

Supplemental Material

Title: Frequency of Extreme Heat Events and Hay Fever Prevalence Among Representative Sample of US Adults: 1997-2013

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Supplemental Material, Table S1. Unadjusted and adjusted [AORs (95% CIs)] for hay fever in adults*, NHIS 1997-2013, sensitivity analysis for EHE₉₀

EHE ₉₀ Categories	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
	<i>P_{trend} <0.05</i>	<i>P_{trend} <0.05</i>	<i>P_{trend} <0.05</i>
Q1 (0-23 days) [#]	1.00	1.00	1.00
Q2 (24-34 days)	1.04 (1.00-1.09)	1.04 (1.00-1.09)	1.04 (1.00-1.08)
Q3 (35-46 days)	1.06 (1.02-1.10)	1.06 (1.02-1.10)	1.06 (1.01-1.10)
Q4 (≥47 days)	1.05 (1.01-1.10)	1.06 (1.01-1.10)	1.05 (1.01-1.10)

[#] Reference Category

Model 1: Unadjusted; Model 2: Adjusted for sex, age, race/ethnicity, education, family income as percent of poverty and threshold; Model 3: Additionally adjusted for urban-rural classification.

* Includes sample adults 18 years and older with complete data.

EHE₉₀: Extreme heat events – days where the daily TMAX value exceeded the county and calendar month specific 90th percentile threshold, calculated using 30 year of baseline data.

Supplemental Material, Table S2. Unadjusted and adjusted [AORs (95% CIs)] for hay fever in adults *, NHIS 1997-2013, sensitivity analysis for EHE₉₉

EHE ₉₉ Categories	Model 1 OR (95% CI)	Model 2 OR (95% CI)	Model 3 OR (95% CI)
	<i>P_{trend} <0.001</i>	<i>P_{trend} <0.001</i>	<i>P_{trend} <0.001</i>
Q1 (0 days) [#]	1.00	1.00	1.00
Q2 (1-2 days)	1.05 (1.00-1.10)	1.03 (0.98-1.08)	1.03 (0.98-1.08)
Q3 (3-6 days)	1.11 (1.06-1.16)	1.09 (1.05-1.14)	1.09 (1.04-1.14)
Q4 (≥7 days)	1.09 (1.04-1.14)	1.08 (1.03-1.13)	1.08 (1.03-1.13)

[#] Reference Category

Model 1: Unadjusted; Model 2: Adjusted for sex, age, race/ethnicity, education, family income as percent of poverty and threshold; Model 3: Additionally adjusted for urban-rural classification.

* Includes sample adults 18 years and older with complete data.

EHE₉₉: Extreme heat events – days where the daily TMAX value exceeded the county and calendar month specific 99th percentile threshold, calculated using 30 year of baseline data.

Supplemental Material, Table S3. Adjusted odds ratios [AORs (95% CIs)] for hay fever in adults*, NHIS 1997-2013, sensitivity analyses for EHE₉₀ and EHE₉₉ by season

Quartiles	Hay Fever AOR (95% CI)			
	Winter	Spring	Summer	Fall
EHE ₉₀	<i>P</i> _{trend} <0.001	<i>P</i> _{trend} <0.01	<i>P</i> _{trend} <0.5	<i>P</i> _{trend} <0.05
Q1 (0-4 days) [#]	1.00	1.00	1.00	1.00
Q2 (5-6 days)	0.98 (0.93-1.02)	1.05 (1.01-1.10)	1.02 (0.97-1.06)	1.03 (0.99-1.07)
Q3 (7-13 days)	0.97 (0.93-1.00)	1.03 (0.99-1.06)	1.02 (0.99-1.06)	1.01 (0.98-1.05)
Q4 (≥14 days)	1.04 (1.00-1.08)	1.08 (1.04-1.12)	1.03 (1.00-1.07)	1.06 (1.02-1.11)
EHE ₉₉	<i>P</i> _{trend} <0.5	<i>P</i> _{trend} <0.01	<i>P</i> _{trend} <0.05	<i>P</i> _{trend} <0.5
Q1 (0 days) [#]	1.00	1.00	1.00	1.00
Q2 (1 days)	1.02 (0.99-1.05)	1.00 (0.97-1.04)	1.01 (0.97-1.06)	1.01 (0.97-1.05)
Q3 (2 days)	1.00 (0.96-1.05)	1.02 (0.98-1.07)	1.04 (0.99-1.09)	1.00 (0.95-1.05)
Q4 (≥3 days)	1.04 (1.00-1.08)	1.07 (1.04-1.11)	1.05 (1.02-1.09)	0.97 (0.94-1.01)

[#] Reference Category

Adjusted for sex, age, race/ethnicity, education, family income as percent of poverty threshold, and urban-rural classification.

* Includes sample adults 18 years and older with complete data

EHE₉₀: Extreme heat events – days where the daily TMAX value exceeded the county and calendar month specific 90th percentile threshold calculated using 30 year of baseline data.

EHE₉₉: Extreme heat events – days where the daily TMAX value exceeded the county and calendar month specific 99th percentile threshold calculated using 30 year of baseline data.