



**DEPRESSIVE AND  
ANXIETY  
SYMPTOMOLOGY  
AMONG  
HISPANICS/LATINOS:  
RESULTS FROM THE  
HCHS/SOL**

**Hispanic Community Health Study/  
Study of Latinos  
(HCHS/SOL)**



# Presentation Outline

- About the HCHS/SOL study
- Overview of depression and anxiety
- Depression and anxiety among Hispanics/Latinos of diverse backgrounds
- The relationship between psychological distress and cardiovascular disease risk factors
- Antidepressant and anxiety medication use
- New models of care for depression and anxiety

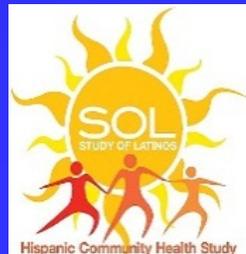


# About the Hispanic Community Health Study/ Study of Latinos (HCHS/SOL)

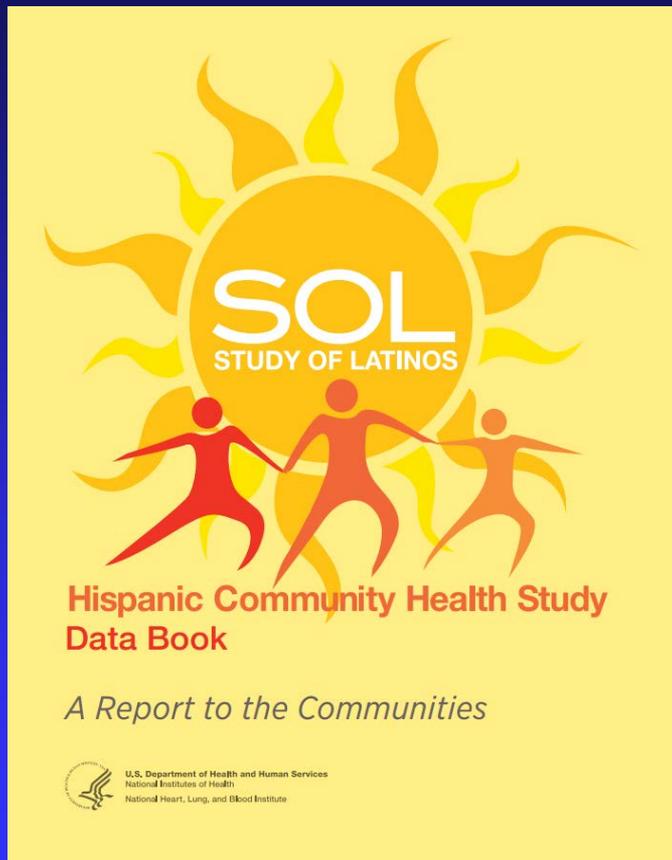
- HCHS/SOL is a comprehensive, longitudinal (prospective), population based, multicenter, cohort study of Hispanic/Latino populations in the United States.
- The study is sponsored by the National Heart, Lung and Blood Institute; and six other Institutes, centers and offices within of the National Institutes of Health.
- The four communities participating in this landmark study are:



- Bronx, New York
- Chicago, Illinois
- Miami, Florida
- San Diego, California



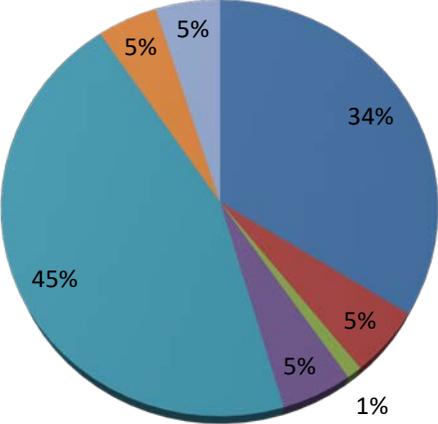
# Broad Range of Measures



- Pulmonary Disease, pg. 22
- Oral Health, pg. 25
- Hearing Loss, pg. 27
- Depression, pg. 37
- Anxiety, pg. 38
- Physical Activity, pg. 45

