



Household Food Security is Associated with Hypoglycemia Fear among Young Adults with Type 1 and Type 2 Diabetes and Parents of Youth with Type 1 Diabetes

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Objective: To evaluate the relationship between household food insecurity and fear of hypoglycemia in young adults with type 1 and type 2 diabetes, youth with type 1 diabetes, and their parents.

Methods



SEARCH for Diabetes in Youth Cohort

- Phase 4: 2015-2020
- Diabetes type: provider determined

Food Security was measured with the US Household Food Security Survey.

- ≥ 3 food insecure conditions or behaviors indicated food insecurity

Fear of Hypoglycemia was measured with the Hypoglycemia Fear Survey.

Two question sets: 1) Behaviors people may do to avoid hypoglycemia; 2) Worries concerning hypoglycemia

- Questions are summed for a behavior score, a worry score, and a total fear of hypoglycemia score
- Adult Survey
 - Total Fear Score (range: 0-132)
 - Behavior subscale score (range: 0-60)
 - Worry Subscale score (range: 0-72)
- Youth and Parent of Youth Survey
 - Total Fear Score (range: 0-100)
 - Behavior subscale score (range:0-40)
 - Worry subscale score (range:0-60)

Statistical analysis: General linear models

Results and Interpretation



- Adults with diabetes, and parents of youth with type 1 diabetes, who had household food insecurity had higher fear of hypoglycemia scores than those who were food secure.
- Implementation of common approaches to ameliorate risk of hypoglycemia such as carrying snacks is problematic for people who are food insecure.
- Providers could consider food insecurity when discussing hypoglycemia and fear thereof with their patients.

Association of Household Food Security with Hypoglycemia Fear Scores and Subscales in the SEARCH for Diabetes in Youth Cohort Study

	Total Score		Behavior Subscale		Worry Subscale	
	β (SE)	P-value	β (SE)	P-value	β (SE)	P-value
Adults Type 1 (N=1283)	14.23 (1.81)	<.0001	3.11 (0.72)	<.0001	11.05 (1.32)	<.0001
Adults Type 2 (N=320)	8.90 (3.20)	0.0060	2.49 (1.48)	0.0938	6.05 (2.25)	0.0078
Youth Type 1 (N=592)	0.39 (1.80)	0.8283	0.05 (0.81)	0.9483	0.46 (1.33)	0.7315
Parents Type 1 (N=592)	3.41 (1.93)	0.0775	0.19 (0.82)	0.8209	3.33 (1.50)	0.0265

*The models are adjusted for age, diabetes duration, sex, race/ethnicity, clinic, education, household income, insurance type, medication regimen, and continuous glucose monitoring use.