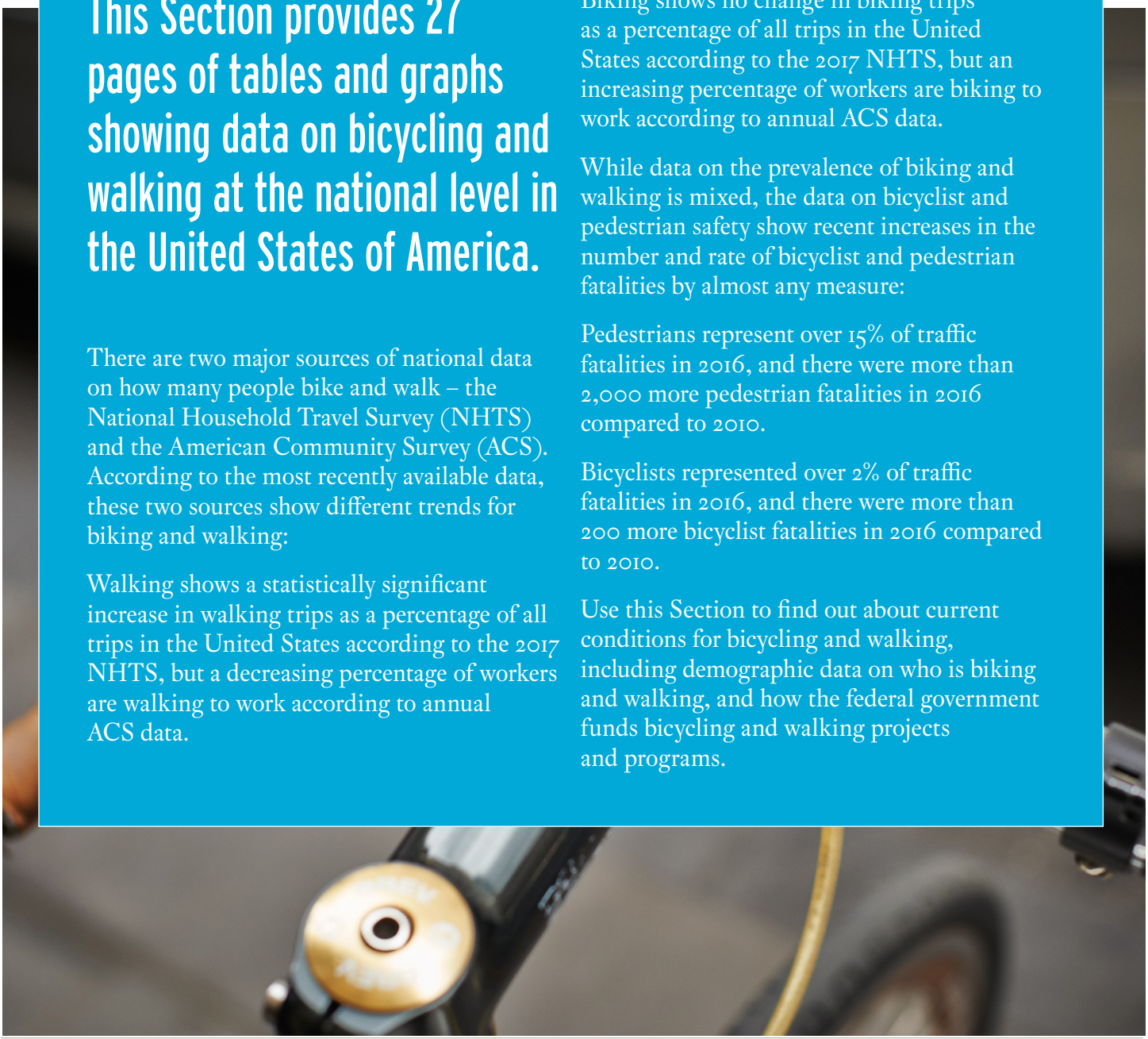
SECTION I: NATION



This Section provides 27 pages of tables and graphs showing data on bicycling and walking at the national level in the United States of America.

There are two major sources of national data on how many people bike and walk – the National Household Travel Survey (NHTS) and the American Community Survey (ACS). According to the most recently available data, these two sources show different trends for biking and walking:

Walking shows a statistically significant increase in walking trips as a percentage of all trips in the United States according to the 2017 NHTS, but a decreasing percentage of workers are walking to work according to annual ACS data.

Biking shows no change in biking trips as a percentage of all trips in the United States according to the 2017 NHTS, but an increasing percentage of workers are biking to work according to annual ACS data.

While data on the prevalence of biking and walking is mixed, the data on bicyclist and pedestrian safety show recent increases in the number and rate of bicyclist and pedestrian fatalities by almost any measure:

Pedestrians represent over 15% of traffic fatalities in 2016, and there were more than 2,000 more pedestrian fatalities in 2016 compared to 2010.

Bicyclists represented over 2% of traffic fatalities in 2016, and there were more than 200 more bicyclist fatalities in 2016 compared to 2010.

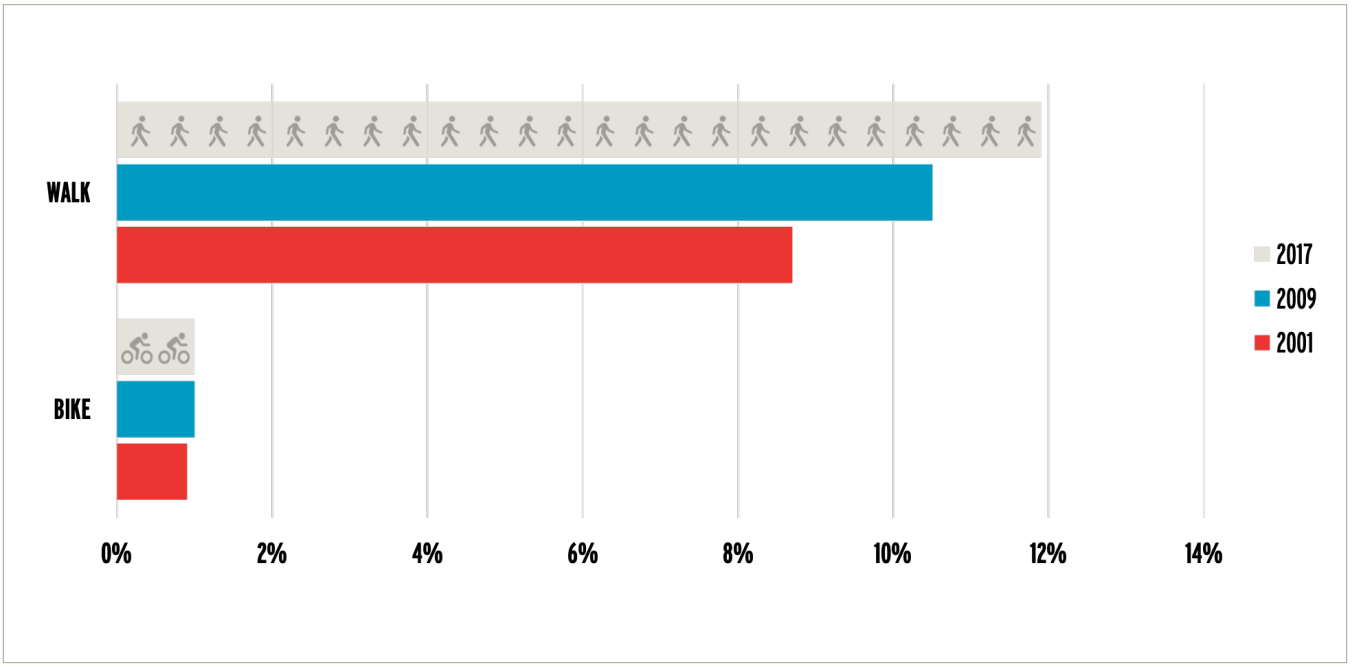
Use this Section to find out about current conditions for bicycling and walking, including demographic data on who is biking and walking, and how the federal government funds bicycling and walking projects and programs.

1.1 - NATION: RATES OF BIKING & WALKING

Trends in Prevalence of Biking & Walking for All Trips

Data from the National Household Travel Survey (NHTS) suggests that bicycling has been relatively stable as a percentage of all trips in the United States.[1] Between 2009 and 2017, about 1% of all trips in the United States were taken by bicycle. This stands in contrast to commuting data, which suggests an increase in the proportion of workers who commute by bicycle.[2]

FIGURE 1.1.1 - PERCENT OF ALL TRIPS BY WALKING OR BIKING



1 For 2001 NHTS data see The Alliance for Biking and Walking (2010). *Bicycling and Walking in the United States: 2010 Benchmarking Report*. Available at https://bikeleague.org/sites/default/files/2010BenchmarkingReport.pdf.