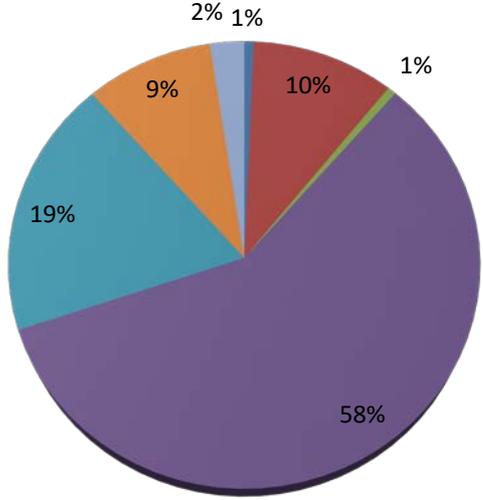
# Distribution by Hispanic / Latino Background and Site

**Bronx Field Center**

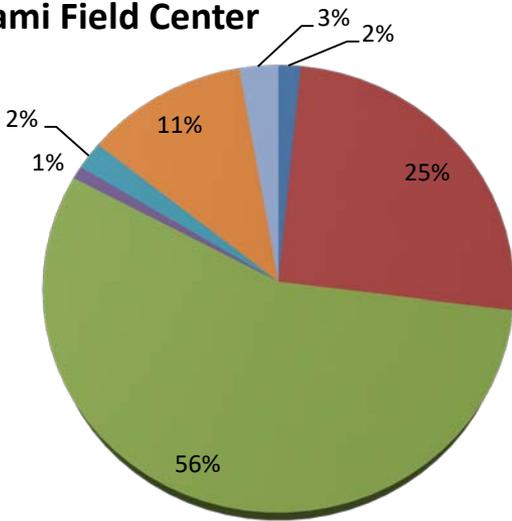


- Dominican
- Central American
- Cuban
- Mexican
- Puerto Rican
- South American
- More than one/Other heritage

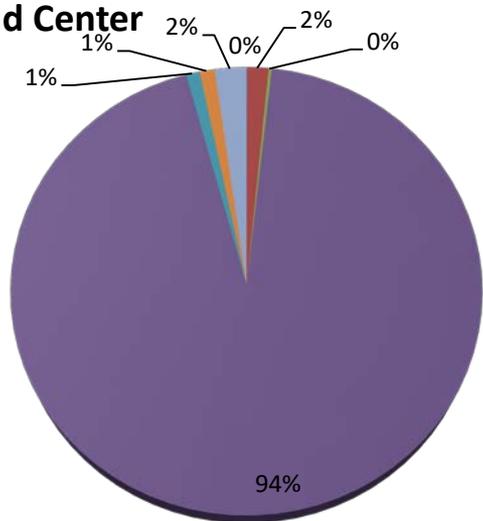
**Chicago Field Center**



**Miami Field Center**



**San Diego Field Center**



# Historical Longitudinal Studies



1948



**CARDIA**  
Coronary Artery Risk Development in Young Adults

1983

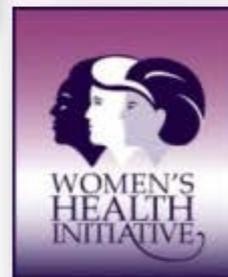
1985

1987

1988

1992

1999



2000  
National Heart, Lung,  
and Blood Institute

2006

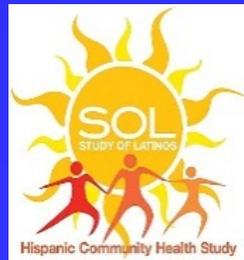
# The Purpose of the HCHS/SOL Study

- To identify prevalence of cardiovascular and pulmonary-related diseases (& other chronic diseases) in Hispanics/Latinos of diverse backgrounds.
- To identify the risk factors (social, cultural and psychological) that may have a **protective** or **harmful** role in the prevalence of cardiovascular and pulmonary-related diseases and other chronic diseases.
- To identify causes of death, and the rate of serious cardiovascular and pulmonary complications over time.



