



Prevalence of Distinct Combinations of Co-morbid Diagnostic Conditions for Metabolic Syndrome in U.S. Adults

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INTRODUCTION

- Metabolic Syndrome (MetS) is a set of concurrent conditions associated with an increased risk of developing cardiovascular diseases and type 2 diabetes mellitus
- Although there is some debate about the criteria used to diagnose MetS, the five most widely accepted diagnostic conditions are obesity, particularly central adiposity, which typically is determined as large waist circumference (WC); low concentrations of high-density lipoprotein cholesterol (HDL-C); elevated triglyceride (TG) concentrations; elevated blood pressure (BP); and elevated fasting glucose (GLU) concentrations. A person contemporaneously having any three or more of these disorders is said to have MetS.
- A fundamental understanding of the prevalence of disorders of specific combinations of co-existing risk factors for MetS may provide insight into commonality among the undesirable biomarkers. The aim of this study was to investigate the non-overlapping prevalence of co-existing disorders among different combinations of the five component risk factors for MetS to determine the most influential diagnostic criteria in US men and women aged 20 years and older.

PURPOSE

- To identify the most prevalent unique combinations of the component disorders of metabolic syndrome among adults.

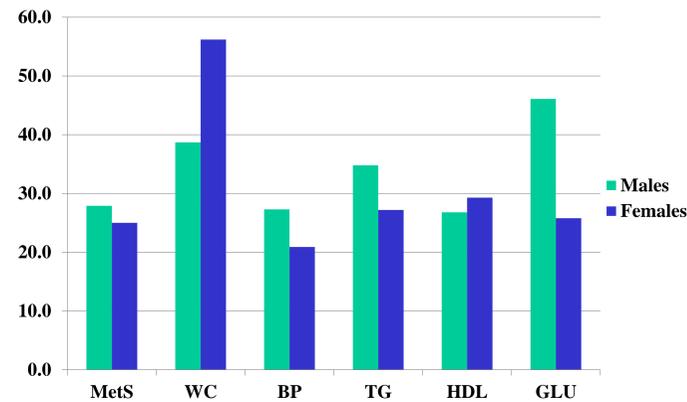
METHODS

- 11,652 participants aged ≥ 20 years in the National Health and Nutrition Examination Survey (NHANES), 1999-2010, constitute a representative sample of U.S. adults.
- Exclusions included those who did not participate in the mobile examination center, did not fast, were pregnant, or did not have measurements for WC, BP, GLU, HDL, or TG.
- Presence or absence of MetS was determined using the present NCEP definition.

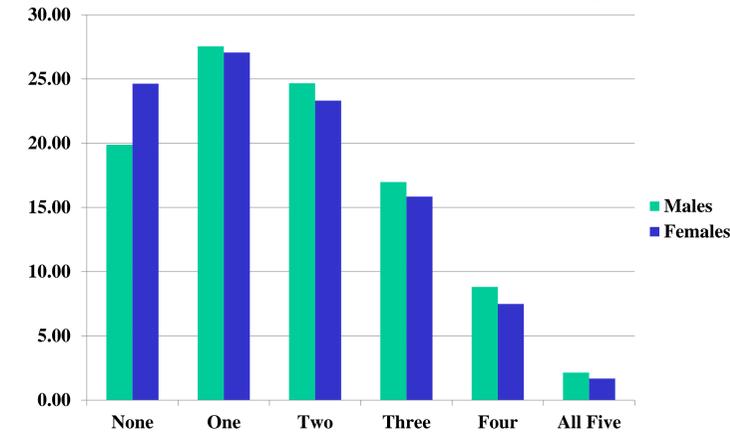
SAMPLE DEMOGRAPHICS

Characteristic	No. of Adults		
	Study Sample	Population Estimate	Population %
Total	11,652	89,668,135	
Sex			
M	5,653	40,809,423	45.5
F	5,999	48,858,713	54.5
Ethnicity			
Non-Hispanic White	7,542	75,976,057	84.7
Non-Hispanic Black	1,738	7,190,837	8.0
Mexican-American	2,372	6,501,241	7.3
Age group			
20-29	1,849	15,509,351	17.3
30-39	1,927	16,581,739	18.5
40-49	2,303	21,871,314	24.4
50-59	1,753	16,373,575	18.3
60-69	1,656	9,849,691	11.0
70 and older	2,164	9,482,465	10.6

Prevalence of MetS and Individual Component Disorders by Sex



Prevalence of Number of Component Disorders, by Sex



Estimated Number of Adults with Each Distinct Component Combination, by Sex