2 Ralph Buehler (2017). *Analysis of National Household Travel Survey data for the League of American Bicyclists*.

Over the same time, there was a statistically significant increase in walking trips as a percentage of all trips, increasing from 10.5% of all trips to 11.9% of all trips. This also stands in contrast to commuting data, which suggests a slight decrease in the proportion of workers who walk to work.[3]

FIGURE 1.1.2 - BREAKDOWN OF DATA BY TRIPS, TIME, & DISTANCE

	BIKE TRIPS (Million Daily Bicycling Trips per Year)	**MINUTES CYCLED** (Billion Minutes)	**DISTANCE CYCLED** (Billion Miles)	**WALK TRIPS** (Million Daily Walking Trips per Year)	**MINUTES WALKED** (Billion Minutes)	**DISTANCE WALKED** (Billion Miles)
2017	3,789	78	8.5	44,900	621	33.7
2009	4,082	80	9.0	41,000	614	27.9

NHTS data on total trips, minutes, and distance of trips by bicycling and walking appear consistent with the data on mode share. The increase in walking trips is statistically significant.[4] Note: Changes to the methodology of the NHTS between 2009 and 2017 mean that changes in data should be interpreted with caution.[5]

Rider at night (pexels.com)

3 Compare to Figure 1.1.2. Trends in Rates of Bicycling and Walking for Commuting.

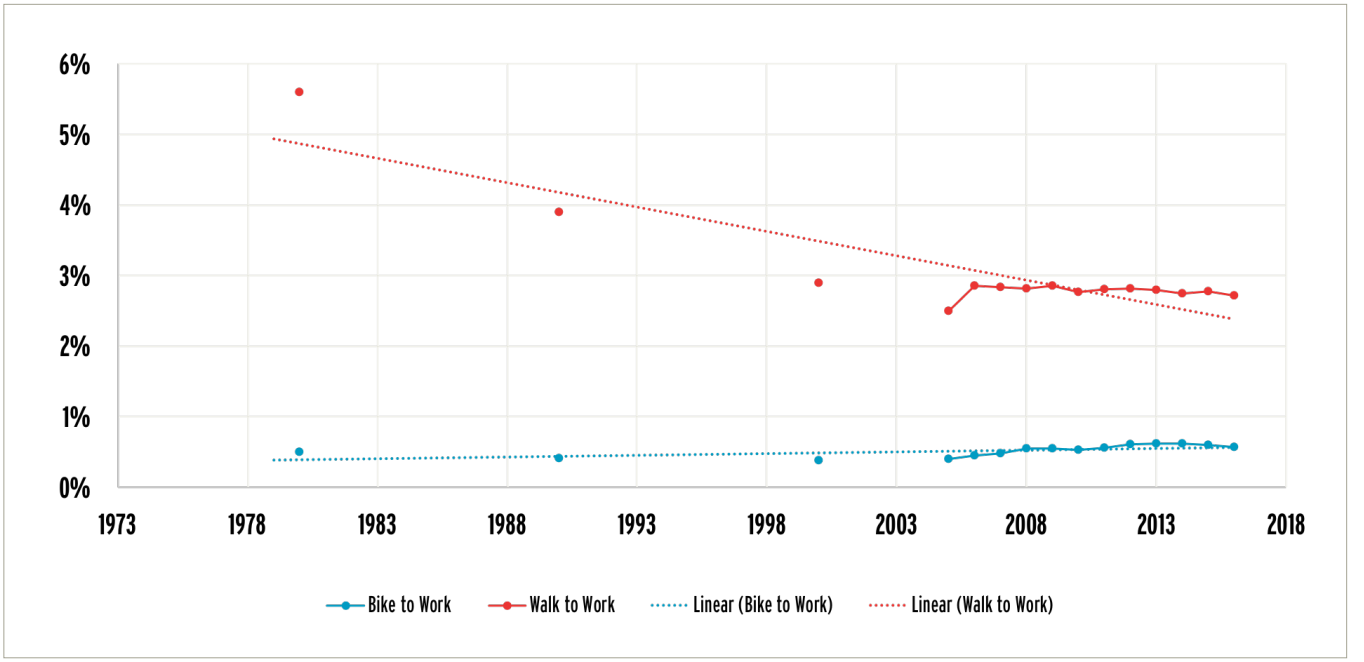
4 Ralph Buehler (2017). *Analysis of 2017 and 2009 National Household Travel Survey data for the League of American Bicyclists.*

5 N. McGuckin and A. Fucci (2017). FHWA-PL-18-019. *Summary of Travel Trends: 2017 National Household Travel Survey*. Available at https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf.

Trends in Rates of Bicycling & Walking for Commuting

Data on bicycling and walking to work comes from the U.S. Census Bureau. The decennial census reported on rates of bicycling and walking to work starting in 1980.[6]

FIGURE 1.1.3 - PERCENTAGE OF WORKERS WHO PRIMARILY BIKE OR WALK TO WORK OVER TIME



After the 2000 decennial census, the Census Bureau began using a continuous survey that has become the American Community Survey (ACS). The ACS has provided yearly estimates of the rate of biking and walking to work since 2005. Since ACS data has allowed yearly tracking of rates of biking and walking to work, researchers and practitioners have gained valuable insights into changes in those rates over time.

At a national level, ACS data show that there has been an increase in the rate of commuting to work by bicycle. While the overall proportion of workers who bicycle to work remains low, the prevalence has increased approximately 50%, from .4% in 2005 to .6% in 2016.[7]

Data from the Census Bureau shows considerable decreases in the proportion of workers who walk to work, from a high of 5.6% in 1980 to a low of 2.5% in 2005. After a slight increase in 2006, the proportion has remained near 3%, with slight declines in recent years.[8]

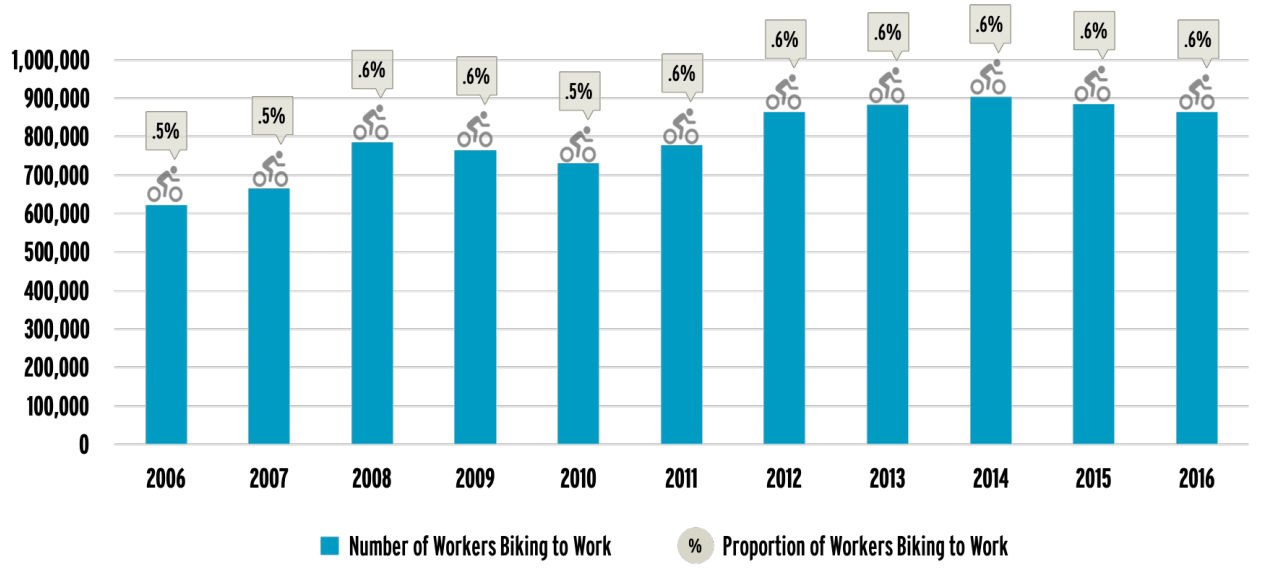
6 U.S. Census Bureau. *Means of Transportation to Work: 1990 and 1980 Decennial Census*. Available at https://www2.census.gov/programs-surveys/commuting/tables/time-series/journey/mode6790.txt.

7 U.S. Census Bureau (2006-2016). *American Community Survey Tables B08006, S0801, C08006*. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

8 See footnote 7.

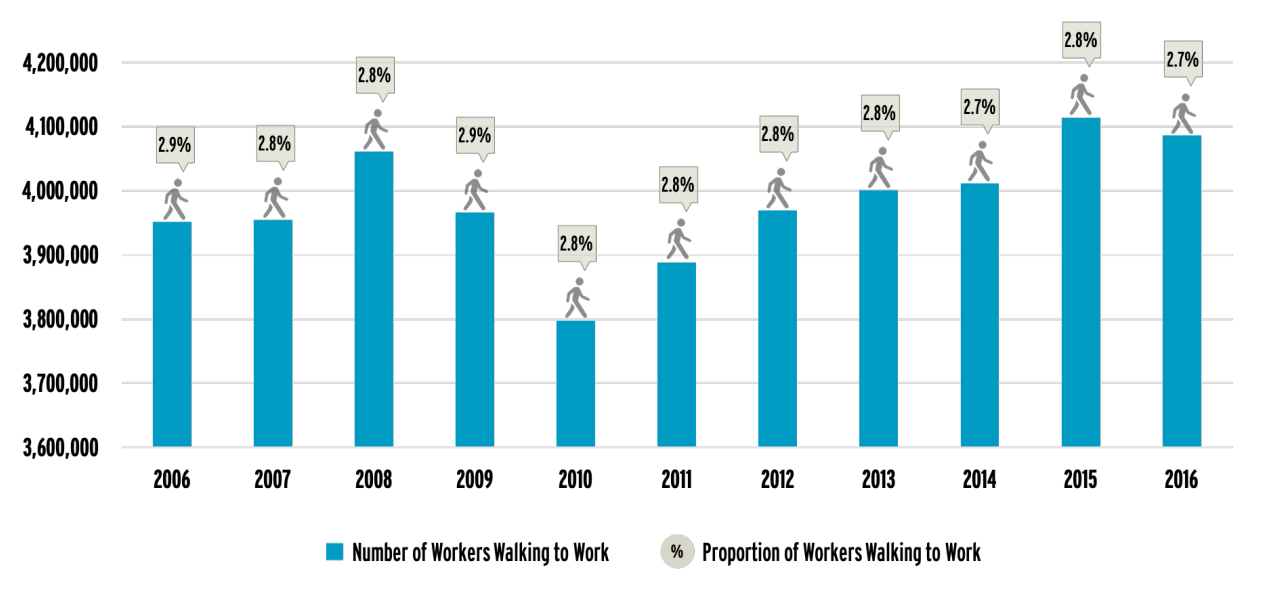
Number & Percent of People Biking to Work [9]

