391	0.229	-0.095	0.565	-0.006	0.488	0.419	0.017	0.100	0.458	0.001	0.992
Spanish Digit Forward	-0.147	0.701	0.219	0.436	-0.090	0.536	-0.004	0.635	0.535	0.000	0.002	0.990	0.005	0.929
Tactile Digit Forward	0.359	0.314	0.070	0.789	-0.093	0.500	-0.003	0.634	0.182	0.202	0.148	0.168	0.060	0.282
Composite D Forward	-0.357	0.375	0.320	0.281	-0.111	0.474	-0.006	0.456	0.526	0.001	0.082	0.501	0.015	0.812
Category Fluency	-0.718	0.064	0.356	0.214	-0.119	0.414	-0.001	0.924	0.435	0.005	0.058	0.623	0.030	0.620
Visual Scan	0.172	0.546	0.244	0.257	-0.159	0.146	-0.024	0.000	0.288	0.012	0.109	0.223	0.113	0.015
Composite Fluid	-0.661	0.076	0.551	0.044	-0.163	0.254	-0.011	0.133	0.348	0.020	0.035	0.759	0.068	0.245

Table S5: Mixed effects linear regressions examining associations between APOE4, four leucocyte subtypes, composite fluid cognitive performance Z scores (n=242 adults aged 30+). Village ID is also included as a random effect (not shown).

Outcome	ApoE4 carrier (vs. not)		ApoE4 *Leucocyte Subtype Count (x1000)		Leucocyte Subtype Count (x1000)		Age		Sex		Education		Spanish	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Eosinophils	-0.760	0.003	0.555	0.004	-0.151	0.152	-0.024	0.000	0.438	0.000	0.139	0.048	0.085	0.086
Monocytes	1.857	0.383	1.860	0.702	-0.145	0.307	-0.023	0.000	0.484	0.000	0.143	0.083	0.081	0.105
Basophils	-14.032	0.303	32.696	0.102	-0.158	0.249	-0.023	0.000	0.465	0.000	0.136	0.098	0.073	0.141
Lymphocytes	0.088	0.169	0.134	0.27	-0.476	0.163	-0.023	0.000	0.511	0.000	0.147	0.071	0.081	0.100
Neutrophils	-0.002	0.962	-0.106	0.277	0.294	0.489	-0.024	0.000	0.472	0.000	0.153	0.066	0.070	0.170

Figure S1: STROBE flow chart depicting sampling

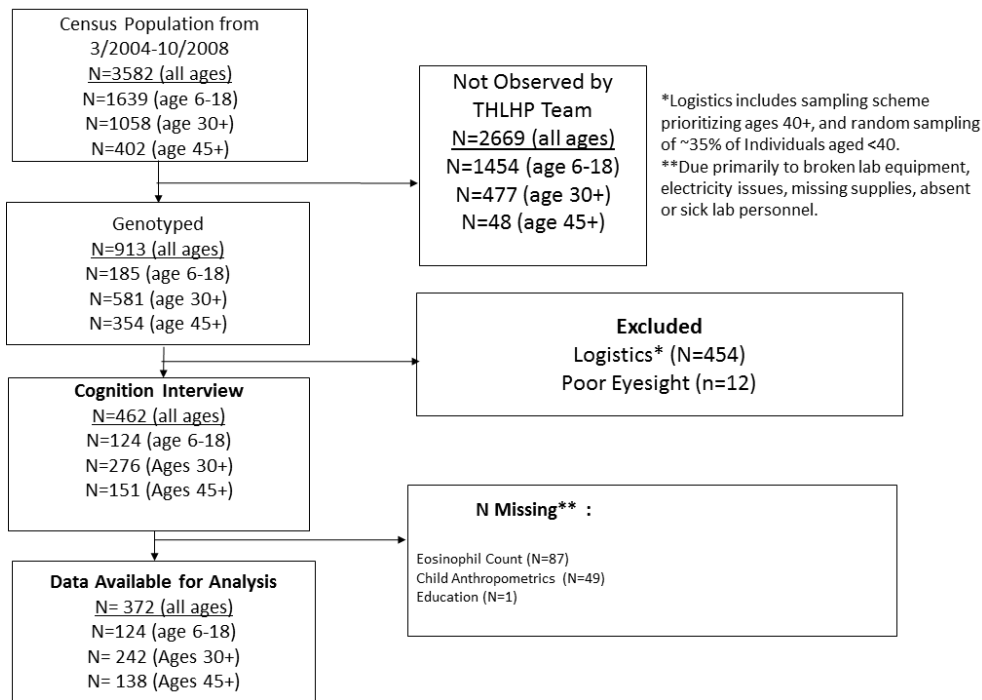


Figure S2 Graphs of each cognitive measure by eosinophil count for carriers of APOE4 (dashed line) and ApoE3 (solid line) for N=124 children aged 6-18.

E4 Eosinophil Interaction, Age <18

