

Disparities in Health Habits Among Minorities with Disabilities: Implications for Public Health Policy and Practice

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Disclaimer

- The findings and conclusions in this report have not been formally disseminated by [the Centers for Disease Control and Prevention/the Agency for Toxic Substances and Disease Registry] and should not be construed to represent any agency determination or policy.



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Objective

- To examine disparities in healthy nutrition, sedentary lifestyle and weight control among minorities with moderate/severe disabilities, using the *International Classification of Functioning, Disability and Health (ICF)* framework
- To consider the implications of these disparities among minorities with disabilities for public health policy and practice



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Methods

- We back-coded NHIS questions to the *International Classification of Functioning, Disability and Health (ICF)* to identify relevant codes that defined our measures of disability, mental health status, obesity, nutrition, fitness, and sleep



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Methods (Continued)

- Using crosstabulation and logistic regression procedures, we analyzed data from the 2005 NHIS Sample Adult and Cancer Supplement files on 31,000 self-responding adults age 18 years and older



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Methods (Continued)

- Disability was defined as having one or more functional limitations
- Comparison groups included minorities with and without functional limitations and non-Hispanic whites with and without functional limitations



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Independent Measures

- Mild Functional Limitations and
- Moderate/Severe Functional limitations (ICF codes d410-d469)
- Minority Status (No ICF codes available)



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Functional Limitations - 1

- Changing and Maintaining Body Position (d410-d429)
 - ◆ Difficulty stooping and bending
 - ◆ Difficulty standing and sitting unsupported for a sustained period of time



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Functional Limitations - 2

- Carrying, moving and handling objects (ICF codes d430-d449)
 - ◆ Difficulty reaching up over head
 - ◆ Difficulty grasping and handling small objects
 - ◆ Difficulty lifting/carrying 10 pounds
 - ◆ Difficulty pushing/pulling large objects



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Functional Limitations - 3

- Walking and Moving Around (d450-d469)
 - ◆ Difficulty walking 3 blocks
 - ◆ Difficulty climbing 10 steps without resting



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Functional Limitations - 4

- Acquisition of necessities (ICF codes d610-d629)
 - Difficulty shopping



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Functional Limitations - 5

- Interpersonal interactions and relationships (ICF codes d710-d779)
 - Difficulty socializing with friends and family and attending social outings



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Functional Limitations - 6

- Recreation and leisure
 - Difficulty relaxing with hobbies and leisure activities



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Severity Index for Level of Functional Limitations

- Mild: Person has a little difficulty with activities
- Moderate: Person finds the activity somewhat difficult to do
- Severe: Person finds the activity very difficult to do, or person is unable to do the activity



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Minority Status

- Includes all adults age 18 years and older who reported belonging to a U.S. racial/ethnic group
- Excludes all adults age 18 years and older who reported being non-Hispanic whites



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Sample Sizes

- Minorities

– Mild limitations	907
– Moderate/severe limitations	1,059
– No limitations	4,114

- Non-Hispanic whites

– Mild limitations	4,543
– Moderate/severe limitations	4,326
– No limitations	16,479



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Dependent Measures – Health Status

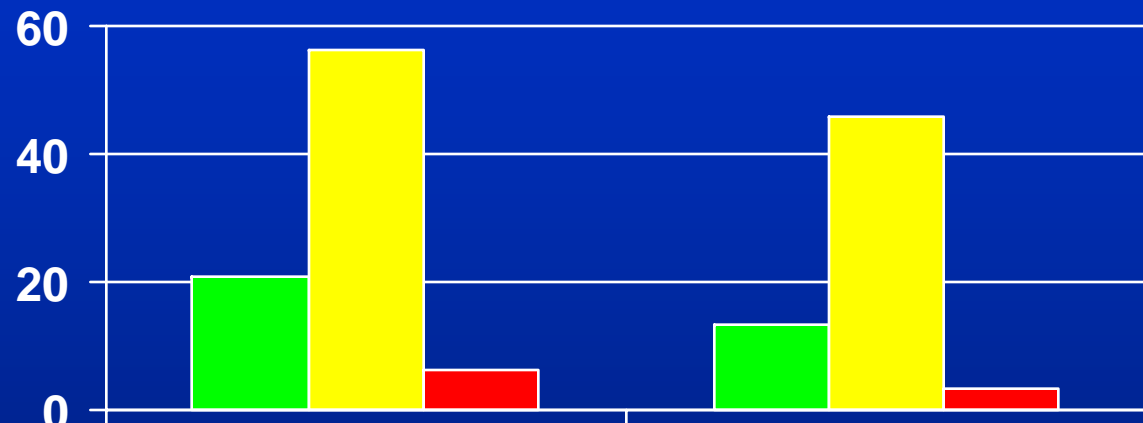
- Physical health status – excellent/very good/good, fair/poor health in past 12 months
- Depressive symptoms – mild/moderate/severe in past 30 days, as measured by the K6 Scale of Psychological Distress



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Adults with Fair/Poor Health

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	21	13.3
■ Mod/Sev Limitations	56.5	45.9
■ No Limitations	6.4	3.5



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Measuring Depressive Symptoms

- The K6 Scale of Psychological Distress is one of the World Health Organization's classification systems
- The K6 Scale has demonstrated specificity and sensitivity in identifying mood (depressive and anxiety) disorders, but it does not distinguish which type of disorder is present in any given individual



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Variables Associated with the K6 Scale

- Respondent reported feelings that significantly interfered with daily activities
 - Sadness
 - Hopelessness
 - Nervousness
 - Restlessness
 - Worthlessness
 - Sense that everything is an effort



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Structuring the K6 Scale

- Reverse code values for 6 measures of depressive symptoms:
 - 1 = none of the time
 - 2 = a little of the time
 - 3 = some of the time
 - 4 = most of the time
 - 5 = all of the time
- Sum across unweighted scores