FIGURE 1.1.4 - NUMBER & PERCENT OF PEOPLE BIKING TO WORK



Number & Percent of People Walking to Work

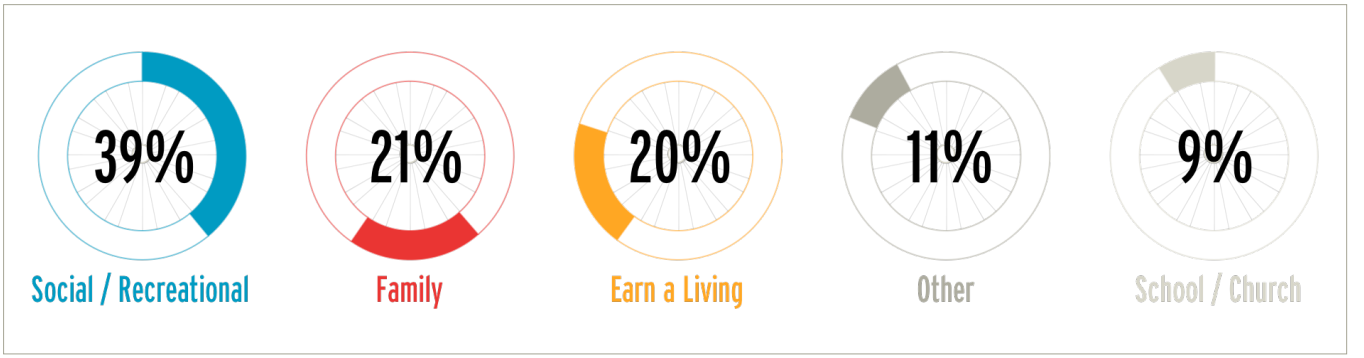
FIGURE 1.1.5 - NUMBER & PERCENT OF PEOPLE WALKING TO WORK



9 U.S. Census Bureau (2006-2016). *American Community Survey Tables B08006 1-year estimates*. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

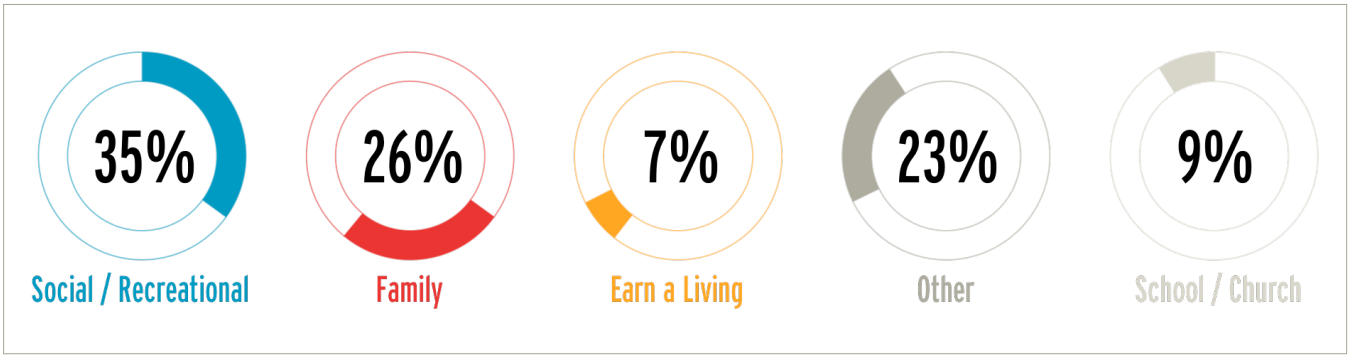
Bicycling Trips by Purpose, According to 2017 National Household Travel Survey [10]

FIGURE 1.1.6 - BIKING TRIPS BY PURPOSE



Walking Trips by Purpose, According to 2017 National Household Travel Survey [11]

FIGURE 1.1.7 - WALKING TRIPS BY PURPOSE



Between the 2009 and 2017 NHTS, biking trips to "earn a living" increased from 12.7% of bicycling trips to 20.2% of bicycling trips. This may explain the increase in the rate of bicycle commuting found in ACS data that is not reflected in the unchanged prevalence of biking as a percent of all trips in the NHTS data.

10 See footnote 2.

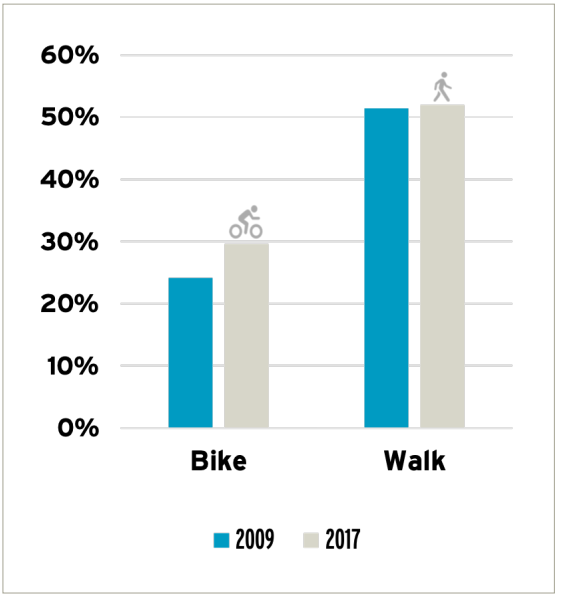
11 See footnote 2.

1.2 - NATION: DEMOGRAPHICS

OF ACTIVE TRANSPORTATION

Percent of Bicycling & Walking Trips by Women [12]

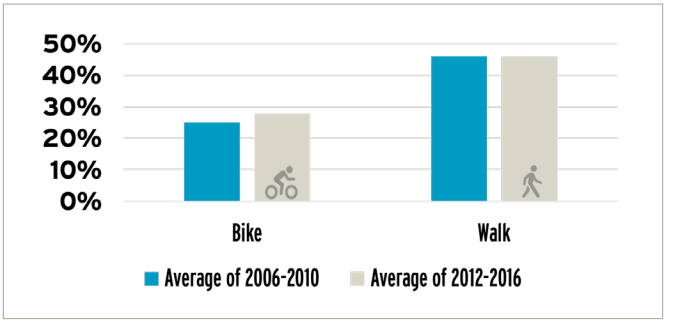
FIGURE 1.2.1 - PERCENT OF TRIPS BY FEMALES



Percent of Bicycling & Walking Commuters Who Are Women [13]

Commute to work data show that women are under-represented among people who bicycle, but not among people who walk. This is also seen in all bicycling and walking trips through NHTS data. Nationally, women represent 50.8% of the population of the United States[14] and 47.0% of commuters, but only 30.3% of all bicycling trips and only 28.0% of bicycle commuters. Nevertheless, these relatively modest participation percentages represent increases from prior years.

FIGURE 1.2.2 - PERCENT OF BIKING & WALKING COMMUTERS WHO ARE FEMALE



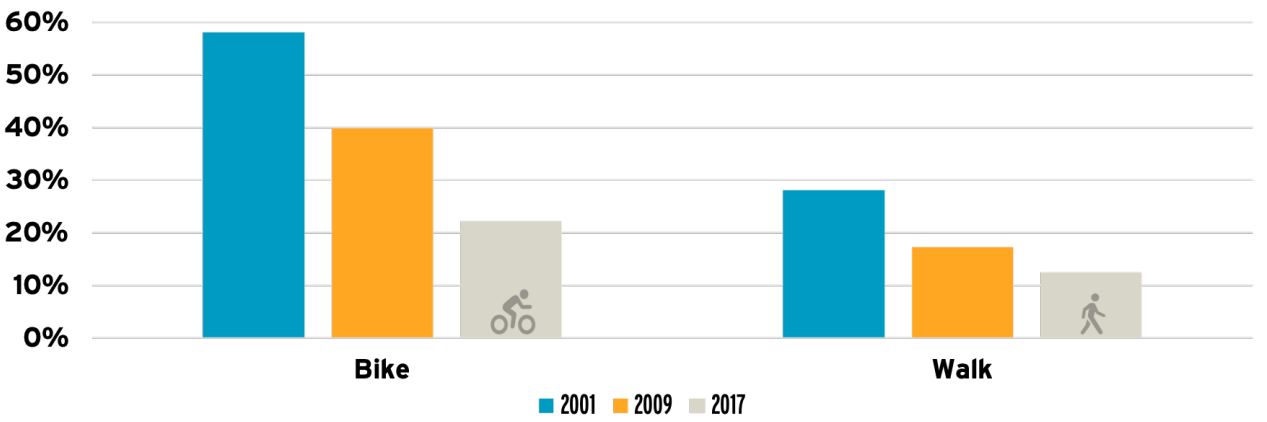
12 See footnote 4.

13 See footnote 9.

14 U.S. Census Bureau (2016). *American Community Survey Table B01003 1-year estimate*. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

Children & Youth Bicycling & Walking [15]

FIGURE 1.2.3 - PERCENT OF TRIPS BY CHILDREN & YOUTH (AGE 5 TO 15)



Data from the NHTS indicates that youth (people under 16 years old) are walking and biking less than in the past. There were significant drops in the percentage of both walking and biking trips by youth.

Historically, youth have represented a disproportionately high percent of bicycle trips. The 2017 NHTS data shows a significant drop to youth representing only 22.1% of bicycle trips, much more closely in line with their percentage of the US population (21.2% according to the 2010 Census). The youth percentage of walking trips also decreased, but not as steeply from 17.2% of trips in 2009 to 12.4% in 2017.