# What is Depression?

Depression is a state of mind marked by sadness, inactivity, difficulty thinking and concentrating, a significant increase or decrease in appetite and time sleeping, feelings of hopelessness and sometimes suicidal tendencies.



# Depression: Causes and Prevalence

- **Depression** is most likely caused by a combination of genetic, biological, environmental, and psychological factors.
  - Trauma, loss of a loved one, or any stressful situation may trigger a depressive episode.
- According to the National Institute of Mental Health (NIMH), each year about 7% of U.S. adults had at least one major depressive disorder.
  - Women are 70% more likely to experience depression than men.
  - The average age of onset is 32.

*Source: <http://www.nimh.nih.gov/health/topics/depression/index.shtml>*



# Facts About Depression

- Anxiety disorders often accompany depression.
- Depression co-exists with alcohol and substance abuse.
- Depression may also occur with other serious medical illnesses.
  - Depressive symptoms as well as anxiety have been associated with higher risk for heart disease, stroke, and all causes of mortality.
- Depression can be effectively treated, usually with medications or psychotherapy.

*Source: <https://www.nimh.nih.gov/health/topics/depression/index.shtml>.*



# What is Anxiety?

- **Anxiety** is a fear or nervousness about what might happen often marked by physiological signs (e.g. sweating, tension, increased pulse).
  - Occasional anxiety is a normal part of life when faced with a problem, decision, etc.
- **Anxiety disorders** involve more than temporary worry or fear; it does not go away and can get worse over time.
  - Commonly occur along with other mental and physical illnesses including depression or alcohol and substance abuse.

Source: <http://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml>



# Anxiety Disorders

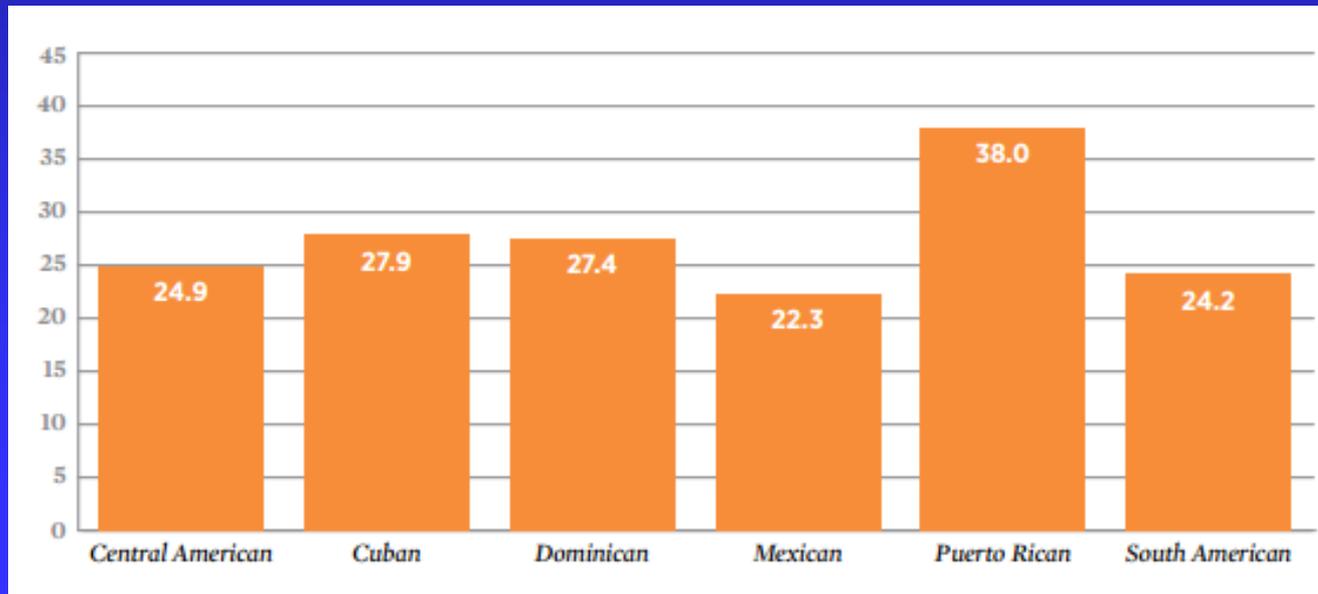
- There are three types of anxiety disorders:
  - **Generalized Anxiety Disorder** – is diagnosed when a person worries excessively about a variety of everyday problems that last at least 6 months.
  - **Panic Disorder** – refers to having one or multiple panic attacks.
  - **Social Anxiety Disorder** – refers to fear or anxiousness about being with other people in social settings.
- Anxiety disorders are treatable, generally they are treated with medication, specific types of psychotherapy or both.

