

# Obesity in Texas:

Reaching Epidemic Proportions

# OBESITY IN TEXAS: REACHING EPIDEMIC PROPORTIONS

**Texas adults are the 15th most obese population in the nation.**<sup>1</sup> The obesity epidemic knows no bounds as it impacts all socioeconomic strata, adults, children, and adolescents.

**Changes in Worksites, Schools, and Communities are paramount to combating obesity in Texas.**

## DEFINING THE ISSUE

Obesity is determined by using weight and height to calculate a person's body mass index (BMI). For an adult, a BMI between 25 and 29.9 is considered overweight. A BMI of 30 or higher is considered obese.<sup>2</sup>

Obesity is determined differently for children and adolescents. Overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile. Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex.<sup>3</sup>

## HEALTH CARE COSTS

In Texas, Medicare and Medicaid costs attributable to obese Texans are more than \$5 billion annually.<sup>4</sup>

Direct and indirect health care costs of overweight and obesity in Texas during 2001 were an estimated \$10.5 billion. As prevalence of overweight and obesity increases, annual costs associated are projected to reach \$15.6 billion by 2010 and \$39 billion by the year 2040.<sup>5</sup>

## DID YOU KNOW?

- Texas ranks 6th highest in the nation for obesity in 10-17 year olds<sup>1</sup>
- 42% of 4th graders in Texas are obese or overweight<sup>8</sup>
- Nearly two-thirds of adult Texans are overweight or obese<sup>1</sup>
- The U.S. Surgeon General's Office reports that overweight children have a 70 % chance of becoming overweight or obese adults<sup>4</sup>
- Obese workers cost Texas employers an estimated \$3.3 billion<sup>4</sup>

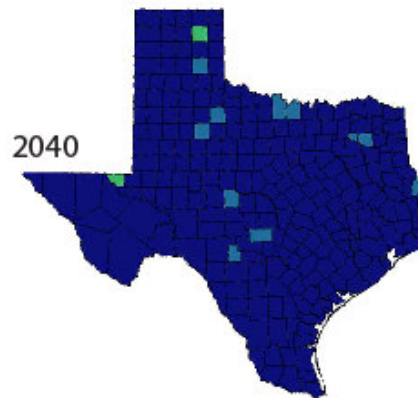
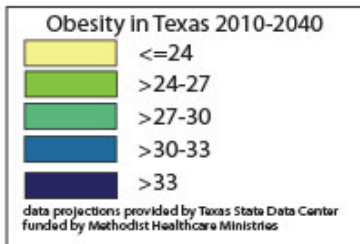
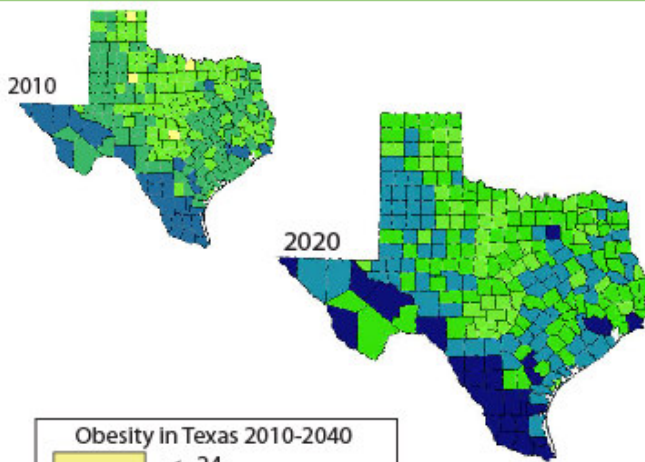
Texas has the 11th highest type 2 diabetes rates in the nation.<sup>1</sup>

Overweight and obesity can lead to serious health concerns such as type 2 diabetes, arthritis, respiratory issues and some cancers.<sup>7</sup>

1 Trust for America's Health. *Fas in Fat 2008: How Obesity Policies are Failing in America*, 2008  
2 Centers for Disease Control & Prevention. [www.cdc.gov/nccdphp/dnpa/obesity/defining.htm](http://www.cdc.gov/nccdphp/dnpa/obesity/defining.htm)  
3 Centers for Disease Control & Prevention. [www.cdc.gov/nccdphp/dnpa/obesity/childhood/defining.htm](http://www.cdc.gov/nccdphp/dnpa/obesity/childhood/defining.htm)  
4 Castellon, Michael. *The Economics of Obesity in Texas: One Year Later*, May 2008  
5 Combs, Susan. *Counting Costs and Calories*, March 2007  
6 Barlow, Sarah, M.D. *Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity*. *Pediatrics* 2007;120

7 Office of the Surgeon General, [www.surgeongeneral.gov/obesityprevention/index.html](http://www.surgeongeneral.gov/obesityprevention/index.html)  
8 Partnership for a Healthy Texas. Support Comprehensive Evidence-Based Programs at the Community Level. Report on Priorities for 81st Legislative Session, 2008  
9 Eschbach, Karl, Ph.D., Texas Data Center, 2008  
10 Texas Department of State Health Services, [www.dshs.state.tx.us/obesity/pdf/txobesitydata.pdf](http://www.dshs.state.tx.us/obesity/pdf/txobesitydata.pdf)  
11 Centers for Disease Control & Prevention. *Guide to Community Preventive Services*. [www.thecommunityguide.org](http://www.thecommunityguide.org)

# TEXAS OBESITY TRENDS



**15 Million  
Adult Texans  
Obese by  
2040<sup>9</sup>**

## OBESITY IN SCHOOLS

The growing number of overweight Texas children is a serious concern as 40% are overweight or obese and are at an increased risk of becoming obese adults. Healthy lifestyle choices must be developed at an early age.

Outcomes of successful overweight prevention programs have resulted in increased academic scores, decreased discipline problems, improved test scores, and reduced absenteeism.

It costs a school district \$40 per day for each child that misses school. If that same district has 114 schools, that translates into \$4.1 million if each school has at least 5 absent students each day for 180 days.

Texas school districts were mandated to implement programs to address nutrition, physical education, parent involvement and to staff obesity prevention efforts. Funding to support mandates are critical to the quality and success of programs targeted to our school aged children.

The earlier healthy behaviors begin in childhood, the greater the likelihood they will be maintained into adulthood.

## OBESITY IN THE COMMUNITY

Texans who live in low-income communities or communities which lack access to safe and affordable housing, safe routes to schools, outdoor recreational activities and fresh and affordable produce are at an increased risk of becoming obese. Community-based, multi-component interventions to address these socio-economic barriers are essential.