The decreases seen in the proportion of trips by youth completed by biking or walking are also seen in the number of trips, distances, and minutes of by biking and walking.

FIGURE 1.2.4 - BREAKDOWN OF DATA BY TRIPS, TIME, & DISTANCE

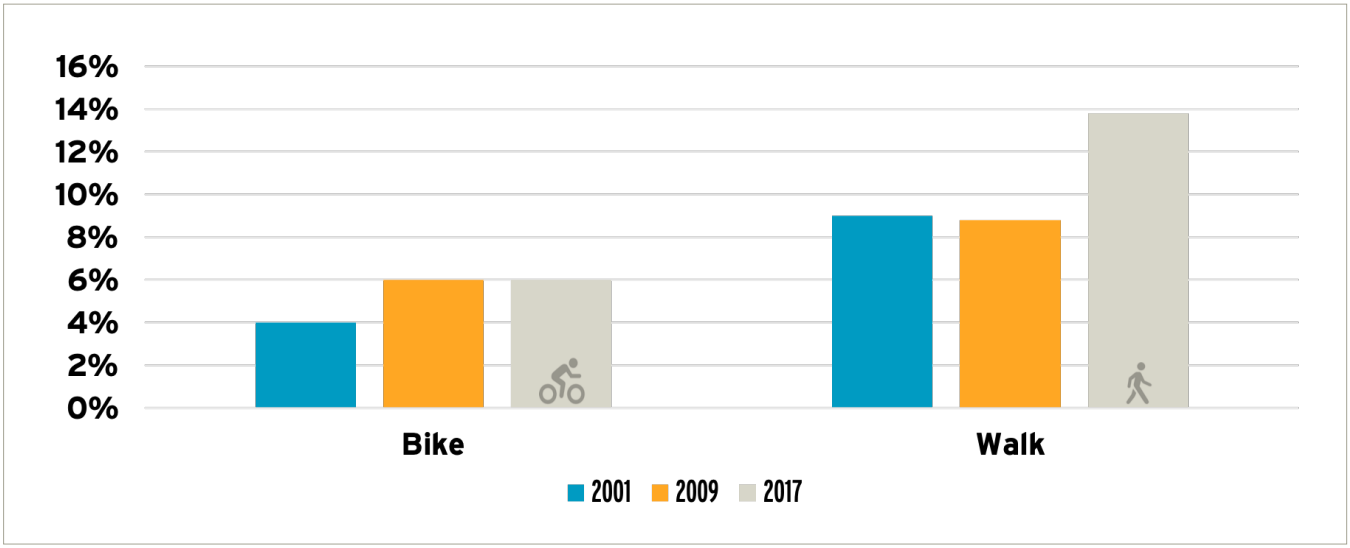
	BIKE TRIPS (Million Daily Bicycling Trips per Year)	**MINUTES CYCLED** (Billion Minutes)	**DISTANCE CYCLED** (Billion Miles)	**WALK TRIPS** (Million Daily Walking Trips per Year)	**MINUTES WALKED** (Billion Minutes)	**DISTANCE WALKED** (Billion Miles)
2017	821	13	0.8	5,490	75	3.0
2009	1,608	23	1.3	6,900	95	4.1

15 For 2001 NHTS data see The Alliance for Biking and Walking (2010). *Bicycling and Walking in the United States: 2010 Benchmarking Report*. Available at https://bikeleague.org/sites/default/files/2010BenchmarkingReport.pdf. Ralph Buehler (2017). *Analysis of 2009 and 2017 National Household Travel Survey data for the League of American Bicyclists.*

However, data from the National Center for Safe Routes to School (NCSRTS) estimates that walking to school increased between 2007/8 and 2014, while biking to school stayed relatively consistent. The NCSRTS data is based on "720,000 parent surveys collected by nearly 6,500 schools throughout the United States starting in 2007 and extending through 2014.[16]" The parent survey "captures the usual travel mode of students and parents' perceptions about walking and bicycling between home and school.[17]"

Seniors Bicycling & Walking

FIGURE 1.2.5 - PERCENT OF TRIPS BY SENIORS (AGE 65+)



Data from the 2017 NHTS shows a statistically significant increase in the percent of walking trips attributed to people over 65 years of age. The percentage of walking trips by people over 65 years of age rose from 8.8% in 2009 to 13.8% in 2017.[18] This increase was greater than the increase in the share of the U.S. population that is aged 65 years or older, which increased from 13.1% in the 2010 Census to 14.5% in the 2016 1-year ACS estimate.[19]

After increasing between 2001 and 2009, the percentage of bicycling trips attributable to people over 65 years of age did not change significantly between 2009 and 2017, staying stable at 6% of all bicycling trips according to the NHTS. [20]

16 The National Center for Safe Routes to School (2016). Trends in Bicycling to School from 2007 to 2014 at p. 5. Available at http://www.pedbikeinfo.org/pdf/Community_SRTSfederal_Trends.pdf.

17 See footnote 16.

18 See footnote 4.

19 U.S. Census Bureau (2016). *2010 Decennial Census and American Community Survey Table B01003 1-year estimate*. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

20 For 2001 NHTS data see The Alliance for Biking and Walking (2010). *Bicycling and Walking in the United States: 2010 Benchmarking Report*. Available at https://bikeleague.org/sites/default/files/2010BenchmarkingReport.pdf. Ralph Buehler (2017). *Analysis of 2009 and 2017 National Household Travel Survey data for the League of American Bicyclists*.

Low-Income Households Bicycling, Walking, & Using Transit

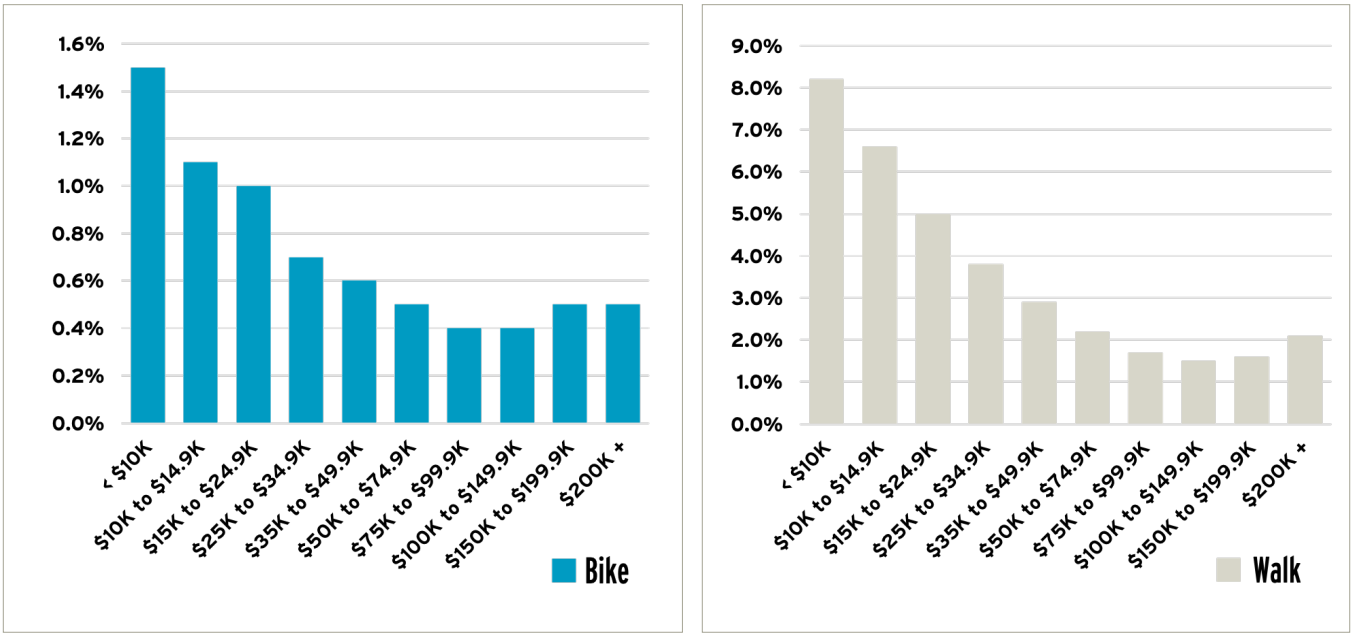
FIGURE 1.2.6 - PERCENT OF BIKING, WALKING, & TRANSIT TRIPS BY PEOPLE FROM HOUSEHOLDS WITH INCOME OF LESS THAN $25,000 PER YEAR

According to the 2017 NHTS, the proportion of bicycling and walking trips made by people from households with low incomes (incomes of less than $25,000 per year) is similar or slightly more than the percentage of total population from those households (21.2% according to the 2016 ACS) . Although people from low-income households represented significantly smaller proportion of transit trips in 2017 compared to 2009, they are still over-represented among transit users.

Data from the Census Bureau has suggested that bicycling and walking are much more common as a means of commute to work at lower income levels. The proportion of workers who walk or bike to work is progressively lower across income categories, up to about $100,000 per year, beyond which the prevalence is fairly stable or slightly higher at very high-income levels.