Source: <http://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml>



# HCHS/SOL: Symptoms of Depression

- Although we did not conduct diagnosis for mental health problems in HCHS/SOL, we asked participants about symptoms that might suggest they are at risk for having a depression disorder.
- The HCHS/SOL found a 27% overall reporting of high depressive symptoms among study participants.
- The risk associated to high depressive symptoms reported varied among individuals of diverse Hispanic/Latino background: highest among Puerto Ricans and lowest among Mexicans.



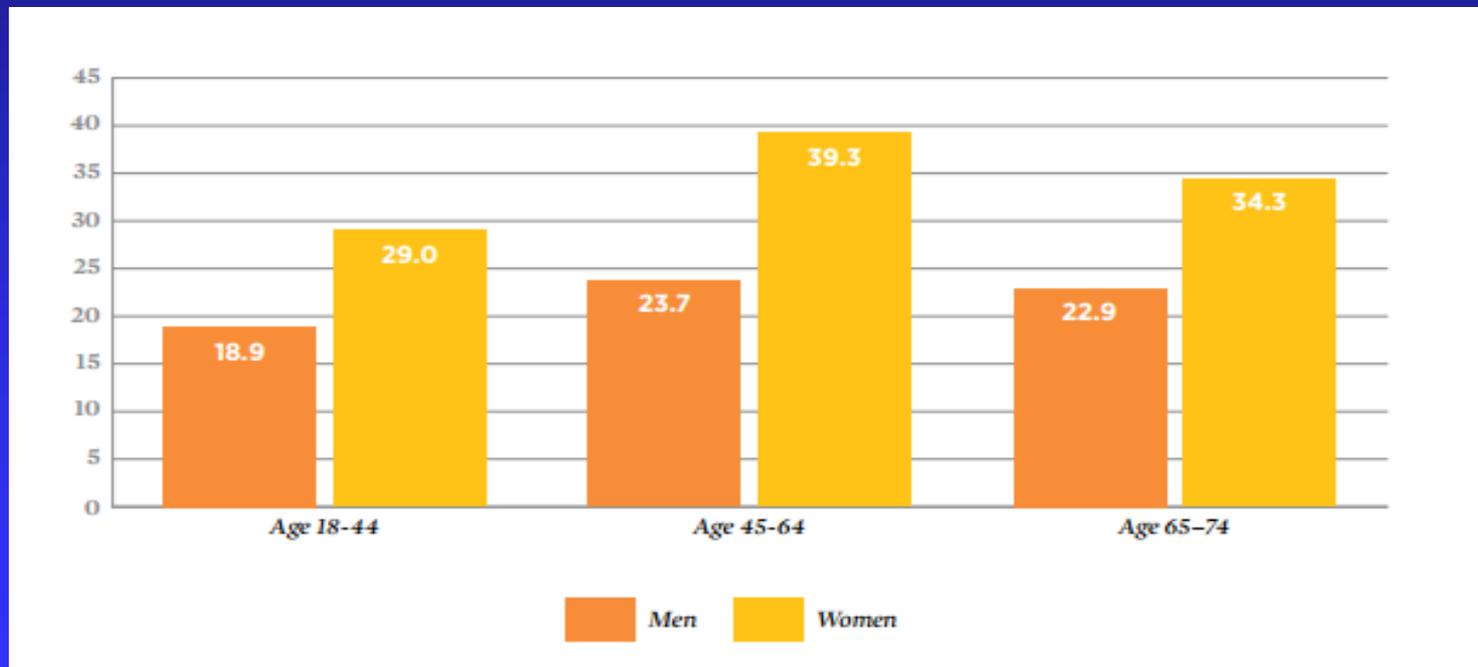
Source: *Annals of Epidemiology*, September 2014, *Hispanic Community Health Study Data Book*