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Scoring the K6 Scale

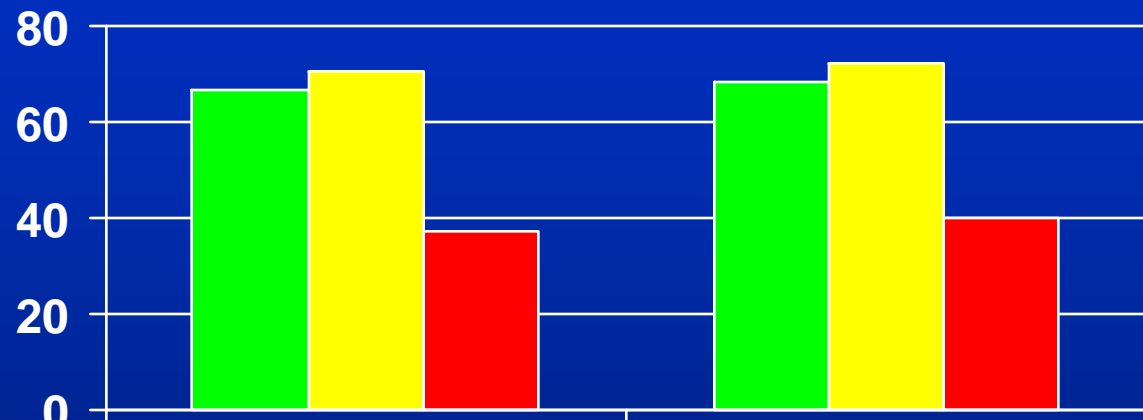
- No symptoms of depression: K6 Scale score = 6
- Mild symptoms: K6 Scale Score = 7-12
- Moderate symptoms: K6 Scale score = 13-18
- Severe symptoms: K6 Scale score = 19-30



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Adults with Depressive Symptoms

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	67	68.7
■ Mod/Sev Limitations	70.7	72.5
■ No Limitations	37.2	39.8



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Dependent Measures- Health Behaviors

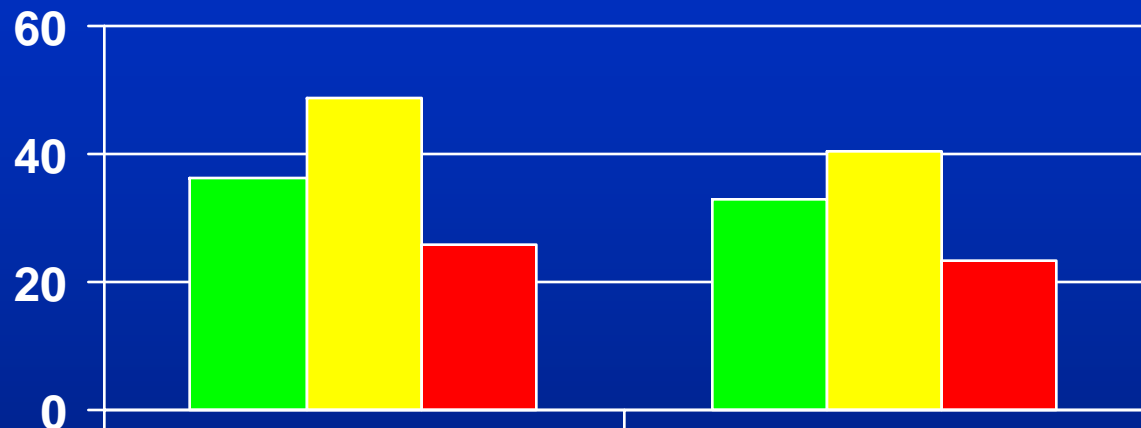
- Obesity – BMI \geq 30
- Sleep <8 hours per night v. \geq 8 hours per night
- Physical inactivity – moderate or vigorous exercises <1 time per week or never any type of exercise
- Sedentary lifestyle – sit most of the time
- Current smoker: smoked daily or some days during the week



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Adults Who Are Obese

Percent of Adults



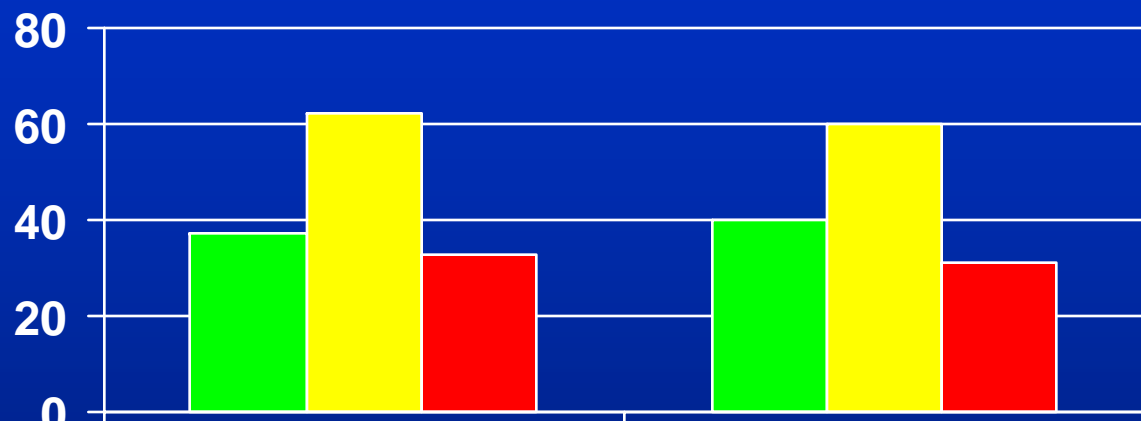
	Minorities	Non-Hispanic Whites
■ Mild Limitations	36.3	32.7
■ Mod/Sev Limitations	48.6	40.6
■ No Limitations	25.8	23.3



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Adults with a Sedentary Lifestyle

Percent of Adults



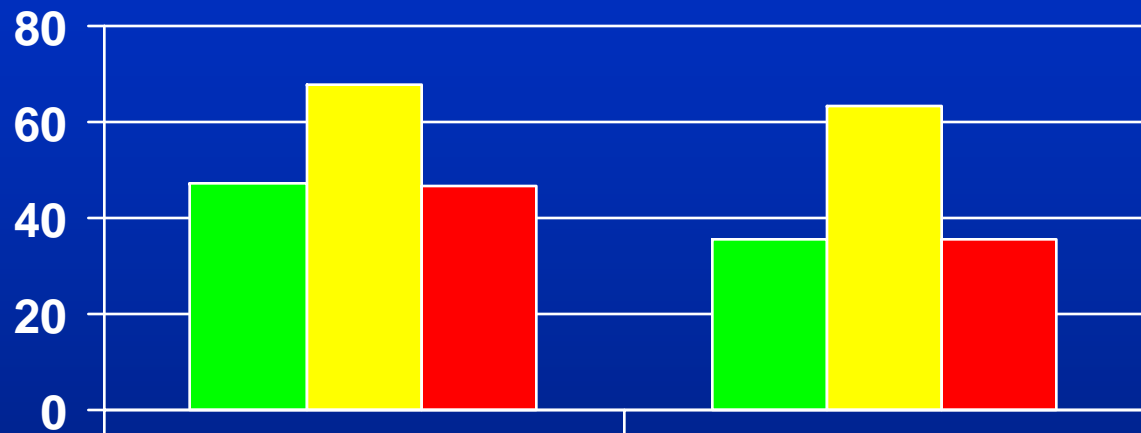
	Minorities	Non-Hispanic Whites
■ Mild Limitations	37.2	40.2
■ Mod/Sev Limitations	62.4	60
■ No Limitations	32.8	31.1