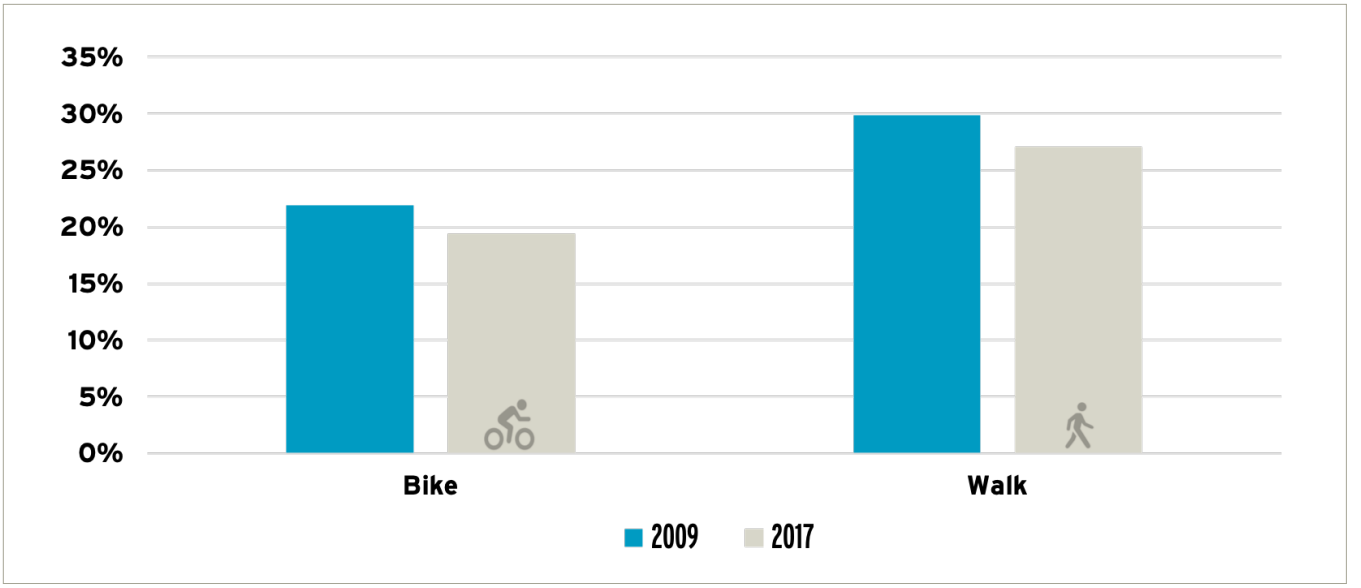
Photo credit Brett Sayles (pexels.com) - City street in San Francisco, CA

FIGURE 1.2.7 - BIKING & WALKING TO WORK BY HOUSEHOLD INCOME: 2008-2012 [21]



Bicycling & Walking by People of Color [22]

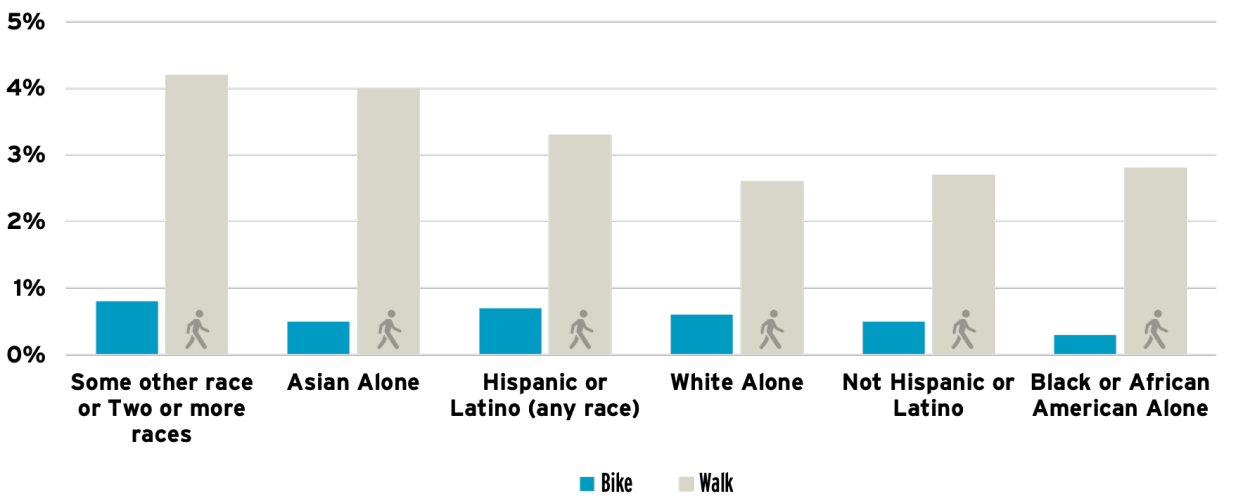
FIGURE 1.2.8 - PERCENT OF BIKING & WALKING TRIPS BY PEOPLE OF COLOR



21 U.S. Census Bureau (2014). *Modes Less Traveled*. Available at https://www.census.gov/prod/2014pubs/acs-25.pdf (adapted from Figure 11 at p. 13).

22 Ralph Buehler (2017). *Analysis of 2009 and 2017 National Household Travel Survey data for the League of American Bicyclists*. (For this analysis, People of Color means all persons who are not non-Hispanic White).

FIGURE 1.2.9 - RATES OF BIKING & WALKING TO WORK BY RACE & ETHNICITY, 2008-2012



According to the 2010 Census, about 28% of the United States population is non-White.[23] Data from NHTS suggests people of color account for a smaller proportion of bicycle trips (about 19%) than their population share would suggest if all races and ethnicities bicycled at the same rate. For walking, people of color make about 26% of trips, which is closer to their population share. This suggests an opportunity to increase biking as a transportation option among people of color.

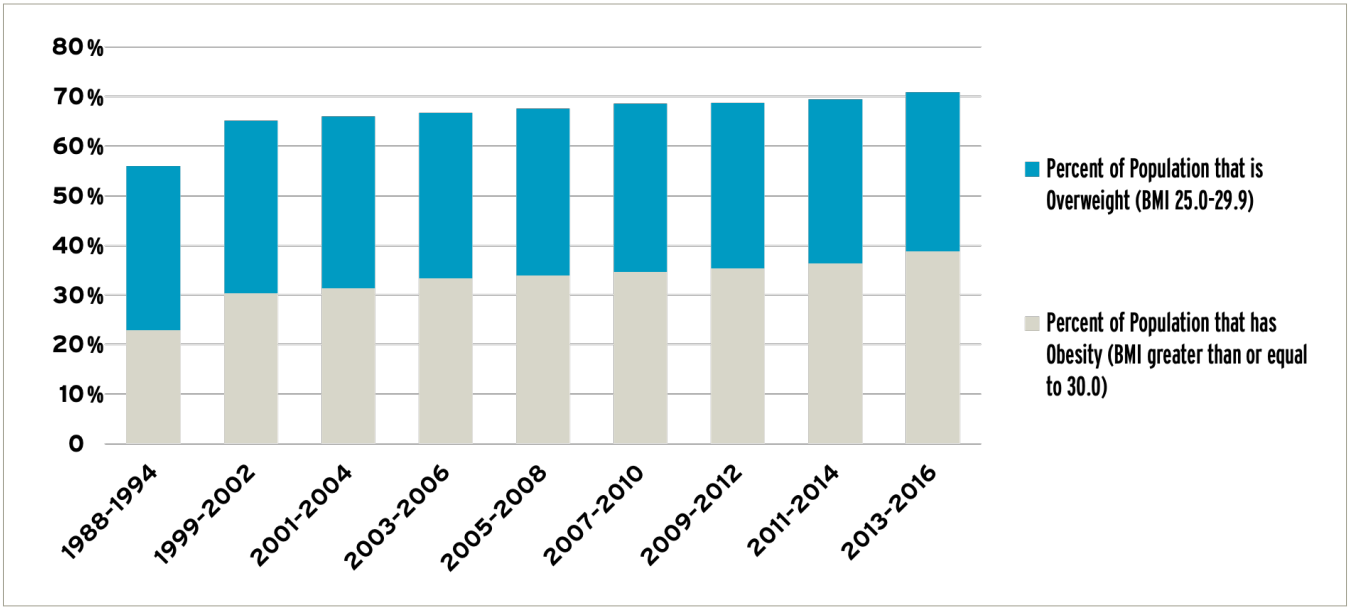
Bike Your Park Day, photo courtesy of Century Cycles Peninsula, OH

23 U.S. Census Bureau. 2010 Decennial Census Table QT-P3. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

1.3 - NATION: PUBLIC HEALTH INDICATORS

Percent of Population that is Overweight or Has Obesity [24]

FIGURE 1.3.1 - PERCENT OF POPULATION THAT IS OVERWEIGHT OR HAS OBESITY



Body Mass Index (BMI) is a person's weight in kilograms divided by the square of the person's height in meters. [25] When using pounds and inches, a conversion factor is used. BMI is often used as a screening tool. It is not a diagnostic tool that assesses the health of an individual. For adults, BMI is interpreted into weight status categories: underweight, normal or healthy weight, overweight, and obese. People who have obesity, compared to people with normal or healthy weight, are at an increased risk for many serious diseases and health conditions. [26]

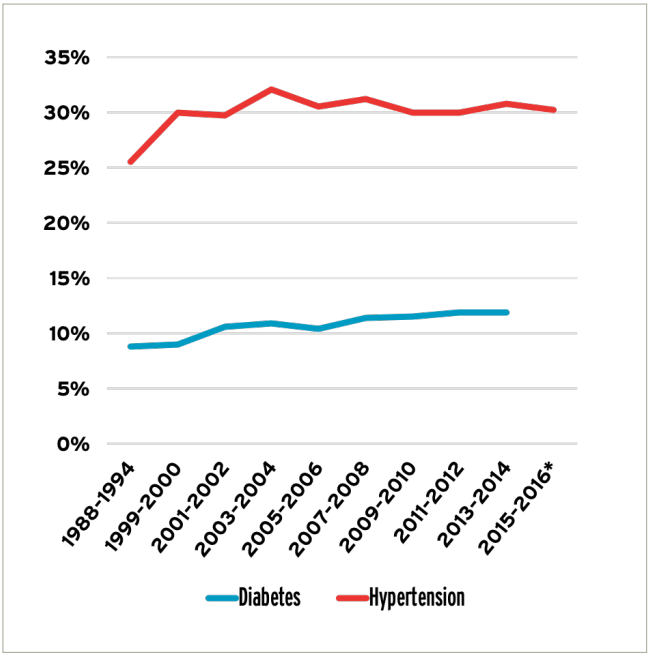
24 Centers for Disease Control and Prevention. *National Center for Health Statistics Table 058*. Available at https://www.cdc.gov/nchs/hus/contents2017.htm?search=Obesity/overweight,

25 Centers for Disease Control and Prevention. *About Adult BMI* (last updated August 29, 2017). Available at https://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/index.html.