# High depressive symptoms

High depressive symptoms was more frequent:

- Among adults between the ages of 45 to 64 years.
- In those with less than high school education.
- Among women compared to men.



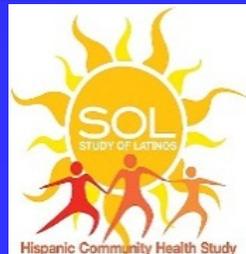
Source: *Annals of Epidemiology*, September 2014, *Hispanic Community Health Study Data Book*



# High depressive symptoms

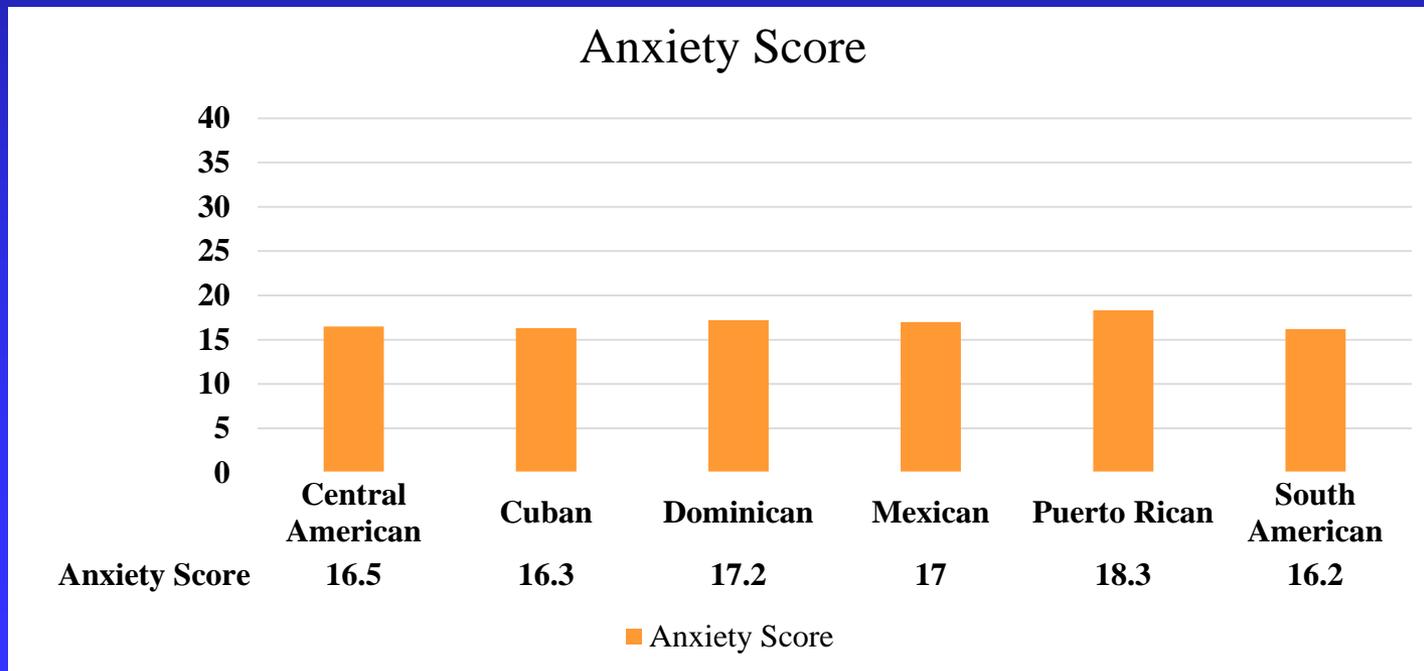
- High depressive symptoms were more frequently observed in widowed (37%) and divorced (35%) than in single (29%) and married (23%) participants.
- U.S. born Hispanics/Latinos (29%) had higher rates of high depressive symptoms than foreign-born Hispanics/Latinos (26%).
- Participants with a history of any cardiovascular disease (MI, stroke, revascularization or stenting) show more high depressive symptoms compared to those with no cardiovascular disease history.