If Texans were to invest \$10 per person per year in proven community-based programs to increase physical activity, improve nutrition, and prevent smoking and tobacco use, the State could save \$1 billion annually within five years through reductions in health care spending, a return of \$4.70 for every \$1 spent.<sup>10</sup>

## OBESITY IN THE WORKFORCE

Obese workers cost Texas employers an estimated \$3.3 billion annually<sup>4</sup> driven by obesity-related costs, including decreased productivity, disability and absenteeism.<sup>6</sup>

To reduce these costs to businesses, many employers are establishing worksite wellness programs and collaborative efforts with the public sector and local communities. Effective interventions use combinations of nutrition and physical activity. The CDC's Guide to Community Preventive Services recommends multi-component programs that combine different food and exercise activities.<sup>11</sup>

# SUPPORTING OBESITY PREVENTION

While efforts continue to move Texans toward healthier lifestyles, greater efforts are needed. Funding to support mandates are critical to the quality and success of programs targeted to school-aged children.

## SCHOOLS

- Support expansion of farm to school programs to reach more Texas school children
- Promote nutrition, nutrition education, and physical education in public schools and in early childhood environments
- Support funding for schools to implement coordinated school health programs

## COMMUNITIES

- Promote built environments for "walkable communities" designed to integrate physical activity within the community
- Facilitate incorporation of WIC/Food Stamp programs into farmer's market locations
- Provide information needed about food and exercise to enable Texans to make educated decisions such as point-of-purchase information about the nutrition and calorie content of foods
- Appropriations for comprehensive evidence-based obesity prevention programs at the community level

## WORKSITES

- Provide incentives for employers to establish worksite wellness programs that focus on both food and exercise
- Encourage employers to provide healthy options in vending machines and in cafeterias

For More Information, Please Contact: Camille D. Miller, President / CEO, Texas Health Institute, (512) 279-3910

Texas Health Institute thanks Methodist Healthcare Ministries of South Texas, Inc., for partnering and underwriting this project and brochure. Methodist Healthcare Ministries (MHM), based in San Antonio, is a faith-based, 501(c)(3), not-for-profit organization providing care through health-related programs and services to the least served throughout South Texas. MHM also partners with other established organizations that are fulfilling the needs of the underserved in local communities. It supports policy advocacy and programs that promote wholeness of body, mind and spirit.



## Local Community Forums Available

Interested in hosting a local discussion on these health solutions in your community? THI can provide localized data and facilitate creating an actionable plan of strategic community solutions. For information on organizing a community forum or obtaining a THI leader as an event speaker, please contact Lenora Doerfler at 512-279-3915.



Reunion Park Building 1  
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# Summary

## *Findings about the Obesity Epidemic in Texas*

by the Texas State Demographer  
Karl Eschbach, PhD

with special assistance from the Texas State Epidemiologist  
Vincent Fonseca, MD, MPH

from a project funded by  
Methodist Healthcare Ministries of South Texas, Inc.

in partnership with  
Texas Health Institute

Detailed report and data available  
<http://txsdc.utsa.edu/>

January 2009

## **Key findings about the obesity epidemic in Texas**

- 1. Adult obesity rates have been increasing at an alarming rate in Texas.** The increase has occurred across the board for all ethnic groups and all ages. There are especially dramatic increases among young adults, for whom obesity rates increase from 10 percent to more than 20 percent in just 7 years. These increases are of tremendous concern. If people in their 20s are already overweight or obese, the rates for this cohort may be staggering in 20 years, when the current generation of persons in their 20s reaches their 40s.
- 2. Demographic changes in the state's population alone will increase obesity rates.** The Texas population is aging and is changing in ethnic makeup. Body weight increases throughout the lifespan, so as the state's population gets older, it will get heavier. The majority of obese persons are currently Anglos, while obesity *rates* are higher for African Americans and for Latinos. Those most likely to be obese, the older population and the Latino population, are the fastest growing populations in the state, accounting for most of the projected change.
- 3. New methodology developed for projecting obesity.** Office of the State Demographer projections developed in collaboration with the State Epidemiologist adopted a conservative methodology to make moderate predictions of increasing obesity in the State. These projections started with actual data from the Behavioral Risk Factor Surveillance System (BRFSS) in 2005-2007. They projected increased obesity rates as a result of demographic changes, recent patterns of observed weight change in the aging process, and recent patterns of increasing obesity among younger adults. These scenarios predict an increase of the number of obese adult Texans to nearly 15 million (**43%** of the adult population of Texas) by 2040.
- 4. The consequences of increasing obesity include cardiovascular diseases and diabetes.** If we do not arrest the increase of the burden of obesity, we will lower the quality of life for Texas population, decrease the economic competitiveness of the state by increasing the burden of health care costs on the state's employers, and increase the burden on the health care system.
- 5. Obesity rates are highest in the border and rural counties.** These counties are more likely to have very low rates of insurance coverage, and low physician-to-population ratios. The projections show that these same counties are leading the state to higher levels of obesity.

## Summary Tables and Figures

**Table 1.** Projected Increases in Obesity in Texas: Demographic Changes only, and with continuation of current life course patterns, trends