26 Centers for Disease Control and Prevention. *The Health Effects of Overweight and Obesity* (last updated June 5, 2015). Available at https://www.cdc.gov/healthyweight/effects/index.html.

Percent of Population that has Diabetes or Hypertension [27]

FIGURE 1.3.2 - PERCENT OF US POPULATION WHO HAS DIABETES OR HYPERTENSION



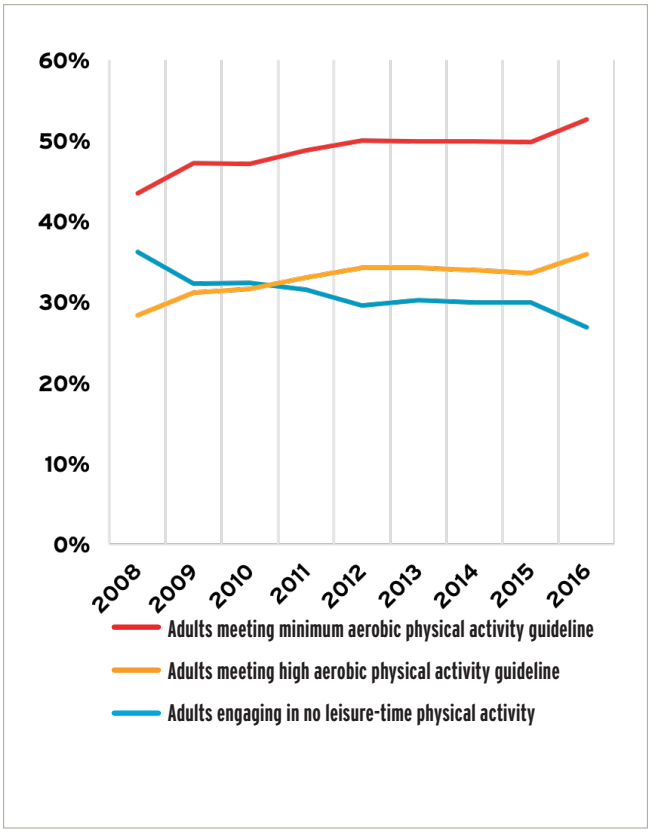
The U.S. Department of Health and Human Services first issued physical activity guidelines in 2008 to provide "evidence-based advice on how physical activity can help promote health and reduce the risk of chronic disease." Updated guidelines were published in 2018 with additional evidence about "Immediate and longer term benefits for how people feel, function, and sleep" and that "even short episodes of physical activity are beneficial." You can learn more here: https://health.gov/paguidelines/second-edition/.

Physical Activity Over Time [28]

The minimum aerobic physical activity guideline is defined as moderate intensity physical activity for 150 minutes per week or more, or vigorous intensity physical activity for 75 minutes per week or more, or an equivalent combination.

The high aerobic physical activity guideline is defined as moderate intensity physical activity for 300 minutes per week or more, or vigorous intensity physical activity for 150 minutes per week or more, or an equivalent combination.

FIGURE 1.3.3 - PHYSICAL ACTIVITY BY ADULTS OVER TIME



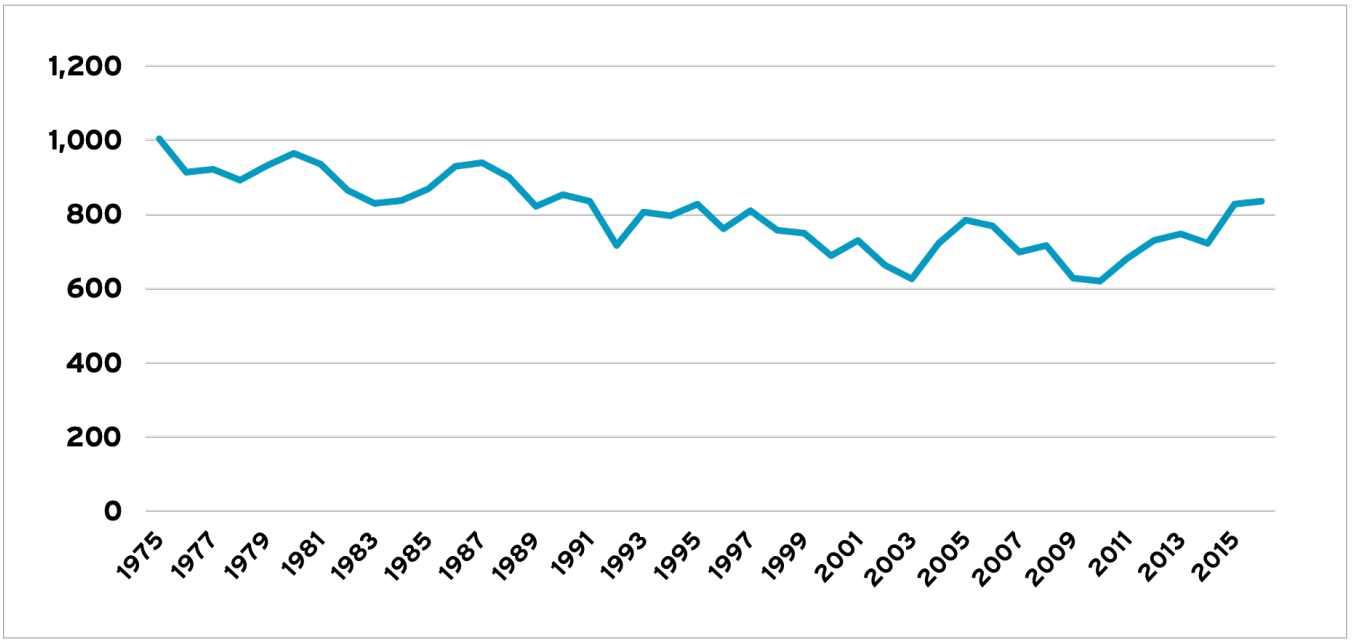
27 Centers for Disease Control and Prevention. *National Center for Health Statistics Table 053*. Available at https://www.cdc.gov/nchs/hus/contents2017.htm.

28 Centers for Disease Control and Prevention. *National Health Interview Survey* (NHIS). Available at https://www.cdc.gov/physicalactivity/downloads/trends-in-the-prevalence-of-physical-activity-508.pdf

1.4 - NATION: BICYCLIST & PEDESTRIAN ROAD SAFETY

Trends in Bicyclist Fatalities

FIGURE 1.4.1 - NUMBER OF ANNUAL BICYCLIST FATALITIES



In 1975, bicyclist deaths were evenly distributed (50/50) between urban and rural land uses.[29] Since that time, bicyclist deaths have become increasingly an urban problem, with 71% of bicyclist deaths occurring in urban areas in 2016.[30]

Most bicyclist deaths occur on arterial roadways, with 61% of bicyclist deaths in 2016 occurring on principal or minor arterial roadways, despite this type of road making up only 10% of the national roadway system.[31]

29 Insurance Institute for Highway Safety. *Fatality Facts*. Available at http://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/bicycles (uses data from NHTSA FARS and includes fatalities categorized as "other and/or unknowns").

30 See footnote 29.

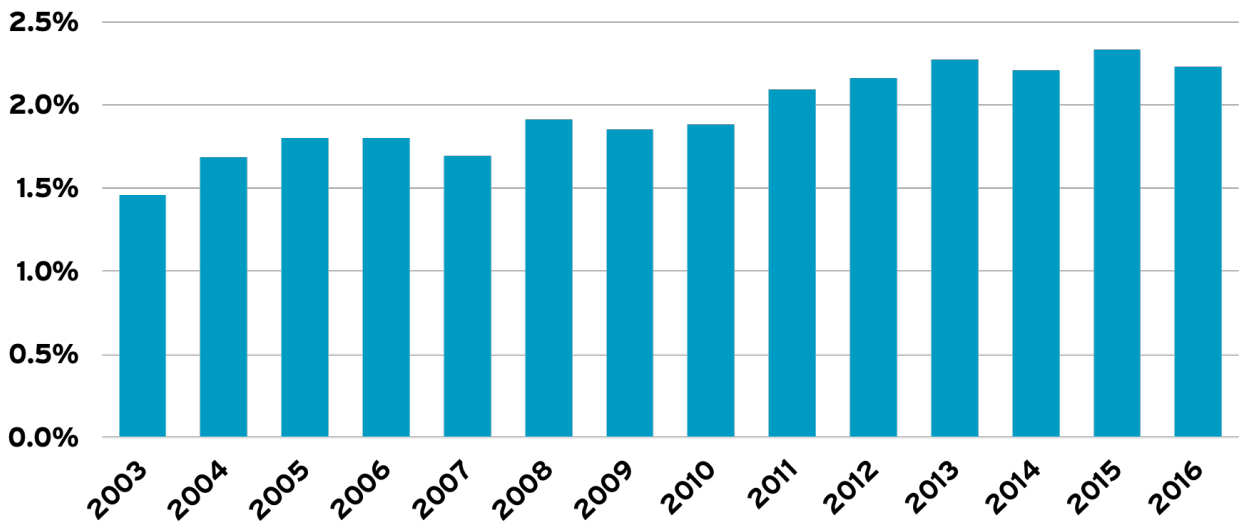
31 National Highway Traffic Safety Administration (NHTSA). *Fatality Analysis Reporting System* (query of 2016 data). Available at https://www-fars.nhtsa.dot.gov//QueryTool/QuerySection/SelectYear.aspx.