*Source: Annals of Epidemiology. September 2014*



# HCHS/SOL: Anxiety Symptoms

- Although we did not conduct diagnosis for mental health problems in HCHS/SOL, we asked people about symptoms that might suggest they are at risk for having an anxiety disorder.
- The risk associated to the anxiety symptoms reported varied among individuals of diverse Hispanic/ Latino background: it was highest among Puerto Ricans and lowest among South Americans.



# Anxiety Symptoms

Anxiety symptoms were assessed using an anxiety scale. The mean score for the anxiety scale was 17.

Anxiety symptoms were higher among:

- Women (18) vs. men (16).
- Those with less than a high school degree (18) vs. high school graduates (17).
- U.S. born Hispanics/Latinos (18) vs. foreign-born Hispanics/Latinos (17) .
- Those with a history of any cardiovascular disease (MI, stroke, revascularization or stenting) (18) vs. those having no history of cardiovascular disease (17).
- Participants with 5 or more cardiovascular disease risk factors (19) vs. participants with no cardiovascular disease risk factors (16).

*Source: Annals of Epidemiology. September 2014*



# Psychological Distress and CVD Risk Factors

Previous studies have shown that:

- Psychological distress, including depression and anxiety was associated with cardiovascular disease risk factors (high LDL (bad) cholesterol, low HDL (good) cholesterol, obesity, cigarette smoking, diabetes, and hypertension).
- Hispanics/Latinos with diabetes experienced higher levels of depressive disorders, and that depression was associated with poor self-management.
- There were significant positive associations between depression and obesity.
- Depression and anxiety were independent predictors of hypertension (*NHANES*).

*Source: Cardiovascular Disease Risk Factors and Psychological Distress among Hispanics/Latinos: The Hispanic Community Health Study/ Study of Latinos (HCHS/SOL). Castaneda, et. al (accepted-2015)*



# Results show a Relationship between Psychological Distress and CVD Risk Factors among Women

- Smoking and obesity were significantly associated with:
  - Higher depressive symptoms
  - Anxiety symptoms
- Symptoms of depression were:
  - Higher among obese women (BMI  $\geq$  30) when compared to non-obese women.
  - Higher among women who were current smokers compared to non-smokers.

*Source: Cardiovascular Disease Risk Factors and Psychological Distress among Hispanics/Latinos: The Hispanic Community Health Study/ Study of Latinos (HCHS/SOL). Castaneda, et. al (accepted-2015)*



# Results about Relationship between Psychological Distress and CVD Risk Factors among Men

- Obesity, current smoking, and diabetes were significantly associated with more symptoms of depression.
- The presence of depressive symptoms was:
  - Higher in obese men (BMI  $\geq$  30) compared to non-obese.
  - Higher among current smokers compared to non-smokers.
  - Higher among men with diabetes compared to those without it.