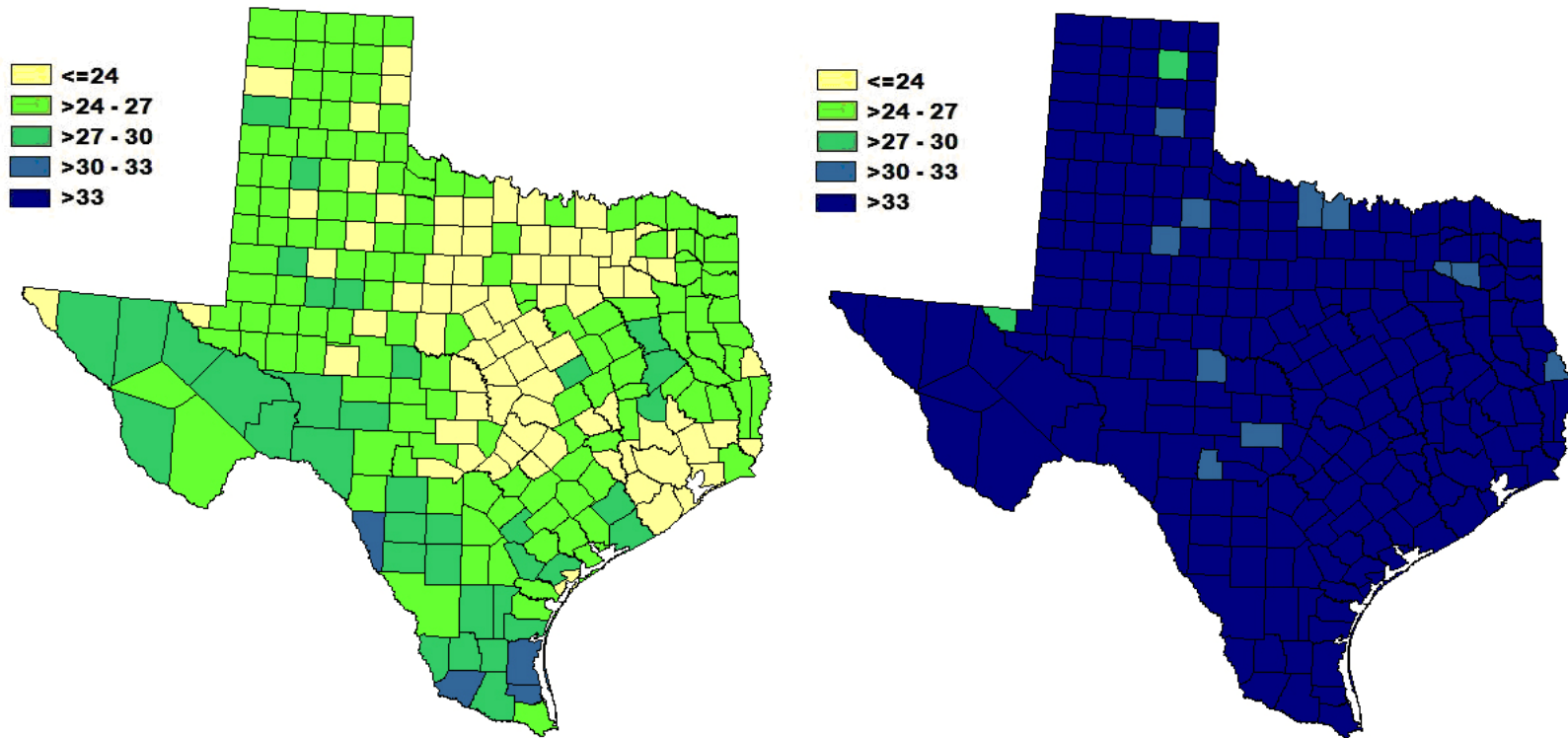
Year	Population	Demographic Changes Only		Demographic Changes, "Life Course" and Continuing Recent Trends	
		Number Obese	Percent Obese	Number Obese	Percent Obese
2005/7	17,133,075	4,776,806	27.9	4,776,806	27.9%
2010	18,524,737	5,178,917	28.0	5,338,356	28.8%
2020	22,774,445	6,996,810	30.7	7,223,329	31.7%
2030	28,173,936	9,069,493	32.2	10,337,175	36.7%
2040	34,433,790	11,063,648	32.1	14,656,539	<b>42.6%</b>

**Table 2.** Projections of increasing numbers of Obese Persons, with demographic changes, "life course" increases in obesity, and continued increases in obesity among young adults

	2005/7	2010	2020	2030	2040
Anglo	2,135,060	2,153,606	2,283,584	2,612,806	2,907,721
African American	733,185	793,317	972,391	1,156,828	1,428,194
Latino	1,762,235	2,207,965	3,607,205	5,969,222	9,407,802
Other	146,326	183,468	360,149	598,319	912,822
Total	4,776,806	5,338,356	7,223,329	10,337,175	14,656,539

Source: Office of the State Demographer projections, using 2000-2004 migration scenario population projections

Figure 1. County Patterns of Obesity: Observed in 2005 and Projected to 2040



% adults with BMI >=30; Office of the State Demographer, 2000-2004 Projection



# **Appendix to the Summary**

## ***Findings about the Obesity Epidemic in Texas***

### **Methodology Statement and Data Tables by County**

by the Texas State Demographer  
Karl Eschbach, PhD

with special assistance from the Texas State Epidemiologist  
Vincent Fonseca, MD, MPH

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## Methodology for obesity projections

The simplest way to project obesity rates is to assume that current rates of obesity will remain constant with respect to population characteristics that are known to be associated with obesity rates today. For example, adults tend to become heavier as they age even after they stop growing in height. Persons who are 45 years old tend to weigh more than they did when they were 25. African Americans and Latinos of a given height and age are likely to weigh more than an Anglo or an Asian person of the same height and age, and thus are more likely to be obese using the conventional definition of having a Body Mass Index (BMI) of 30 or higher (BMI= weight in kilograms/height in meters squared). By this method, future rates of obesity in the general population will depend on demographic composition. As the average age of the population of Texas increases, and as the population becomes increasingly Latino and decreasingly Anglo, obesity levels will be expected to increase, if nothing else happens.

However, these changes alone do not capture the increases that are occurring in Texas and the United States today. Considerable evidence shows that obesity rates have increased sharply over the past several decades for all demographic groups. Data sources that show this include the National Health and Nutrition Examination Survey (NHANES), which has measured body mass index for Americans since the 1970s, and the Behavioral Risk Factor Surveillance Survey (BRFSS). The BRFSS is an ongoing telephone survey administered through the collaboration of the U.S. Centers for Disease Control and Prevention and state health service departments. It collects data about height and weight that can be used to calculate obesity rates.

A second way to project future obesity rates is to extrapolate recent rising trends in the percent of the population that is obese, or to combine this approach with the demographic approach, projecting increases for demographic sub-groups as well as changes in population distribution by age and race/ethnicity. This approach has strength and weaknesses. A strength is that it reflects the reality that average Body Mass Index values and obesity rates are increasing over time. A weakness is that recent trends of increase have been so sharp that this method can yield extremely high future projections of obesity that some may regard as unrealistic.

For these projections, we adopted a related approach to the first two. In essence, instead of projecting increases in obesity rates directly, we projected future increases in Body Mass Index for demographic sub-groups. We began with information from the BRFSS for the years 2005 to 2007 about the distribution of BMI in the adult population of Texas, by age, sex, and race/ethnicity. We then adapted a methodology proposed by a researcher at Columbia University to predict future increases in BMI over the life course given this starting point. These predictions are based on data from the NHANES data set that shows the progression of BMI over the life-course, for example by comparing the average weight of persons who were 25-to-29 in 1988 to persons who 35-to-39 in 1998. We use these calculations to predict increases in body weight for current Texas adults, and then use these predictions to calculate obesity rates in future years. A final step in the projection uses trend data from the NHANES data set to predict BMI for future groups of young Texas adults, compared to young adults today. We apply the age-sex-race-Hispanic origin specific obesity rates derived from these assumptions to population projections

already produced by the Office of the State Demographer, using the 2000-2004 population growth scenario.

