



Question: What is the relationship between acculturation, dietary intake and type 2 diabetes?

Table 1. Summary of studies examining the relationship between acculturation and type 2 diabetes (T2D)

Author, Year Data Source, Location Risk of Bias*	Race/Ethnicity Sample Size Age % Female	Acculturation Measure T2D Measures	Results
Garcia, 2012 National Health and Nutrition Examination Survey (NHANES) 1999-2008, US Risk of Bias: 2/24	Mexican American (100%) Initial N=5,069 (Cases: NR) 20-89y % female NR	Proxies: Predominate language, location of birth Pre-diabetes: Fasting blood glucose of 100-125 mg/dL Diabetes: Fasting blood glucose of ≥ 126 mg/dL or a self-reported physician diagnosis of diabetes or diabetes medication	Pre-diabetes and diabetes (prevalence ratios by acculturation status (ref gp: US-born, predominately English-speaking Mexican Americans with no diabetes): <i>US born:</i> Predominately Spanish-speaking: NS <i>Mexico-born:</i> - Predominately English-speaking: NS - Predominately Spanish-speaking: NS
Kandula, 2008 Multi-Ethnic Study of Atherosclerosis (MESA), Maryland, Illinois, North Carolina, California, New York, and Minnesota Risk of Bias: 4/24	Mexican (36%) non-Mexican Hispanics (27%), and Chinese (37%) N=1,992 (Cases: NR) ~61y ~50% female	Acculturation score calculated using nativity, years living in the US, and language spoken at home. Scores were summed to obtain the acculturation score, ranging from 0 (least acculturated) to 5 (most acculturated) Diabetes: Defined as fasting glucose ≥ 126 mg/dL and/or use of diabetes medications	Diabetes prevalence: <i>Mexican:</i> NS <i>Non-Mexican Hispanic:</i> NS <i>Chinese:</i> NS



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Mainous, 2006 NHANES 1999–2002, US Risk of Bias: 0/24	Mexican American and Other Hispanic N=2,696 (Cases: NR) 18-64y ~50%female	Language acculturation (Short Acculturation Scale) and birth outside the US Previously diagnosed diabetes-self-report; undetected elevated blood glucose: Elevated HbA1c >6.1%	Diabetes prevalence: <i>Language proxy:</i> Low acculturation associated with increase diabetes prevalence (OR=1.90, 95% CI=1.02, 3.54) <i>Place of birth:</i> NS Elevated blood glucose: <i>Language:</i> NS <i>Place of birth:</i> NS
van Rompay, 2012 Boston Puerto Rican Health Study, Massachusetts Risk of Bias: 2/24	Puerto Rican Descent N=1,219; 45-75y (Cases: NR) 72% female	Psychological Acculturation Scale (PAS); Bi-dimensional Acculturation Scale (BAS); length of stay (LOS) T2D: Fasting plasma blood glucose ≥126mg/dL and/or use of oral diabetes medication or insulin	T2D (%) by BAS quartiles: P for trend NS T2D by PAS or LOS quartiles: NS

*Risk of Bias as determined using the Nutrition Evidence Library Bias Assessment Tool