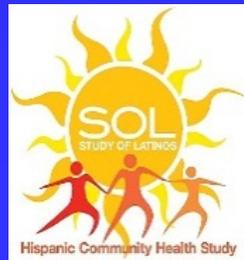
*Source: Cardiovascular Disease Risk Factors and Psychological Distress among Hispanics/Latinos: The Hispanic Community Health Study/ Study of Latinos (HCHS/SOL). Castaneda, et. al (accepted-2015)*



# Antidepressant Medication Use

- The HCHS/SOL found that 5% of the study participants used antidepressant medications.
- There were major differences in medication use among insured participants (8%) when compared to uninsured participants (2%).
- Puerto Rican (8%) and Cuban (7%) participants had the highest proportions of medication use compared to other background groups (range 2% - 6%).
- Older participants ages 65-74 (13%) were more likely to use antidepressants when compared to younger participants.

*Source: Annals of Epidemiology. September 2014*



# Antidepressant and Antianxiety Medication Use

- The highest use of antidepressants was among those with a history of Revascularization (19.5%) or Stroke (20%).
- Use of antidepressant and antianxiety medication was positively correlated with the number of CVD risk factors reported.
- Participants with 5 or more CVD risk factors had significantly higher antidepressant (25%) and antianxiety medication use (11%) compared to those with less risk (range 2-8).

*Source: Annals of Epidemiology. September 2014*



# Public Health Implications

- Hispanics have multiple risk factors that put them at risk for depression and anxiety (ex. Language barrier, Low-SES, financial and job insecurity, being a caregiver, chronic health etc.)
- Under-treatment is related to lack of health insurance, transportation, difficulty finding bilingual therapists, having a job that is not flexible, or having multiple family responsibilities.
- Cultural beliefs (i.e. machismo/marianismo) could affect how patients view depression/anxiety and mental health treatments.
- Since many Hispanics/Latinos are not aware of psychological distress, there is a need to increase awareness to reduce the stigma leading to the burden of undiagnosed or untreated depression and anxiety among this population.

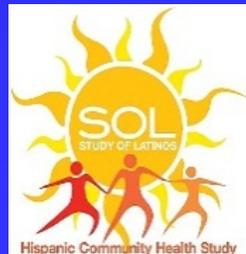
*Source: Annals of Epidemiology. September 2014*



# What can patients do?

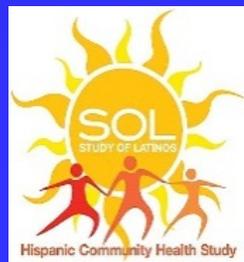
- Depression and anxiety can be successfully treated with behavior therapy medications or both.
- Speak to a health professional and discuss options:
  - **Assertive Community Treatment**: a team-based treatment model that provides treatment and support to people with mental illness 24/7.
  - **Illness self management**: intervention designed to help consumers better manage their psychiatric illness.
  - **Cognitive Behavioral Therapy**: a type of counseling where you work with a counselor to help you respond effectively to negative thinking.
  - **Medication therapy**: The use of medications prescribed by a health professional.
  - **Supported Employment**: an approach to helping people with disabilities to help them find meaningful jobs and ongoing support.
  - **Transcranial Magnetic Stimulation**: a procedure that uses magnetic fields to stimulate nerve cells in the brain.

Source: <http://www.naminys.org/mental-health-support/treatment-support/>



# What can providers do?

- For the underdiagnoses or under-treatment of depression and anxiety:
  - Recommend that clients/ patients seek out a behavioral counselor.
  - Recommend that uninsured clients/ patients apply for care through Covered California.
  - Provide clients/ patients with referral information to local low-cost health care centers.
- For overall emotional and physical wellbeing,
  - Recommend that clients/ patients engage in regular physical activity and eat healthful diets.
  - Recommend that clients/ patients get regular health care to prevent under diagnoses or late treatments.