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Adults Getting No Regular Weekly Exercise

Percent of Adults

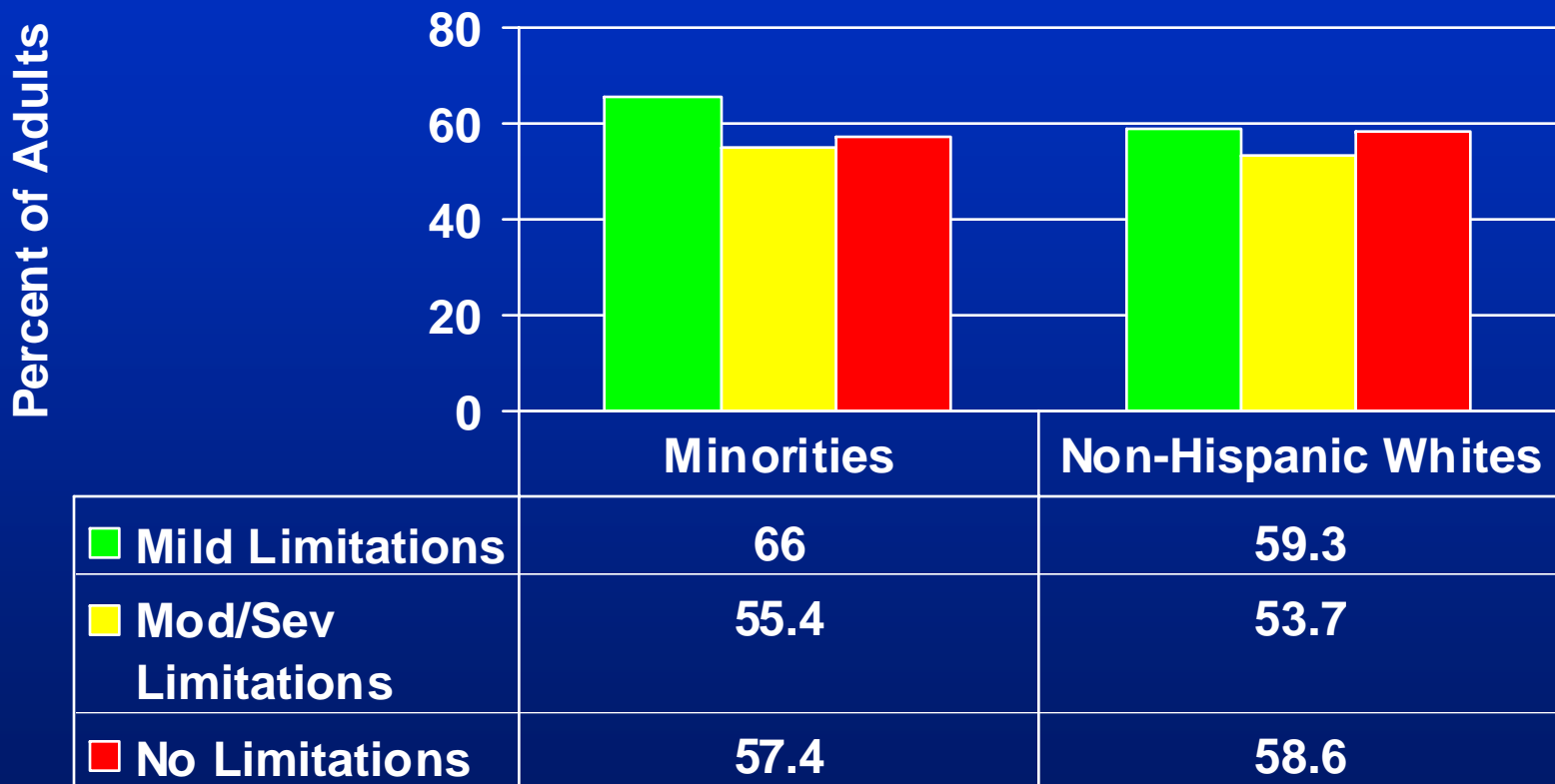


	Minorities	Non-Hispanic Whites
■ Mild Limitations	47.6	35.5
■ Mod/Sev Limitations	68.1	63.4
■ No Limitations	46.8	36



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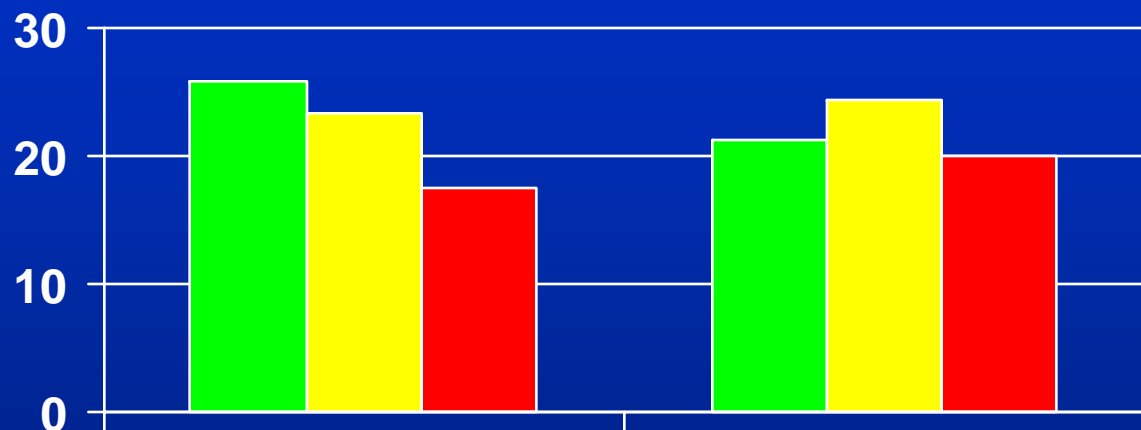
Adults Sleeping Less Than 8 Hours at Night



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Adults Who Are Current Smokers

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	26	21.2
■ Mod/Sev Limitations	23.5	24.3
■ No Limitations	17.7	20.1



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Dependent Measures – Daily Nutritional Habits