This approach, as we implemented it, leads to conservative projections of future obesity rates for the state of Texas. These increases are very modest than those predicted by others based on trend extrapolation. Nonetheless, the rates and numbers of obese persons that we project are extremely disturbing in its implication for the burden of obesity on the state's population.

The most conservative element of the projection is that we did not trend increases in Body Mass Index over the life course that have been observed in recent years. In other words, while we assumed that average body weight increases over the life course as it has in the recent past, we did not extrapolate recent trends of increase in the rate of increase. If we relax that assumption—as perhaps we should have—we would predict much higher levels of obesity than we have. One important lesson we have learned from our approach is that an increasing share of Texans are already overweight. This means that it will not take much of an increase in average body weight for obesity rates to balloon far more rapidly than we have projected.

While there are many reasons to believe that these projections are too conservative with respect to the future of obesity in the state of Texas, we sincerely hope that the projections are too high in the opposite direction. Projections of future population offer a view of the future if current trends continue. That is the case here. However, the continuation of current trends to rising obesity is neither desirable nor inevitable.

The costs to the people of the State of Texas if the number of obese adult continues to rise are alarming. These are costs borne by those who pay for medical care: individuals and families, employers who sponsor employment-based health insurance, the state and federal governments who pay for health care through the Medicare and Medicaid programs, and hospital districts that absorb costs of unsponsored care. These costs are also borne by Texans in the form of diminished quality of life consequent to illness and disability arising from obesity. The costs are borne by Texas families forced to provide increasing levels of support for elder family members who need assistance during additional years of life lived with un-necessary disabilities caused by obesity.

At the same time, the fact that body weight and obesity has risen so sharply also gives reason to believe that the increases can not only be stopped, but reversed. We know that rising obesity rates occur because of changes in diet and adoption of increasingly sedentary lifestyles. If we can reverse these trends that produce increasing obesity rates, we have every reason to believe that we can only halt the increases of obesity that we have projected, but also reverse them.

County	Obese 2010	Obese 2020	Obese 2030	Obese 2040	Change Rate 2010 - 2040
State of Texas	5,338,356	7,223,329	10,337,174	14,656,539	175%
Anderson County	13,823	15,628	17,623	19,030	38%
Andrews County	2,800	3,058	3,511	3,804	36%
Angelina County	17,408	20,406	25,979	33,287	91%
Aransas County	5,407	6,273	7,162	7,708	43%
Archer County	1,816	2,011	2,369	2,706	49%
Armstrong County	410	417	473	502	22%
Atascosa County	10,340	13,577	18,062	22,467	117%
Austin County	5,995	7,766	10,434	13,756	129%
Bailey County	1,429	1,625	1,970	2,299	61%
Bandera County	4,426	5,389	6,535	7,448	68%
Bastrop County	19,234	33,072	59,433	105,190	447%
Baylor County	817	833	866	834	2%
Bee County	8,324	9,540	10,971	12,011	44%
Bell County	57,088	71,042	88,305	104,002	82%
Bexar County	356,187	441,981	562,689	679,970	91%
Blanco County	2,159	2,700	3,439	4,120	91%
Borden County	160	161	158	149	-7%
Bosque County	3,675	4,237	5,182	6,257	70%
Bowie County	20,716	23,507	27,059	29,840	44%
Brazoria County	64,133	90,516	133,070	190,225	197%
Brazos County	34,550	43,175	55,176	66,744	93%
Brewster County	2,156	2,383	2,838	3,269	52%
Briscoe County	378	394	421	441	17%
Brooks County	1,992	2,174	2,552	2,827	42%
Brown County	7,878	8,747	10,114	11,143	41%
Burleson County	3,908	4,671	5,737	6,642	70%
Burnet County	8,917	11,781	15,695	19,619	120%
Caldwell County	8,810	12,002	16,766	22,178	152%
Calhoun County	4,441	4,829	5,450	5,899	33%
Callahan County	2,599	2,780	3,119	3,330	28%
Cameron County	90,084	117,064	158,540	199,771	122%
Camp County	2,909	3,737	4,885	6,429	121%
Carson County	1,235	1,230	1,297	1,286	4%
Cass County	6,291	6,409	6,577	6,334	1%
Castro County	1,821	2,033	2,300	2,424	33%
Chambers County	7,022	10,107	15,427	23,111	229%
Cherokee County	10,419	12,210	14,816	17,700	70%
Childress County	1,719	1,848	2,058	2,262	32%
Clay County	2,199	2,319	2,521	2,536	15%
Cochran County	863	945	1,121	1,240	44%
Coke County	798	844	912	956	20%
Coleman County	1,780	1,812	1,999	2,107	18%
Collin County	167,624	314,184	583,526	1,049,468	526%
Collingsworth	657	683	736	748	14%

County	Obese 2010	Obese 2020	Obese 2030	Obese 2040	Change Rate 2010 - 2040
County					
Colorado County	4,877	5,723	7,050	8,268	70%
Comal County	22,432	31,584	44,461	58,525	161%
Comanche County	2,792	3,011	3,420	3,763	35%
Concho County	1,028	1,046	951	762	-26%
Cooke County	7,853	9,513	11,899	14,352	83%
Coryell County	16,626	18,533	19,817	20,044	21%
Cottle County	399	407	430	450	13%
Crane County	912	1,031	1,180	1,272	40%
Crockett County	982	1,061	1,172	1,220	24%
Crosby County	1,573	1,765	2,046	2,244	43%
Culberson County	762	856	959	1,004	32%
Dallam County	1,308	1,473	1,677	1,764	35%
Dallas County	524,407	653,450	853,943	1,099,069	110%
Dawson County	3,526	3,797	4,242	4,564	29%
Deaf Smith County	4,056	4,621	5,539	6,204	53%
Delta County	1,072	1,142	1,212	1,161	8%
Denton County	151,292	279,058	508,811	882,051	483%
De Witt County	4,578	4,925	5,609	6,144	34%
Dickens County	678	751	850	871	28%
Dimmit County	2,454	2,659	2,997	3,136	28%
Donley County	844	937	1,031	1,038	23%
Duval County	3,216	3,430	3,867	4,074	27%
Eastland County	3,663	3,904	4,387	4,611	26%
Ector County	27,125	32,657	41,861	51,002	88%
Edwards County	505	523	558	557	10%
Ellis County	32,210	52,227	90,717	155,242	382%
El Paso County	174,808	213,184	268,120	316,841	81%
Erath County	7,141	8,436	10,713	13,297	86%
Falls County	4,215	4,606	5,236	5,887	40%
Fannin County	7,189	8,596	10,746	13,338	86%
Fayette County	5,093	6,205	8,079	10,514	106%
Fisher County	859	858	879	844	-2%
Floyd County	1,685	1,929	2,275	2,545	51%
Foard County	325	335	348	338	4%
Fort Bend County	123,731	208,905	337,995	538,741	335%
Franklin County	1,987	2,160	2,381	2,547	28%
Freestone County	4,284	5,061	6,345	7,809	82%
Frio County	3,998	4,455	5,032	5,325	33%
Gaines County	3,054	3,446	4,130	4,672	53%
Galveston County	62,653	79,837	107,100	140,808	125%
Garza County	1,170	1,351	1,525	1,638	40%
Gillespie County	4,920	5,968	7,181	8,030	63%
Glasscock County	308	350	377	391	27%
Goliad County	1,639	1,758	1,971	2,145	31%
Gonzales County	4,419	5,099	6,207	7,157	62%
Gray County	4,414	4,592	4,962	5,240	19%

