

Table 1. Descriptive Statistics of the U.S. Adult Population Ages 35-74 by Diabetes Status and Period

	No Diabetes		Pre-Diabetes		Diabetes	
	NHANES III	NHANES CTS	NHANES III	NHANES CTS	NHANES III	NHANES CTS
Sample size	6,277	4,014	1,679	660	1,254	796
Mean age, y	49.45	49.47	56.19	55.52	57.11	56.99
Hispanic, %	7.62	10.84	10.26	15.65	11.25	16.91
Non-Hispanic Black, %	7.32	8.71	20.07	16.67	17.69	17.79
Education, %						
Less than High School	20.99	17.66 †	35.63	29.06	44.35	37.61
High School	33.21	24.45 †	35.56	28.52 †	33.15	24.84 †
More than High School	45.80	57.89 †	28.82	42.42 †	22.51	37.55 †
Smoking Status, %						
Current	25.43	23.91	37.63	22.13 †	22.01	19.13
Former	31.51	28.51 †	30.04	33.85	40.98	34.56
Never	43.06	47.58 †	32.33	44.02 †	37.02	46.31 †
Mean BMI ^a (kg/m ²)	26.69	27.73 †	28.85	31.74 †	31.41	32.86 †
BMI ^a category (kg/m ²), %						
30 to 35	15.09	17.41 †	20.34	31.98 †	28.25	25.68
More than 35	6.88	10.48 †	15.33	24.27 †	26.20	33.15 †
Mean HbA1c	5.16	5.24 †	5.99	5.97	8.11	8.00

BMI: body mass index; HbA1c: Hemoglobin A1c; a. BMI derived from measured data on height and weight; No Diabetes is defined as HbA1c less than 5.7%; Pre-Diabetes is defined as HbA1c between 5.7 and 6.5%; Diabetes is defined as HbA1c above 6.5% or on treatment for diabetes. Sources: National Health and Nutrition Examination Survey (NHANES) III (1988-1994) and continuous (CTS) (1999-2002).

† Significantly different ($p < 0.05$) compared with NHANES III

Table 2. All-Cause Mortality Rates (per 1,000 person-years) and Relative Risks for the US Adult Population by Diabetes Status and Period

	NHANES III (1988-2001)	NHANES CTS (1999-2006)
<i>No Diabetes</i>		
Mortality Rate	7.81 (6.70-8.93)	6.04 (4.77-7.32) [†]
Relative Risk	1.00	1.00
<i>Pre-Diabetes</i>		
Mortality Rate	11.19 (8.38-14.00)	14.02 (8.47-19.58)
Relative Risk	1.43 (1.12-1.74)	2.32 (1.24-3.40)
<i>Diabetes</i>		
Mortality Rate	20.34 (16.00-24.67)	20.82 (13.10-28.54)
Relative Risk	2.60 (1.91-3.29)	3.45 (2.02-4.87)
Deaths	960	341
Person-years	67,526	30,989

HbA1c: Hemoglobin A1c; No Diabetes is defined as HbA1c less than 5.7%; Pre-Diabetes is defined as HbA1c between 5.7 and 6.5%; Diabetes is defined as HbA1c above 6.5% or on treatment for diabetes. Sample includes persons ages 35-74 at baseline. Entry years are 1988-1994 with follow-up through 2001 for the earlier period and 1999-2002 with follow-up through 2006 for the later period. Mortality rates are age-standardized to the year 2000 Census population using age groups 35-54, 55-69 and 70-84. Relative risks are based on age-standardized mortality rates and are otherwise unadjusted. All estimates are weighted and account for complex survey design. Sources: National Health and Nutrition Examination Survey (NHANES) III and continuous (CTS).

[†] Significantly different (p<0.05) compared with NHANES III

Table 3. Hazard Ratios Predicting Mortality from All Causes

	Model 1		Model 2		Model 3	
	Hazard Ratio	95% CI	Hazard Ratio	95% CI	Hazard Ratio	95% CI
Sex						
Women	1.00		1.00		1.00	
Men	1.54 ***	(1.34-1.76)	1.30 ***	(1.13-1.50)	1.33 ***	(1.16-1.53)
Race/ethnicity						
Other	1.00		1.00		1.00	
Hispanic	0.76	(0.57-1.02)	0.83	(0.62-1.12)	0.84	(0.63-1.13)
Non-Hispanic Black	1.48 ***	(1.21-1.82)	1.51 ***	(1.23-1.84)	1.49 ***	(1.22-1.81)
Education Level						
Less than High School	1.00		1.00		1.00	
High School	0.78 **	(0.65-0.93)	0.79 **	(0.66-0.94)	0.79 **	(0.67-0.94)
More than High School	0.61 ***	(0.50-0.74)	0.68 ***	(0.56-0.83)	0.67 ***	(0.55-0.82)
Smoking						
Never Smoker	-		1.00		1.00	
Former Smoker	-		1.83 ***	(1.46-2.29)	1.83 ***	(1.46-2.29)
Current Smoker	-		2.90 ***	(2.24-3.75)	2.73 ***	(2.11-3.52)
BMI	-		-		0.87 ***	(0.82-0.93)
BMI Squared	-		-		1.00 ***	(1.00-1.00)
Period ^a	0.86	(0.65-1.13)	0.86	(0.66-1.13)	0.88	(0.67-1.15)
Dysglycemia ^b	1.63 ***	(1.38-1.92)	1.55 ***	(1.31-1.83)	1.62 ***	(1.36-1.93)
Dysglycemia X Period	1.34	(0.94-1.92)	1.45 *	(1.02-2.07)	1.46 *	(1.03-2.08)

a. Period is an indicator variable which takes a value of 1 in the later of the two periods in the analysis. Entry years are 1988-1994 with follow-up through 2001 for the earlier period and 1999-2002 with follow-up through 2006 for the later period; b. Dysglycemia sample includes persons with HbA1c \geq 5.7% or on treatment for diabetes. Reference categories for categorical variables indicated by HR=1.00; Sample includes persons ages 35-74 at baseline. All estimates are weighted and account for complex survey design. Sources: National Health and Nutrition Examination Survey III and continuous.

***p<0.001; **<0.01; *p<0.05