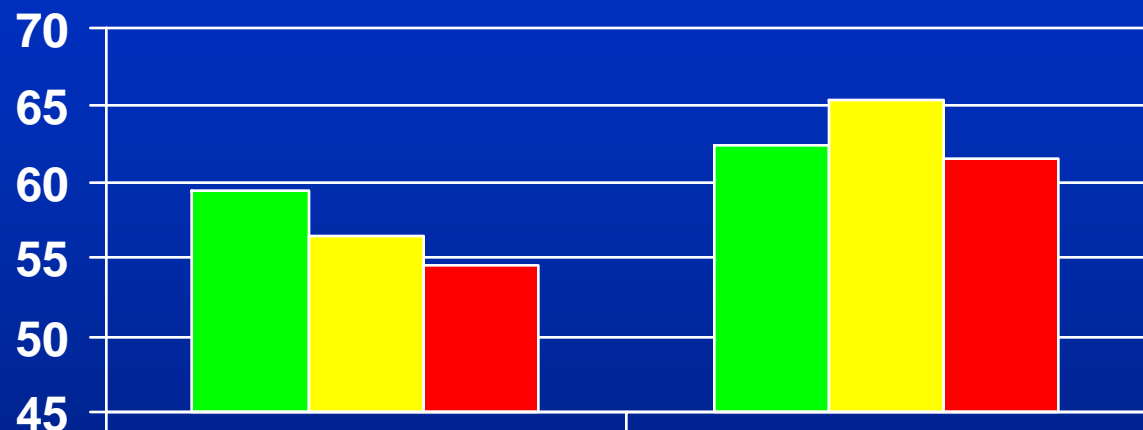
- Cereals and bread
- Dairy – milk and cheese
- Fruits and fruit juices
- Beans, salad, and other vegetables
- Red meat
- White potatoes (other than French fries)



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Adults Eating Hot or Cold Cereal Weekly

Percent of Adults



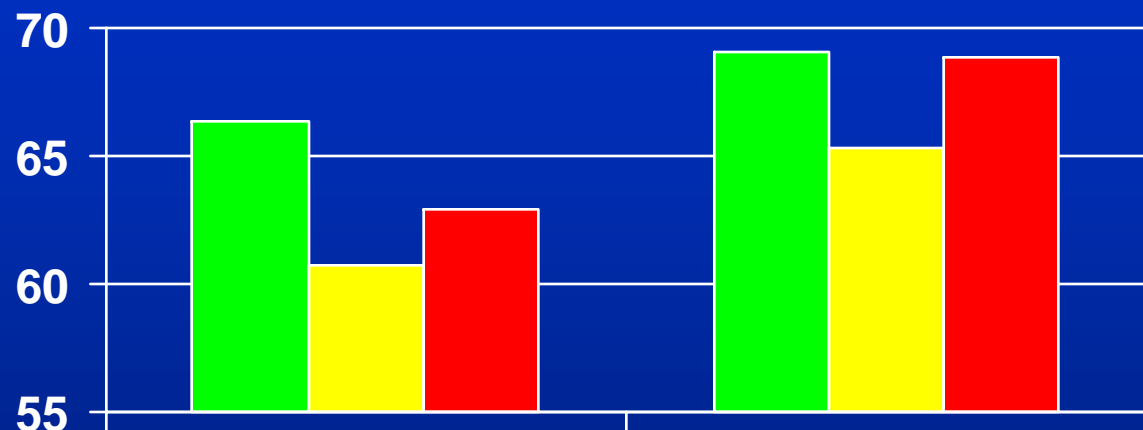
	Minorities	Non-Hispanic Whites
■ Mild Limitations	59.4	62.5
■ Mod/Sev Limitations	56.5	65.3
■ No Limitations	54.6	61.5



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Adults Eating Whole Grain Bread Weekly

Percent of Adults



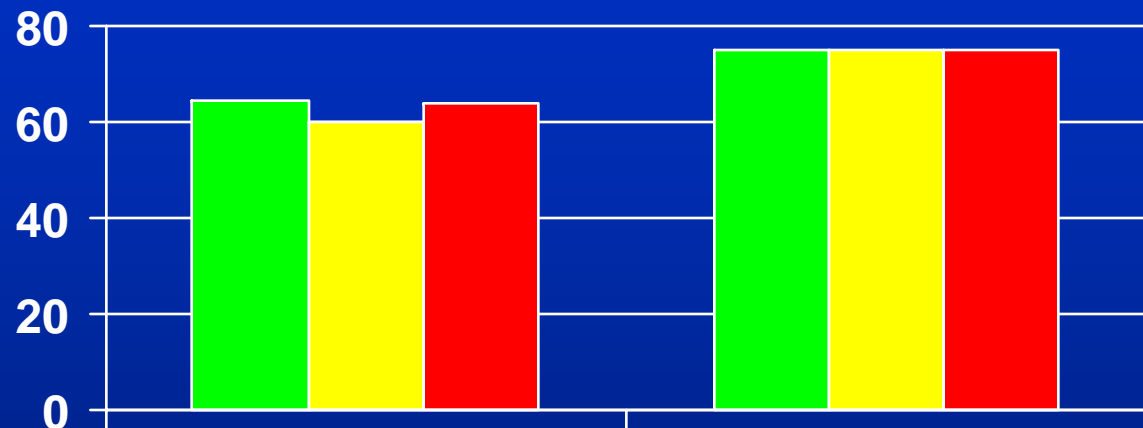
	Minorities	Non-Hispanic Whites
■ Mild Limitations	66.4	69.1
■ Mod/Sev Limitations	60.7	65.3
■ No Limitations	62.9	68.9



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Adults Drinking Milk Weekly

Percent of Adults



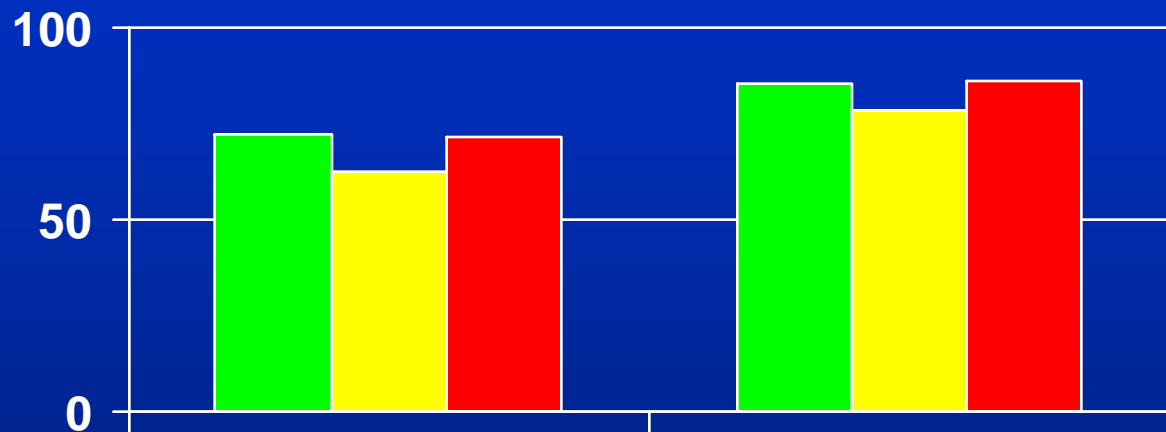
	Minorities	Non-Hispanic Whites
■ Mild Limitations	64.5	74.8
■ Mod/Sev Limitations	60.6	75
■ No Limitations	64.2	75