<b>County</b>	<b>Obese 2010</b>	<b>Obese 2020</b>	<b>Obese 2030</b>	<b>Obese 2040</b>	<b>Change Rate 2010 - 2040</b>
Grayson County	24,014	28,624	36,719	46,800	95%
Gregg County	24,903	30,473	42,053	62,254	150%
Grimes County	5,833	6,641	7,798	8,740	50%
Guadalupe County	25,662	38,337	58,021	84,284	228%
Hale County	7,797	8,574	9,644	10,184	31%
Hall County	781	853	998	1,100	41%
Hamilton County	1,625	1,701	1,812	1,866	15%
Hansford County	1,107	1,241	1,545	1,893	71%
Hardeman County	943	984	1,049	1,033	10%
Hardin County	10,096	11,412	13,420	15,049	49%
Harris County	881,534	1,210,240	1,726,532	2,384,991	171%
Harrison County	13,738	15,265	18,248	22,561	64%
Hartley County	1,235	1,283	1,395	1,528	24%
Haskell County	1,214	1,214	1,340	1,420	17%
Hays County	36,718	66,360	120,263	198,370	440%
Hemphill County	684	714	768	805	18%
Henderson County	16,781	20,565	26,966	35,741	113%
Hidalgo County	173,609	259,896	394,886	556,471	221%
Hill County	7,308	8,916	11,372	14,368	97%
Hockley County	4,890	5,342	6,221	6,657	36%
Hood County	10,477	14,307	20,757	30,867	195%
Hopkins County	6,813	7,810	9,407	10,973	61%
Houston County	5,593	6,179	6,936	7,921	42%
Howard County	7,506	7,777	8,187	8,176	9%
Hudspeth County	906	1,159	1,400	1,527	69%
Hunt County	18,436	24,086	34,343	51,442	179%
Hutchinson County	4,348	4,327	4,537	4,489	3%
Irion County	407	411	406	375	-8%
Jack County	1,787	1,870	2,030	2,115	18%
Jackson County	3,022	3,216	3,572	3,745	24%
Jasper County	7,413	7,696	8,224	8,400	13%
Jeff Davis County	604	710	798	858	42%
Jefferson County	57,774	65,629	81,731	108,122	87%
Jim Hogg County	1,332	1,465	1,664	1,790	34%
Jim Wells County	9,345	10,368	12,023	13,055	40%
Johnson County	32,307	49,570	85,654	153,937	376%
Jones County	4,532	4,764	5,225	5,654	25%
Karnes County	3,873	4,234	4,692	4,999	29%
Kaufman County	22,023	37,253	68,455	128,163	482%
Kendall County	6,922	9,840	13,725	18,429	166%
Kenedy County	111	131	144	140	27%
Kent County	173	163	150	135	-22%
Kerr County	9,911	11,381	13,303	14,484	46%
Kimble County	936	998	1,097	1,107	18%
King County	75	82	83	82	10%
Kinney County	756	773	858	923	22%
Kleberg County	8,041	8,912	10,055	10,501	31%

County	Obese 2010	Obese 2020	Obese 2030	Obese 2040	Change Rate 2010 - 2040
Knox County	877	919	1,013	1,088	24%
Lamar County	10,053	10,926	11,972	12,320	23%
Lamb County	3,222	3,576	4,311	4,852	51%
Lampasas County	4,776	6,671	9,442	12,584	164%
La Salle County	1,514	1,685	2,015	2,308	52%
Lavaca County	3,944	4,279	4,905	5,411	37%
Lee County	3,746	4,742	6,272	8,027	114%
Leon County	3,627	4,189	4,867	5,261	45%
Liberty County	17,434	23,116	32,963	47,822	174%
Limestone County	5,061	5,787	6,813	7,864	55%
Lipscomb County	617	652	711	748	21%
Live Oak County	2,827	2,853	2,934	2,856	1%
Llano County	3,829	4,212	5,112	6,356	66%
Loving County	15	15	13	10	-35%
Lubbock County	52,951	59,572	70,007	77,675	47%
Lynn County	1,474	1,604	1,801	1,907	29%
McCulloch County	1,689	1,775	1,942	2,012	19%
McLennan County	47,666	58,604	77,215	99,768	109%
McMullen County	203	210	213	194	-5%
Madison County	3,212	3,671	4,206	4,785	49%
Marion County	2,478	2,543	2,584	2,514	1%
Martin County	1,023	1,180	1,427	1,608	57%
Mason County	845	915	976	980	16%
Matagorda County	8,222	9,005	10,204	11,096	35%
Maverick County	11,965	14,363	17,872	21,022	76%
Medina County	9,870	12,070	14,968	17,468	77%
Menard County	557	584	626	633	14%
Midland County	25,570	30,629	39,530	48,979	92%
Milam County	5,427	6,377	7,773	9,177	69%
Mills County	998	1,031	1,133	1,202	20%
Mitchell County	2,377	2,572	2,810	2,938	24%
Montague County	3,794	4,056	4,469	4,709	24%
Montgomery County	90,912	154,406	271,145	465,729	412%
Moore County	4,308	5,115	6,059	6,581	53%
Morris County	2,838	2,958	3,145	3,205	13%
Motley County	289	290	287	259	-10%
Nacogdoches County	13,083	15,649	19,813	25,394	94%
Navarro County	10,706	13,914	19,819	28,809	169%
Newton County	3,226	3,353	3,457	3,378	5%
Nolan County	3,230	3,354	3,632	3,738	16%
Nueces County	71,468	80,135	94,541	106,362	49%
Ochiltree County	1,909	2,247	2,868	3,571	87%
Oldham County	456	498	537	526	16%
Orange County	16,503	17,367	19,092	20,396	24%
Palo Pinto County	5,547	6,414	8,002	9,974	80%
Panola County	4,735	4,898	5,302	5,507	16%