# Follow us! SOL



RESULTADOS DEL ESTUDIO DE LA SALUD DE LA COMUNIDAD HISPANA/ ESTUDIO DE LOS LATINOS

## SOBRE NUESTRA SALUD

Study of Latinos San Diego  
Educational Research

Hispanic Community Health Study

Timeline About Reviews Likes More ▾

PEOPLE >

★ ★ ★ ★ ★  
137 likes  
20 visits

Status Photo / Video Offer, Event +

What have you been up to?

Study of Latinos San Diego shared The Heart Truth's photo.



Hispanic Community Health Study

TWEETS 82 PHOTOS/VIDEOS 7 FOLLOWING 101 FOLLOWERS 34 More ▾

### SOL San Diego

@HCHSSOL

16,000+ Hispanics/Latinos across the nation continue to participate in HCHS/SOL! Please stay in touch: (619) 205-1926. Visit us at [saludsol.net](http://saludsol.net)

San Diego  
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Joined February 2012

Tweets Tweets and replies

Retweeted by SOL San Diego

**The Heart Truth** @TheHeartTruth · Jul 2  
Un 14% de hispanas de mediana edad padecen de la diabetes y están en riesgo de padecer de la enfermedad del corazón.

**DIABETES Y PREDIABETES**

Las carbohidratos son una gran fuente de energía para nuestro cuerpo, pero si consumes muchos a la vez, los niveles de azúcar en la sangre pueden subir mucho. Si los niveles de glucosa en la sangre se mantienen muy altos por mucho tiempo, puede provocar problemas serios de salud.

**10 - 15 Libras**  
SI TIENE SOBREPESO, LA PÉRDIDA DE PESO MODERADA Y REALIZAR ACTIVIDAD FÍSICA CON REGULARIDAD PUEDE REDUCIR MUCHO SU RIESGO DE TENER DIABETES.



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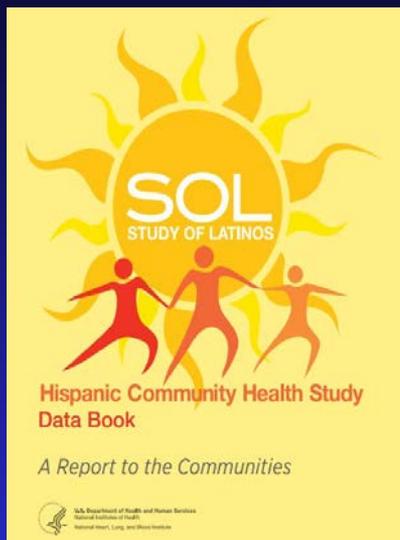
Check out our **Blogspot**: [www.hchssol.blogspot.com](http://www.hchssol.blogspot.com)



Check Out our **Website**: [www.SaludSol.net](http://www.SaludSol.net)



# Learn More about Hispanic/Latino Health



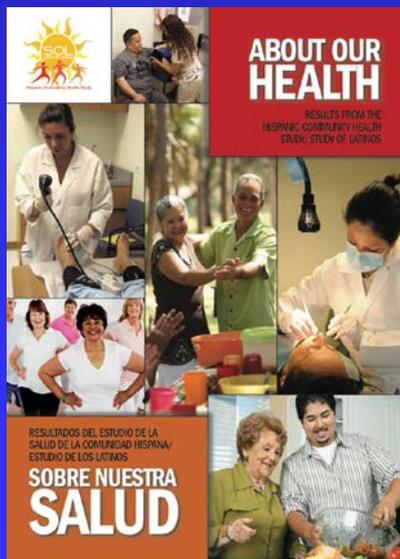
This report is the most comprehensive health and lifestyle analysis of people from a range of Hispanic/Latino backgrounds.

HCHS/SOL findings will enable individuals, communities, and policy makers to tailor health intervention strategies.



**To download the report please go to:**

<http://www.nhlbi.nih.gov/research/resources/obesity/population/hchs.htm>



This booklet highlights health areas that are having a positive impact on Hispanic and Latino families and communities.

It also underlines health trends for each of the communities involved in the study.



**To download the report please go to:**

<http://www.sol-study.org>



**THANK YOU!**