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Adults Eating Cheese Weekly

Percent of Adults



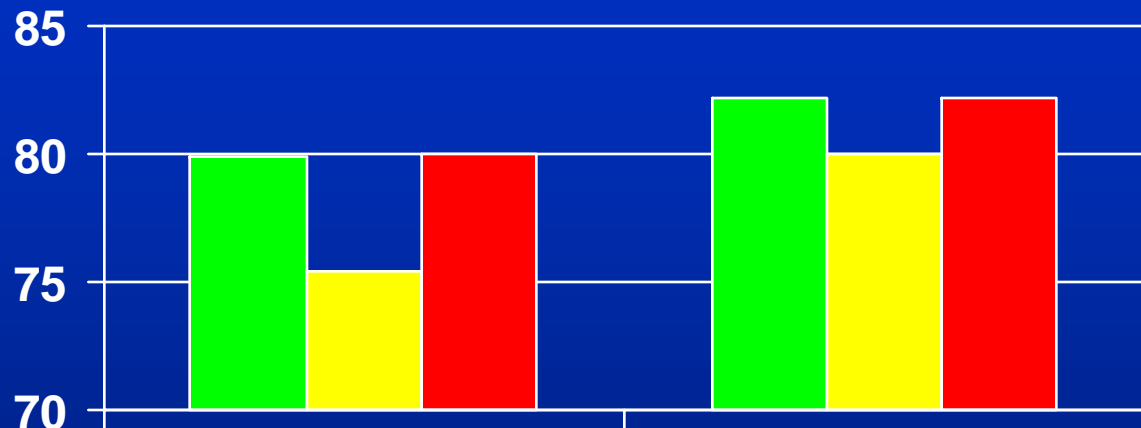
	Minorities	Non-Hispanic Whites
■ Mild Limitations	72.5	85.2
■ Mod/Sev Limitations	62.5	78.9
■ No Limitations	72	86.2



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Adults Eating Fruit Weekly

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	79.9	82.2
■ Mod/Sev Limitations	75.5	80
■ No Limitations	80	82.2



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Adults Drinking Fruit Juice Weekly

Percent of Adults



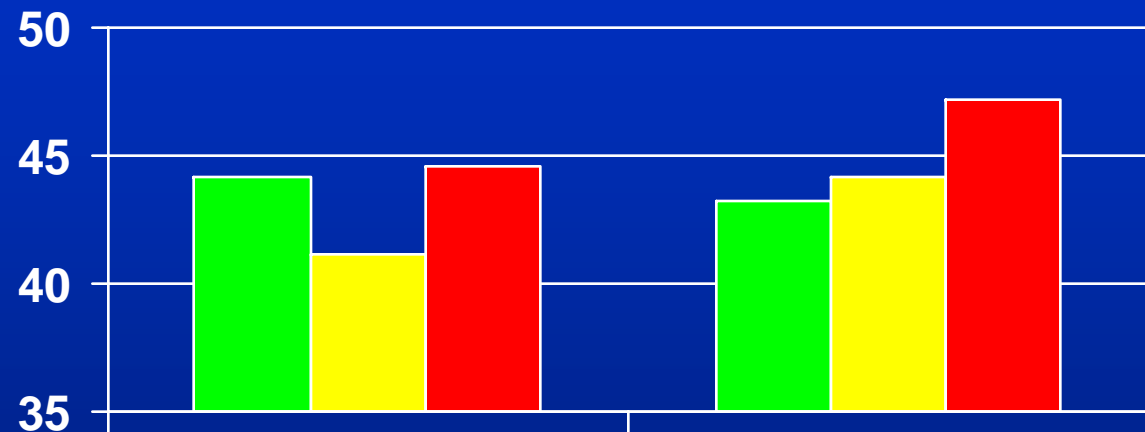
	Minorities	Non-Hispanic Whites
■ Mild Limitations	72.5	61.7
■ Mod/Sev Limitations	64.7	58.6
■ No Limitations	71.8	63.9



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Adults Eating Beans Weekly

Percent of Adults



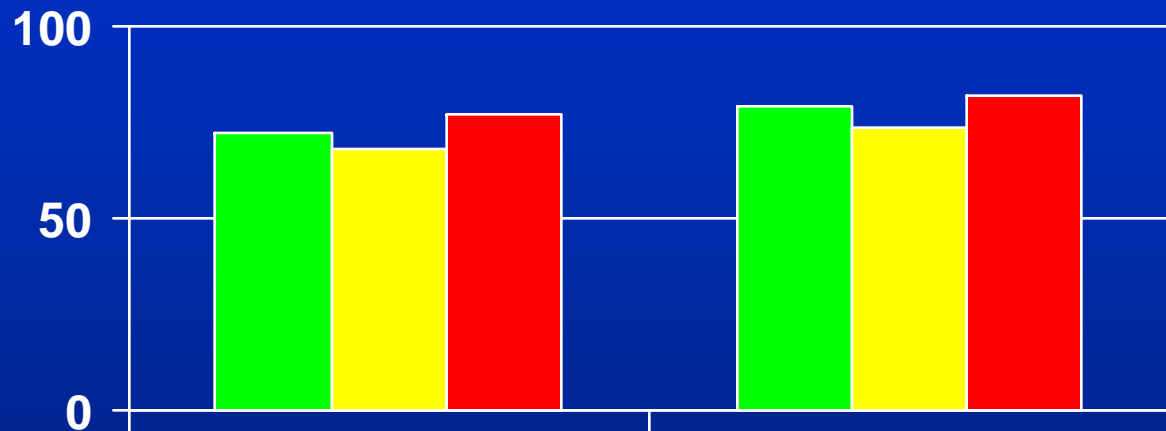
	Minorities	Non-Hispanic Whites
■ Mild Limitations	44.2	43.2
■ Mod/Sev Limitations	41.2	44.2
■ No Limitations	44.6	47.2