County	Obese 2010	Obese 2020	Obese 2030	Obese 2040	Change Rate 2010 - 2040
Parker County	23,800	35,448	56,772	92,574	289%
Parmer County	2,171	2,502	2,918	3,190	47%
Pecos County	4,021	4,417	4,963	5,201	29%
Polk County	10,797	13,712	17,066	19,868	84%
Potter County	25,977	32,425	42,572	53,579	106%
Presidio County	1,863	2,171	2,810	3,518	89%
Rains County	2,428	3,200	4,083	4,671	92%
Randall County	22,705	27,315	34,223	40,922	80%
Reagan County	787	897	1,062	1,179	50%
Real County	676	746	791	786	16%
Red River County	3,001	3,132	3,400	3,705	23%
Reeves County	2,873	2,768	2,735	2,518	-12%
Refugio County	1,825	1,913	2,142	2,323	27%
Roberts County	186	189	208	219	18%
Robertson County	3,626	4,030	4,596	5,168	43%
Rockwall County	16,789	35,187	75,693	161,890	864%
Runnels County	2,308	2,416	2,669	2,797	21%
Rusk County	10,587	11,856	14,045	16,755	58%
Sabine County	2,223	2,277	2,325	2,281	3%
San Augustine County	2,090	2,234	2,382	2,497	19%
San Jacinto County	5,100	5,682	6,271	6,549	28%
San Patricio County	15,022	16,804	19,355	21,199	41%
San Saba County	1,285	1,368	1,563	1,729	35%
Schleicher County	675	715	815	881	30%
Scurry County	3,517	3,784	4,201	4,396	25%
Shackelford County	626	644	709	746	19%
Shelby County	5,548	6,332	7,539	8,809	59%
Sherman County	670	734	807	816	22%
Smith County	41,967	55,234	82,042	128,802	207%
Somervell County	1,693	2,328	3,387	4,747	180%
Starr County	14,386	18,782	25,606	32,703	127%
Stephens County	1,942	2,060	2,464	2,895	49%
Sterling County	315	328	352	342	9%
Stonewall County	339	333	351	344	1%
Sutton County	971	1,052	1,190	1,272	31%
Swisher County	1,830	2,024	2,366	2,632	44%
Tarrant County	373,660	541,602	845,794	1,319,642	253%
Taylor County	26,562	29,327	33,570	36,779	38%
Terrell County	265	274	265	235	-11%
Terry County	2,847	3,136	3,591	3,932	38%
Throckmorton County	362	354	374	373	3%
Titus County	6,452	8,304	10,868	13,690	112%
Tom Green County	21,437	23,137	26,223	28,020	31%
Travis County	203,868	260,970	336,461	407,596	100%
Trinity County	3,103	3,427	3,909	4,251	37%



<b>County</b>	<b>Obese 2010</b>	<b>Obese 2020</b>	<b>Obese 2030</b>	<b>Obese 2040</b>	<b>Change Rate 2010 - 2040</b>
Tyler County	4,515	4,856	5,283	5,495	22%
Upshur County	7,632	8,767	11,015	14,269	87%
Upton County	787	830	945	1,007	28%
Uvalde County	5,959	6,755	8,151	9,309	56%
Val Verde County	11,040	12,760	15,244	17,181	56%
Van Zandt County	10,420	12,028	14,405	16,671	60%
Victoria County	18,824	21,631	26,262	30,622	63%
Walker County	15,872	17,874	19,895	21,066	33%
Waller County	10,388	14,436	21,313	31,174	200%
Ward County	2,429	2,574	2,874	3,035	25%
Washington County	6,981	7,966	9,411	10,743	54%
Webb County	56,210	80,204	118,342	164,052	192%
Wharton County	9,524	10,896	12,989	14,694	54%
Wheeler County	992	988	1,042	1,054	6%
Wichita County	25,234	26,055	28,363	30,075	19%
Wilbarger County	3,020	3,231	3,557	3,639	20%
Willacy County	4,924	5,560	6,598	7,308	48%
Williamson County	82,106	145,909	258,409	439,546	435%
Wilson County	9,561	13,917	20,503	28,858	202%
Winkler County	1,593	1,744	1,971	2,090	31%
Wise County	11,522	14,882	20,426	27,851	142%
Wood County	8,650	9,951	11,308	12,098	40%
Yoakum County	1,631	1,847	2,218	2,517	54%
Young County	3,452	3,650	4,319	4,943	43%
Zapata County	3,644	5,227	7,678	10,611	191%
Zavala County	2,844	3,191	3,658	3,908	37%

County	Percent Obese, 2010	Percent Obese, 2020	Percent Obese, 2030	Percent Obese, 2040
State of Texas	28.8	31.7	36.7	42.6
Anderson County	29.4	31.6	34.9	39.1
Andrews County	27.7	30.1	34.6	40.4
Angelina County	27.8	30.5	36.0	43.0
Aransas County	25.5	26.4	29.3	33.3
Archer County	24.4	25.8	30.4	36.1
Armstrong County	24.1	25.2	29.0	34.6
Atascosa County	29.6	31.8	36.4	41.8
Austin County	27.0	29.0	33.5	39.4
Bailey County	28.3	30.7	35.7	42.3
Bandera County	25.2	25.9	29.0	33.3
Bastrop County	28.0	30.6	36.2	43.6
Baylor County	24.7	25.8	28.8	33.2
Bee County	30.6	33.7	38.6	44.4
Bell County	29.4	32.8	37.2	42.1
Bexar County	30.2	33.0	37.7	42.7
Blanco County	25.5	26.4	29.7	34.3
Borden County	24.5	25.6	29.0	33.0
Bosque County	25.1	26.9	31.3	37.7
Bowie County	28.4	30.8	34.9	39.5
Brazoria County	28.1	30.8	36.1	42.3
Brazos County	25.9	29.5	35.0	41.5
Brewster County	27.5	29.6	34.6	41.3
Briscoe County	25.8	27.6	31.8	36.9
Brooks County	32.4	34.4	39.4	45.4
Brown County	25.8	27.9	32.2	37.9
Burleson County	27.1	28.7	32.6	38.5
Burnet County	25.4	26.7	30.1	34.8
Caldwell County	29.4	32.2	37.5	44.0
Calhoun County	28.0	30.1	34.7	40.2
Callahan County	24.2	25.3	28.9	33.5
Cameron County	31.7	34.5	39.5	45.5
Camp County	27.9	29.9	34.2	40.5
Carson County	24.6	25.9	29.6	33.9
Cass County	26.7	28.1	31.5	36.1
Castro County	28.8	31.1	36.0	41.5
Chambers County	26.9	29.2	34.8	41.9
Cherokee County	27.6	30.0	34.6	40.8
Childress County	28.2	30.9	35.6	41.8
Clay County	24.1	25.0	28.5	32.6
Cochran County	28.2	30.6	35.1	41.0
Coke County	25.1	27.1	30.8	35.8
Coleman County	25.3	26.7	30.5	35.5
Collin County	26.6	29.2	33.9	39.5
Collingsworth	26.3	28.2	32.6	37.8