FIGURE 1.4.2 - BICYCLIST FATALITIES BY ROAD TYPE

	INTERSTATE	OTHER PRINCIPAL AND MINOR ARTERIALS	MAJOR AND MINOR COLLECTORS	LOCAL
PERCENT OF BICYCLIST FATALITIES BY FUNCTIONAL SYSTEM [30]	2%	61%	20%	12%
PERCENT OF ROAD MILES BY FUNCTIONAL SYSTEM [31]	1%	10%	20%	69%

Bicyclist Fatalities as a Percent of All Road Fatalities

FIGURE 1.4.3 - PERCENT OF ALL TRAFFIC FATALITIES THAT ARE BICYCLISTS



The proportion of all traffic fatalities that are bicyclists has increased in recent years. Bicyclists represent over 2% of traffic fatalities while only accounting for 1% of trips. [34]

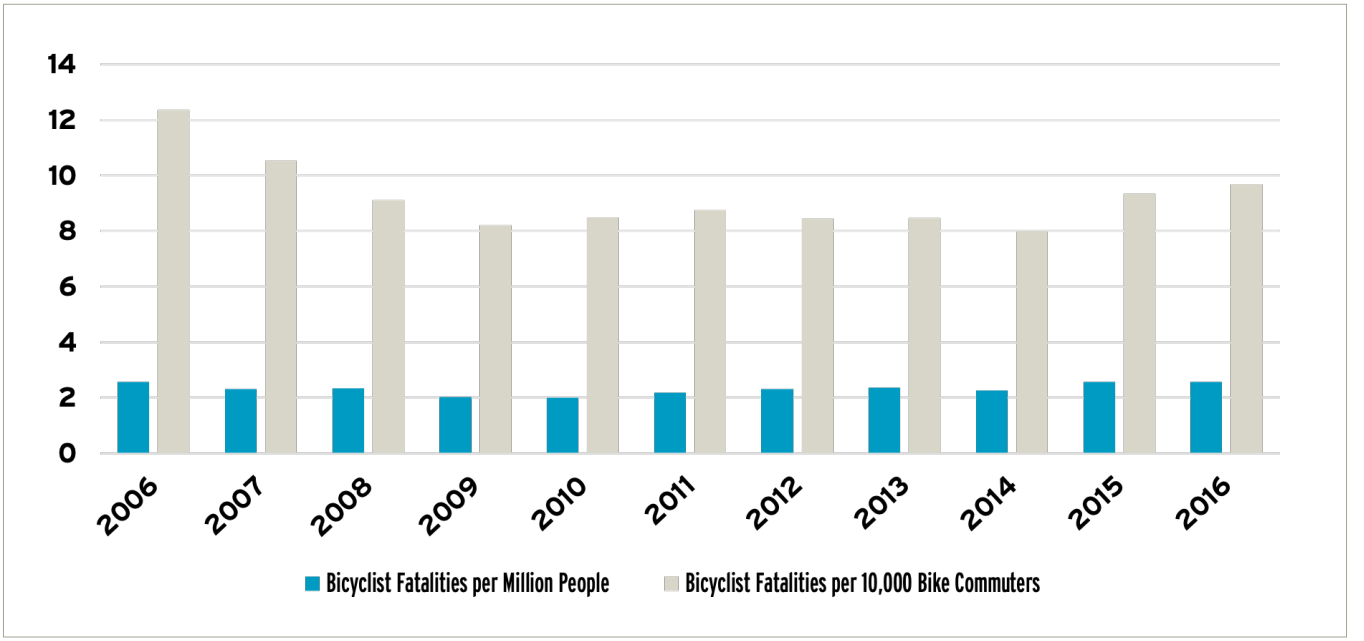
32 See footnote 31.

33 Bureau of Transportation Statistics (2013). *Table 1-1: Public Road Length, Miles by Functional System*. Available at https://cms.bts.dot.gov/archive/publications/state_transportation_statistics/state_transportation_statistics_2015/chapter-1/table1_1.

34 Compare to 1.1.1: Trends in Prevalence of Bicycling and Walking for All Trips.

Bicyclist Fatality Rates Per Capita & Per Bicycle Commuter [35]

FIGURE 1.4.4 - BICYCLIST FATALITIES PER CAPITA & PER BICYCLE COMMUTER



The rate of bicyclist fatalities per capita and per estimated bicycle commuters has increased since 2014 for both metrics.

35 Insurance Institute for Highway Safety. *Fatality Facts*. Available at http://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/bicycles (uses data from NHTSA FARS and includes fatalities categorized as "other and/or unknowns"). U.S. Census Bureau (2016). *American Community Survey Tables B01003 and B08006 1-year estimates*. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

Bicyclist Fatalities, by Race of Bicyclist Killed

FIGURE 1.4.5 - RACE OF BICYCLISTS KILLED IN MOTOR VEHICLE CRASHES, 2014-2016

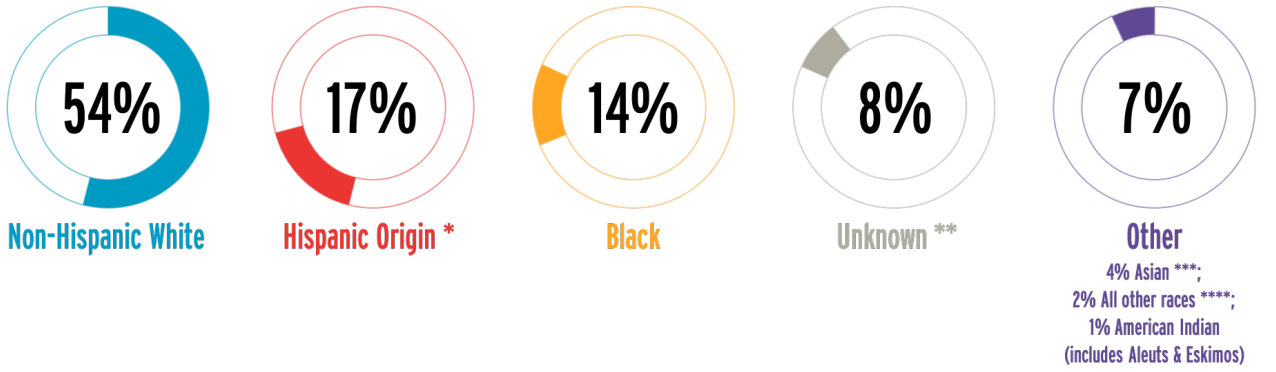


FIGURE 1.4.6 - BICYCLIST FATALITIES BY RACE

RACE AS REPORTED IN NHTSA FARS DATA	PERCENT OF BICYCLIST FATALITIES, 2014-2016 [34]	RACE AS REPORTED IN AMERICAN COMMUNITY SURVEY	PERCENT OF POPULATION [35]
Non-Hispanic White	54%	White alone, not Hispanic or Latino	61.3%
Hispanic Origin*	17%	Hispanic or Latino	17.8%
Black	14%	Black or African American	13.3%
Unknown**	8%	NA	NA
Asian***	4%	Asian alone	5.7%
All other races****	2%	NA	NA
American Indian (includes Aleuts and Eskimos)	1%	American Indian and Alaska Native alone	1.3%

* Hispanic Origin includes all people categorized as White and any Hispanic origin, including Mexican, Puerto Rican, Cuban, Central or South American, European Spanish, Hispanic-origin not specified or other origin, and Unknown.

** Unknown includes all people coded as blank.

*** Asian includes all people categorized as Chinese, Japanese, Hawaiian (including part-Hawaiian), Filipino, Asian Indian, Korean, Vietnamese, Other Asian or Pacific Islander, and Asian and Pacific Islander-no specific (individual) race.

**** All other races includes all people categorized as All Other Races, Multiple Races (individual races not specified; ex. "mixed"), and Other Indian (includes South and Central America, any other, except American or Asian Indians).

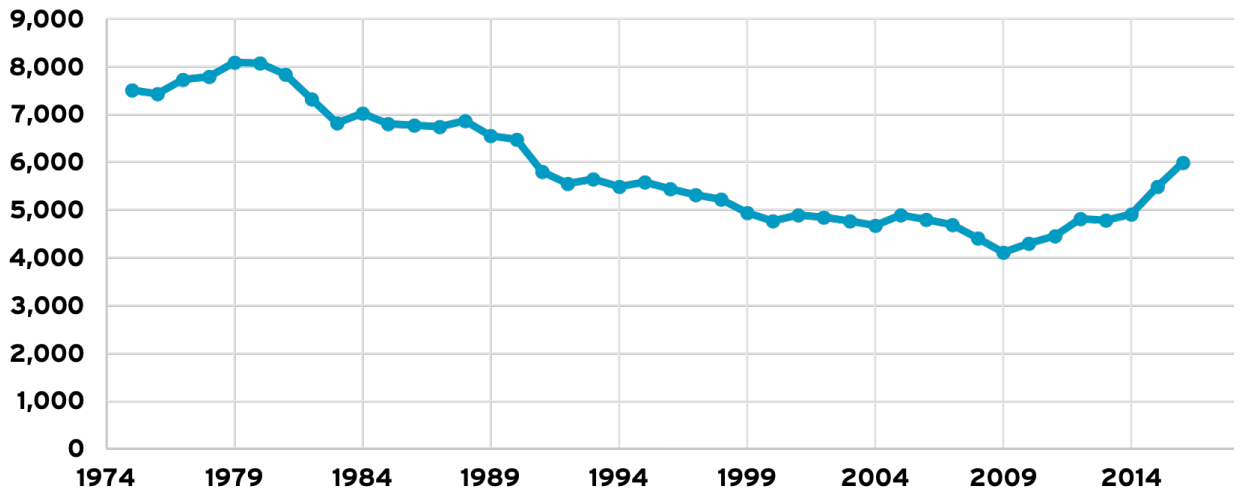
36 NHTSA. *FARS Database*; (Query: Table Option 1; Person Fields "Hispanic Origin," "Injury Severity," "Person Type," and "Race;" Injury Severity = "(4)Fatal Injury (K), Person Type = "(6)Bicyclist.")