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Adults Eating Salads Weekly

Percent of Adults



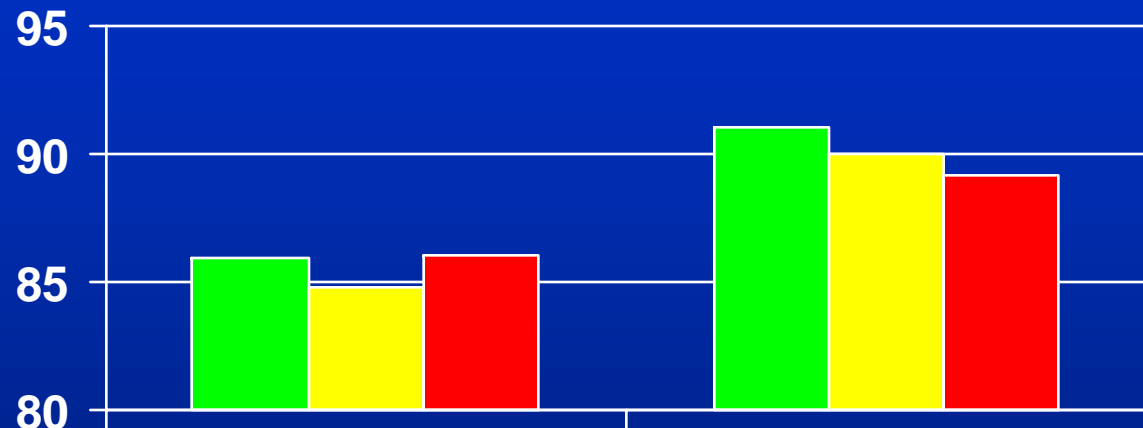
	Minorities	Non-Hispanic Whites
■ Mild Limitations	72.2	79.9
■ Mod/Sev Limitations	68.4	73.9
■ No Limitations	77.3	82.4



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Adults Eating Other Vegetables Weekly

Percent of Adults



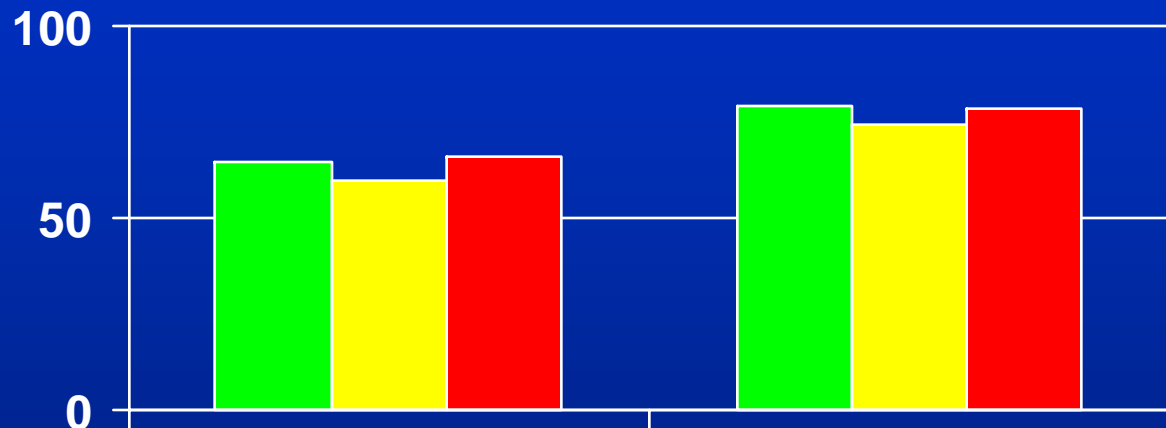
	Minorities	Non-Hispanic Whites
■ Mild Limitations	85.9	91.1
■ Mod/Sev Limitations	84.8	90
■ No Limitations	86	89.2



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Adults Eating Red Meat Weekly

Percent of Adults



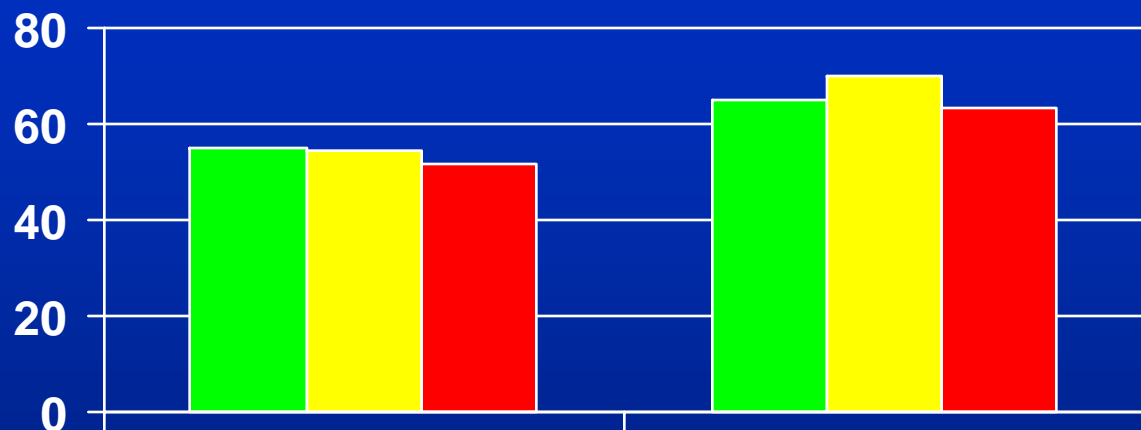
	Minorities	Non-Hispanic Whites
■ Mild Limitations	65.3	79.5
■ Mod/Sev Limitations	59.7	74.6
■ No Limitations	66.4	78.4



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Adults Eating White Potatoes Weekly