<b>County</b>	<b>Percent Obese, 2010</b>	<b>Percent Obese, 2020</b>	<b>Percent Obese, 2030</b>	<b>Percent Obese, 2040</b>
County				
Colorado County	27.8	29.9	34.2	39.9
Comal County	26.2	27.4	30.6	34.8
Comanche County	25.5	27.5	32.0	37.3
Concho County	29.4	31.4	32.6	32.4
Cooke County	25.2	27.2	31.6	37.1
Coryell County	28.8	31.8	36.2	41.0
Cottle County	26.8	28.8	33.0	38.5
Crane County	28.0	30.0	34.4	39.5
Crockett County	28.9	30.5	34.9	40.3
Crosby County	28.8	31.3	36.5	42.1
Culberson County	30.4	32.6	37.2	42.2
Dallam County	26.8	28.6	32.9	37.6
Dallas County	30.5	34.3	39.6	45.9
Dawson County	29.9	32.5	37.2	43.7
Deaf Smith County	29.3	32.0	37.1	43.2
Delta County	25.0	26.6	29.8	33.2
Denton County	26.7	29.5	34.5	40.3
De Witt County	28.4	30.4	34.5	40.1
Dickens County	26.9	28.5	31.3	34.7
Dimmit County	31.8	33.9	38.5	43.8
Donley County	24.6	25.8	28.5	31.9
Duval County	32.1	34.2	38.9	44.4
Eastland County	24.8	26.3	30.2	35.3
Ector County	28.8	32.1	37.6	43.9
Edwards County	27.8	29.6	34.2	38.8
Ellis County	27.7	31.0	37.0	44.4
El Paso County	31.9	34.9	40.0	45.6
Erath County	24.5	27.5	33.2	40.3
Falls County	29.1	31.5	36.4	43.4
Fannin County	25.5	26.9	30.9	36.7
Fayette County	26.1	27.9	32.5	39.3
Fisher County	26.2	27.7	32.0	36.3
Floyd County	28.5	31.0	36.0	41.4
Foard County	25.5	27.1	31.3	35.4
Fort Bend County	29.5	31.6	35.0	39.5
Franklin County	24.8	26.0	29.4	34.2
Freestone County	27.4	29.3	33.5	39.8
Frio County	31.5	34.0	38.6	44.1
Gaines County	27.4	29.7	34.4	40.3
Galveston County	28.1	30.4	35.3	41.1
Garza County	28.4	30.6	33.8	36.9
Gillespie County	24.7	25.8	28.8	32.9
Glasscock County	26.3	28.0	32.0	36.9
Goliad County	27.8	29.1	33.2	39.2
Gonzales County	28.8	31.3	35.8	41.4
Gray County	26.2	28.6	33.3	39.3

County	Percent Obese, 2010	Percent Obese, 2020	Percent Obese, 2030	Percent Obese, 2040
Grayson County	25.4	27.6	32.3	38.4
Gregg County	28.0	31.0	36.7	44.6
Grimes County	28.3	29.6	33.2	39.1
Guadalupe County	28.0	30.5	35.8	42.0
Hale County	29.1	32.0	36.9	42.9
Hall County	27.4	29.8	34.4	39.3
Hamilton County	24.2	25.3	28.7	33.0
Hansford County	26.6	28.9	34.2	41.3
Hardeman County	25.6	27.2	31.0	35.5
Hardin County	25.3	26.9	31.1	36.6
Harris County	30.1	33.9	39.5	45.6
Harrison County	28.1	30.3	35.3	42.9
Hartley County	27.6	29.3	33.7	40.6
Haskell County	25.9	27.4	31.5	37.5
Hays County	26.6	29.6	34.5	39.7
Hemphill County	25.3	27.0	31.1	36.3
Henderson County	25.5	27.4	32.2	39.3
Hidalgo County	32.1	35.4	40.6	46.4
Hill County	26.2	28.2	32.9	39.6
Hockley County	27.9	30.4	35.1	40.5
Hood County	24.7	26.5	31.2	38.1
Hopkins County	26.0	27.9	32.3	38.4
Houston County	28.8	30.9	34.9	41.3
Howard County	28.7	30.8	34.2	38.8
Hudspeth County	30.4	32.5	37.1	40.6
Hunt County	26.6	29.5	35.2	43.0
Hutchinson County	25.6	27.4	31.8	37.2
Irion County	25.9	27.2	30.4	34.0
Jack County	25.5	27.1	31.0	36.4
Jackson County	27.3	29.2	33.4	38.4
Jasper County	26.9	28.4	31.9	37.0
Jeff Davis County	27.1	28.1	30.8	33.9
Jefferson County	30.2	33.3	38.4	45.5
Jim Hogg County	32.3	34.3	39.0	44.5
Jim Wells County	31.1	33.2	37.8	43.4
Johnson County	25.9	28.9	35.5	43.8
Jones County	28.0	30.4	35.1	41.9
Karnes County	30.4	33.2	37.2	42.2
Kaufman County	27.0	29.7	35.4	42.7
Kendall County	25.6	26.5	29.5	33.8
Kenedy County	31.3	32.7	36.5	40.5
Kent County	23.9	24.7	27.5	31.3
Kerr County	25.4	26.9	30.3	35.2
Kimble County	25.3	26.5	29.8	34.1
King County	24.1	25.0	28.5	32.2
Kinney County	28.6	30.7	35.4	40.6