Percent of Adults



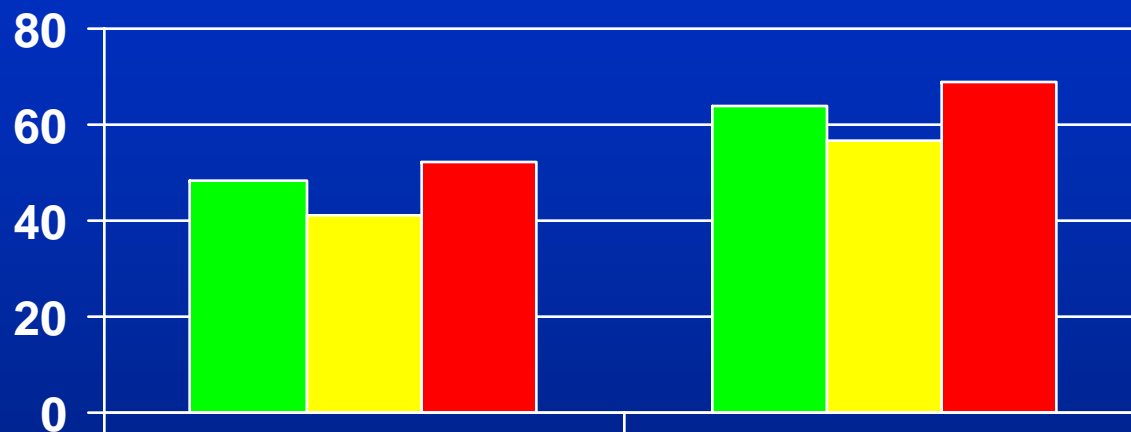
	Minorities	Non-Hispanic Whites
■ Mild Limitations	55.6	65.2
■ Mod/Sev Limitations	54.5	69.8
■ No Limitations	52.2	63.3



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Adults Eating Tomato Sauce in Foods Weekly

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	48.7	64.3
■ Mod/Sev Limitations	41.1	56.6
■ No Limitations	52.4	69.2



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Dependent Measures: Daily Vitamin Supplements

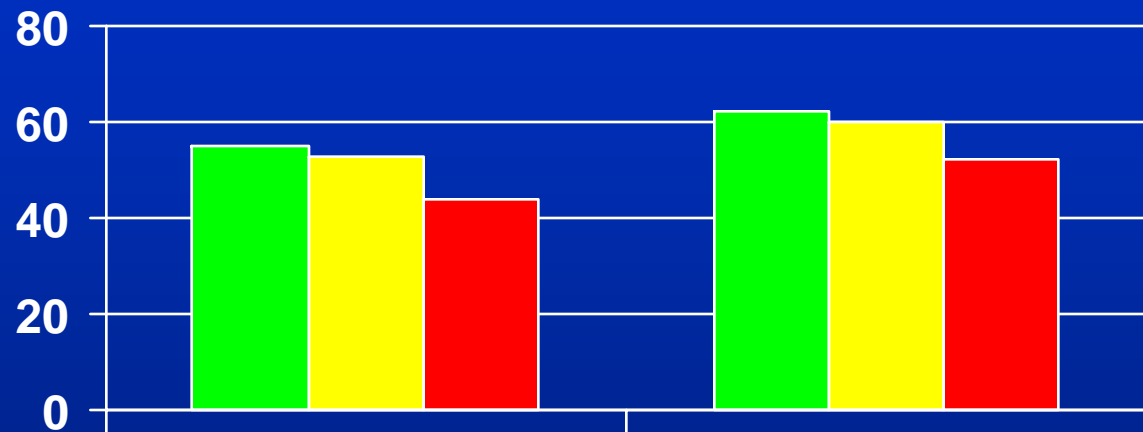
- Multi-vitamin supplement
- Calcium supplement (women)



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Adults Taking a Daily Vitamin Supplement

Percent of Adults



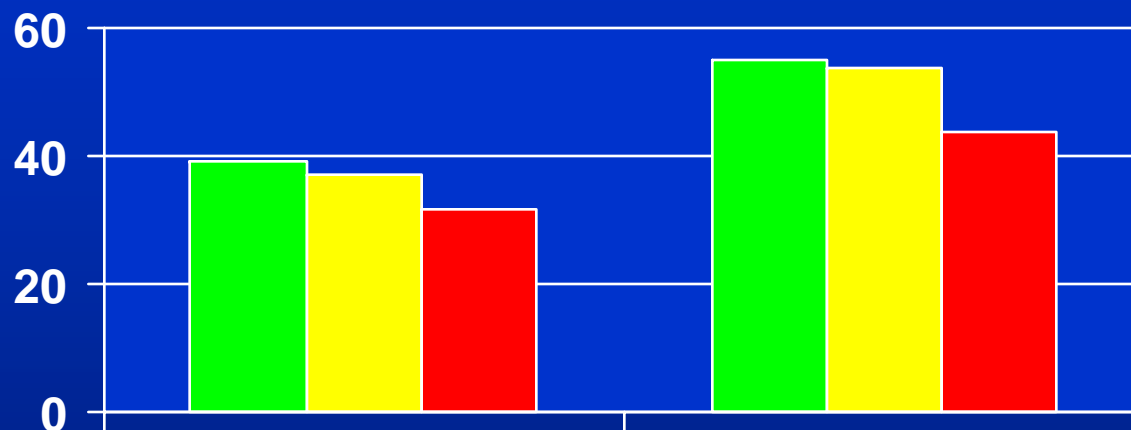
	Minorities	Non-Hispanic Whites
■ Mild Limitations	55.5	62.4
■ Mod/Sev Limitations	53.1	60.4
■ No Limitations	43.6	52.6



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Women Taking a Daily Calcium Supplement

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	39.5	55.4
■ Mod/Sev Limitations	37.1	53.7
■ No Limitations	31.6	44.1



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Dependent Measures – Nutritional Habits

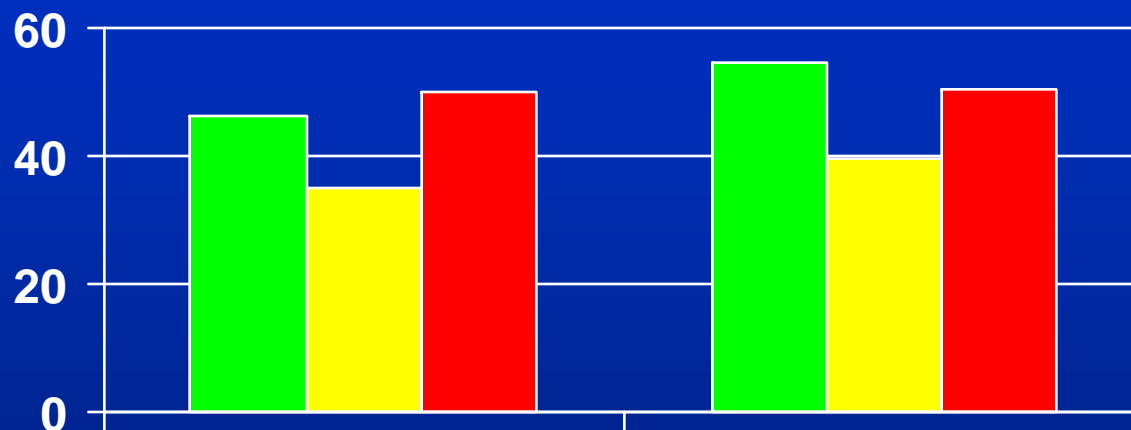
- French fries
- Sugared fruit drinks
- Sodas
- Doughnuts and other sweet baked goods