County	Percent Obese, 2010	Percent Obese, 2020	Percent Obese, 2030	Percent Obese, 2040
Kleberg County	30.1	33.1	37.6	42.5
Knox County	27.0	29.1	33.4	38.9
Lamar County	26.1	27.6	31.0	35.6
Lamb County	28.6	31.1	35.8	41.5
Lampasas County	25.6	27.3	30.9	35.3
La Salle County	31.5	33.9	38.8	45.8
Lavaca County	25.8	27.5	31.5	37.0
Lee County	27.5	30.2	35.4	42.1
Leon County	25.7	26.7	29.9	34.7
Liberty County	27.3	29.7	35.1	42.6
Limestone County	28.1	30.4	34.7	41.0
Lipscomb County	25.5	27.1	31.0	36.3
Live Oak County	28.2	29.9	33.4	37.5
Llano County	23.9	24.8	28.3	33.7
Loving County	24.6	24.1	26.0	27.6
Lubbock County	27.1	30.1	35.2	41.0
Lynn County	28.3	30.4	35.0	40.4
McCulloch County	26.3	27.8	31.8	36.9
McLennan County	27.8	31.4	37.5	44.8
McMullen County	26.8	27.8	30.7	33.2
Madison County	28.3	30.3	34.1	40.4
Marion County	27.2	28.1	31.1	35.6
Martin County	27.7	29.8	34.6	40.4
Mason County	25.3	26.1	29.1	33.1
Matagorda County	28.7	31.1	35.7	41.4
Maverick County	32.8	35.1	39.8	45.7
Medina County	28.5	30.6	34.9	40.4
Menard County	26.3	27.1	29.8	34.9
Midland County	28.0	30.9	36.4	42.6
Milam County	27.2	29.3	33.8	39.9
Mills County	24.6	26.1	29.9	35.7
Mitchell County	28.9	31.3	35.5	41.5
Montague County	24.0	25.1	28.4	32.9
Montgomery County	26.2	28.4	33.6	40.1
Moore County	28.5	31.5	36.7	41.7
Morris County	27.7	29.3	32.8	37.6
Motley County	25.1	26.7	30.6	34.3
Nacogdoches County	26.7	29.4	34.6	42.0
Navarro County	28.1	31.2	37.0	44.5
Newton County	27.2	28.8	32.8	38.3
Nolan County	27.4	29.4	33.8	39.1
Nueces County	29.9	33.0	38.6	45.1
Ochiltree County	26.8	29.4	34.7	41.5
Oldham County	24.6	26.6	30.6	34.4
Orange County	25.7	27.4	31.7	37.1

County	Percent Obese, 2010	Percent Obese, 2020	Percent Obese, 2030	Percent Obese, 2040
Palo Pinto County	25.6	28.0	33.6	40.7
Panola County	26.8	28.3	32.1	37.8
Parker County	25.6	28.0	33.5	40.6
Parmer County	28.4	31.0	36.0	41.4
Pecos County	30.2	33.0	37.8	43.4
Polk County	26.1	27.4	30.0	33.8
Potter County	28.3	31.7	37.4	43.8
Presidio County	31.3	33.6	38.8	46.0
Rains County	24.5	25.0	27.4	30.1
Randall County	25.3	27.8	32.9	38.8
Reagan County	28.5	30.7	35.1	40.6
Real County	25.2	26.2	29.3	33.0
Red River County	26.8	28.5	32.4	38.2
Reeves County	31.1	33.0	36.8	40.6
Refugio County	29.1	31.0	35.1	41.0
Roberts County	23.8	24.2	26.5	29.9
Robertson County	28.6	30.4	34.6	40.7
Rockwall County	26.1	28.4	33.7	40.2
Runnels County	26.7	28.8	33.3	38.8
Rusk County	27.7	29.6	34.1	40.9
Sabine County	25.0	25.8	28.4	32.1
San Augustine County	28.4	30.0	33.3	38.5
San Jacinto County	26.0	27.1	30.2	34.6
San Patricio County	29.2	31.4	36.0	41.7
San Saba County	25.7	27.9	31.9	37.0
Schleicher County	27.8	29.6	34.0	39.3
Scurry County	27.7	30.3	34.9	40.3
Shackelford County	24.2	25.5	29.3	34.3
Shelby County	27.8	30.1	34.7	41.1
Sherman County	26.2	28.1	32.6	37.0
Smith County	27.8	30.7	36.6	44.5
Somervell County	24.9	26.7	31.4	37.5
Starr County	32.8	35.4	40.4	46.7
Stephens County	25.4	27.4	32.3	39.2
Sterling County	26.5	28.0	31.6	35.6
Stonewall County	25.0	26.4	30.0	34.6
Sutton County	28.9	30.1	34.3	39.6
Swisher County	28.1	30.8	35.6	41.5
Tarrant County	28.4	31.8	37.3	43.5
Taylor County	26.7	29.5	34.0	39.0
Terrell County	28.2	29.2	33.0	35.7
Terry County	28.8	31.4	36.2	42.0
Throckmorton County	24.0	25.7	29.6	34.4

<b>County</b>	<b>Percent Obese, 2010</b>	<b>Percent Obese, 2020</b>	<b>Percent Obese, 2030</b>	<b>Percent Obese, 2040</b>
Titus County	28.4	31.5	36.7	42.9
Tom Green County	27.4	30.3	35.5	41.5
Travis County	28.3	31.8	36.7	41.9
Trinity County	25.6	26.9	30.3	35.6
Tyler County	25.8	27.2	30.7	35.3
Upshur County	25.9	27.6	32.6	40.1
Upton County	27.8	29.5	34.0	39.9
Uvalde County	29.9	32.4	37.4	43.8
Val Verde County	31.3	33.6	38.1	43.6
Van Zandt County	24.8	26.2	30.1	35.4
Victoria County	28.7	31.6	37.1	44.0
Walker County	28.2	31.2	35.8	42.0
Waller County	30.2	32.9	38.2	45.2
Ward County	28.4	30.6	35.0	40.5
Washington County	27.3	29.2	33.1	38.8
Webb County	32.4	35.6	41.1	47.7
Wharton County	29.2	31.8	36.7	42.7
Wheeler County	25.1	26.8	31.2	36.1
Wichita County	26.7	29.4	34.4	40.5
Wilbarger County	27.0	29.4	33.8	38.8
Willacy County	32.1	34.8	39.7	45.9
Williamson County	26.9	29.3	34.1	40.0
Wilson County	27.8	29.5	33.9	39.4
Winkler County	28.1	30.3	35.0	40.5
Wise County	25.2	27.0	31.8	38.6
Wood County	25.0	25.9	28.5	32.5
Yoakum County	28.2	30.5	35.1	41.2
Young County	24.9	26.8	31.8	38.2
Zapata County	31.8	34.9	40.1	45.8
Zavala County	32.5	34.7	39.3	44.3