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Adults Eating French Fries Weekly

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	46.5	54.8
■ Mod/Sev Limitations	35	39.8
■ No Limitations	49.9	50.5



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Adults Drinking Sugared Fruit Drinks Weekly

Percent of Adults



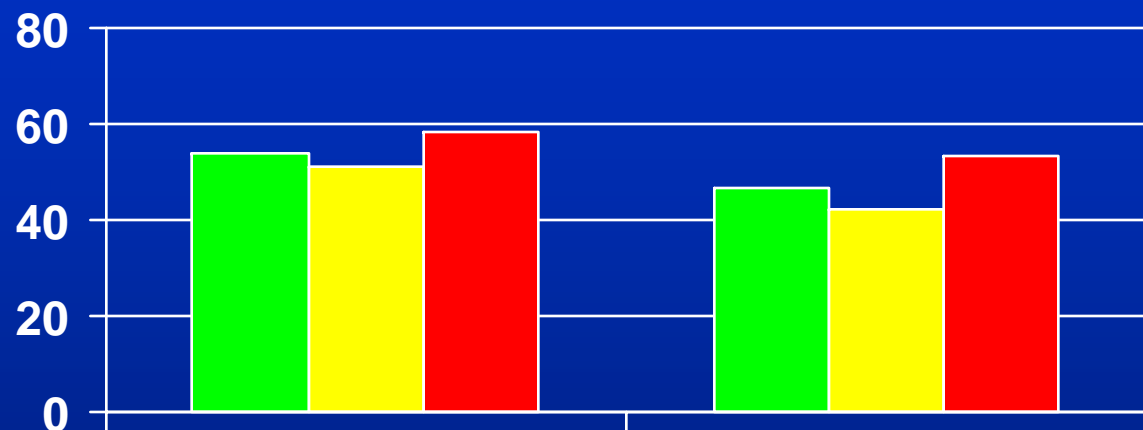
	Minorities	Non-Hispanic Whites
■ Mild Limitations	43.1	26.7
■ Mod/Sev Limitations	39.5	24.7
■ No Limitations	42.8	32



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Adults Drinking Non-Diet Sodas Weekly

Percent of Adults



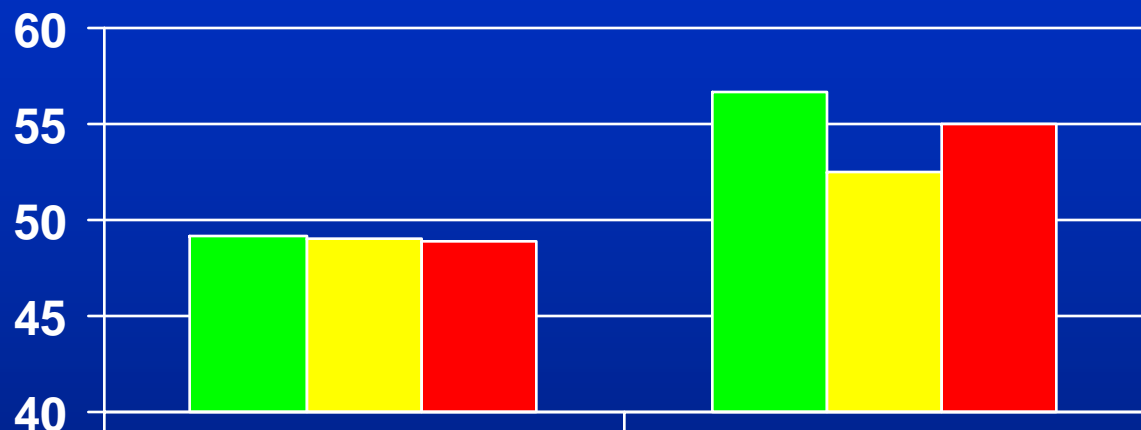
	Minorities	Non-Hispanic Whites
■ Mild Limitations	54.3	46.8
■ Mod/Sev Limitations	51.2	42.6
■ No Limitations	58.2	53.5



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Adults Eating Doughnuts and Other Sweet Pastries Weekly

Percent of Adults



	Minorities	Non-Hispanic Whites
■ Mild Limitations	49.2	56.8
■ Mod/Sev Limitations	49.1	52.5
■ No Limitations	48.9	55.1



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Results

- Findings reported here were statistically significant at $p < .05$ or less
- Odds ratios in the logistic regression models were adjusted for age, sex, income, education and marital status
- Findings are reported for interactive effects of minority status and disability status
- Our reference group was non-minority, non-limited adults



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Results - Health

- Minorities with moderate/severe limitations had the highest odds of experiencing fair/poor health (AOR=18.790) and the highest odds of experiencing depressive symptoms (AOR=4.714) after controlling for demographic factors



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Results – Weight and Physical Inactivity

- Minority adults with moderate/severe limitations had the highest odds of being obese (AOR=3.144), of having a sedentary lifestyle (AOR=2.316) and of getting no exercise during the week (AOR=2.305)



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Results – Healthy Eating

Minority adults with moderate/severe limitations had lower odds of eating fruit (AOR=0.728), eating vegetables (AOR=0.563), eating salad (AOR=0.467) and drinking milk (AOR=0.680)



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Results – Sugared Foods

- Minorities with moderate/severe limitations had higher odds of drinking sugared fruit drinks (AOR=1.907) but higher odds of drinking sodas (AOR=1.582) than whites with moderate/severe limitations



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Conclusions

- Without healthy nutrition and attention to physical fitness, minorities with disabilities may develop additional health problems that can lead to further disablement and health decline



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Implications

- Public health policy makers should create and implement community-based programs that address both minority and disability barriers to living healthy lifestyles



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Barriers to Healthy Lifestyles for Adults with Disabilities

- Economic: lack of affordable and accessible nutrition and fitness options
- Attitudinal: PWD are not expected to care about good nutrition and fitness, so programs are not disability accessible



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Barriers to Healthy Lifestyles

- Nutritional: disability-related cooking skills limitations
- Technology: lack of affordable assistive technology to improve nutrition and physical fitness
- Training: Community professionals lack training to work effectively with PWD on nutrition and fitness



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Contact Information

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