37 U.S. Census Bureau. *United States Quick Facts*. Available at https://www.census.gov/quickfacts/fact/table/US/RHI225216

Trends in Pedestrian Fatalities

After decades of declines, the number of pedestrian fatalities per year has increased since 2009.[38] A 2011 report by the AAA Foundation for Highway Safety found that the risk of death for pedestrians increased dramatically with speed – so that a pedestrian hit at 30 mph had a 25% risk of death, but a pedestrian hit at 40 mph had a 50% risk of death.[39] In 2016, ProPublica organized the data from that study into an interactive tool so that individuals can see how vehicle speeds affect pedestrian survival in crashes.[40]

FIGURE 1.4.7 - NUMBER OF ANNUAL PEDESTRIAN FATALITIES



In 2016, 79% of pedestrian deaths occurred on roads with speed limits of 35 mph or greater. We cannot estimate if this is an over-representation because the U.S. DOT Bureau of Transportation Statistics does not provide data on miles of road by posted speed limit.

FIGURE 1.4.8 - PEDESTRIAN FATALITIES BY POSTED SPEED LIMIT

SPEED LIMIT OF ROAD	PERCENT OF PEDESTRIAN DEATHS [39]
<35 mph	18%
35-40 mph	28%
45 mph+	51%
Unknown or no limit	3%

38 Insurance Institute for Highway Safety. *Fatality Facts.* Available at https://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/pedestrians.

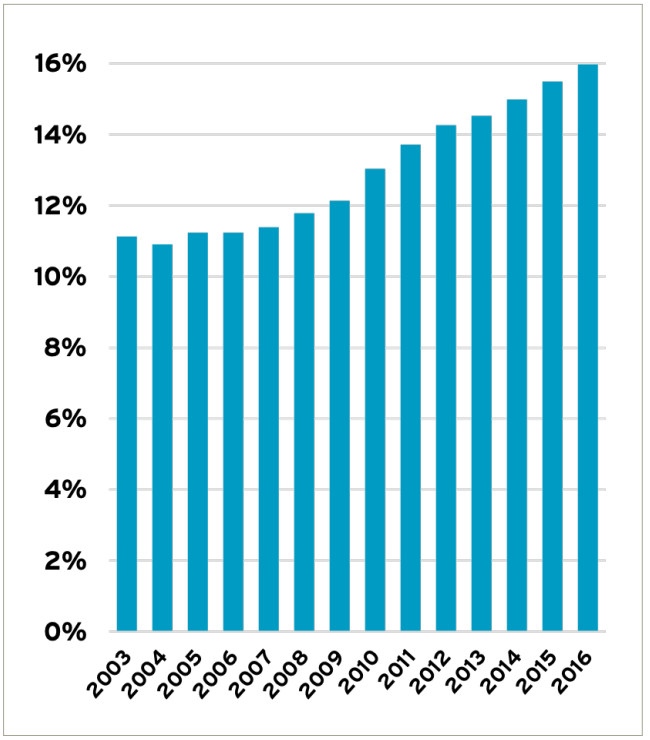
39 Tefft, B.C. AAA Foundation for Traffic Safety (2011). *Impact Speed and a Pedestrian's Risk of Severe Injury or Death.* Available at http://aaafoundation.org/impact-speed-pedestrians-risk-severe-injury-death/.

40 Groeger, L. ProPublica (2016). *Unsafe at Many Speeds*. Available at https://www.propublica.org/article/unsafe-at-many-speeds.

41 See footnote 38.

Pedestrian Fatalities as a Percent of All Road Fatalities

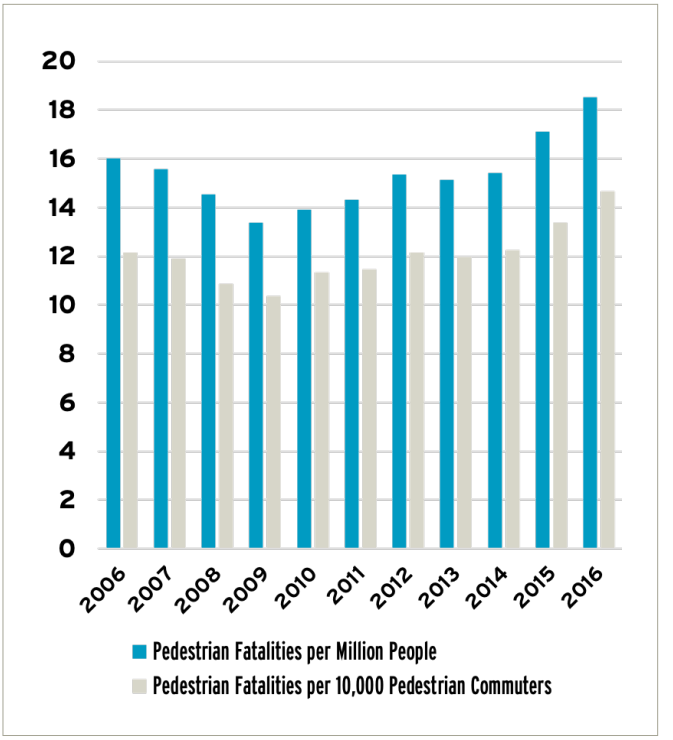
FIGURE 1.4.9 - PERCENT OF ALL TRAFFIC FATALITIES THAT ARE PEDESTRIANS



As with bicyclists, the proportion of all traffic fatalities that are pedestrians has increased in recent years. Pedestrians make up 16% of traffic fatalities while only accounting for about 12% of trips. [42]

Pedestrian Fatality Rates Per Capita & Per Pedestrian Commuter

FIGURE 1.4.10 - PEDESTRIAN FATALITIES PER CAPITA & PER PEDESTRIAN COMMUTER



The rate of pedestrian fatalities per capita and per 10,000 pedestrian commuters has increased since 2009 for both metrics.[43]

42 Compare to 1.1.1: Trends in Prevalence of Bicycling and Walking for All Trips

43 Insurance Institute for Highway Safety. *Fatality Facts*. Available at http://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/pedestrians (uses data from NHTSA FARS and includes fatalities categorized as "other and/or unknowns"). U.S. Census Bureau (2016). *American Community Survey Tables B01003 and B08006 1-year estimates*. Available at https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

Pedestrian Fatalities, by Race of Pedestrian Killed

FIGURE 1.4.11 - RACE OF PEDESTRIANS KILLED IN MOTOR VEHICLE CRASHES, 2014-2016

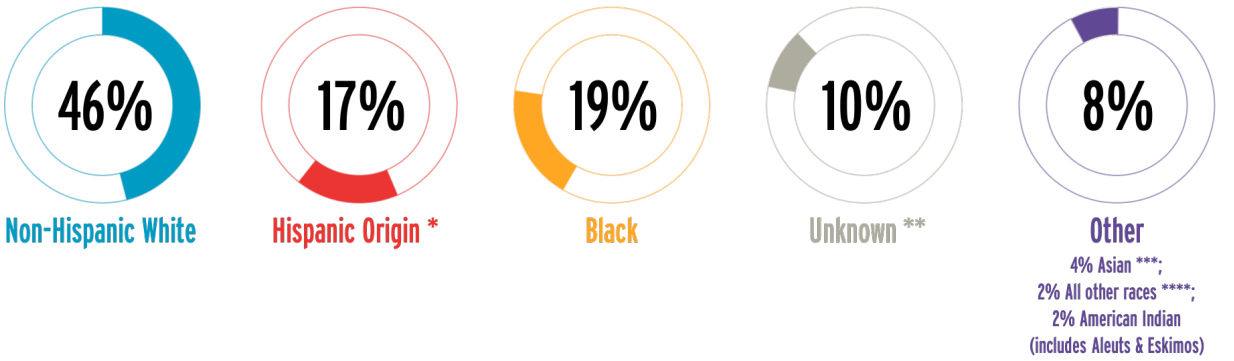


FIGURE 1.4.12 - PEDESTRIAN FATALITIES BY RACE

RACE AS REPORTED IN NHTSA FARS DATA	PERCENT OF PEDESTRIAN FATALITIES, 2014-2016 [42]	RACE AS REPORTED IN AMERICAN COMMUNITY SURVEY	PERCENT OF POPULATION [43]
Non-Hispanic White	46%	White alone, not Hispanic or Latino	61.3%
Hispanic Origin*	17%	Hispanic or Latino	17.8%
Black	**19%**	Black or African American	**13.3%**
Unknown**	10%	NA	NA
Asian***	4%	Asian alone	5.7%
All other races****	2%	NA	NA
American Indian (includes Aleuts and Eskimos)	2%	American Indian and Alaska Native alone	1.3%

Data suggests that black people are over-represented among pedestrian fatalities, with black people accounting for slightly over 19% of pedestrian deaths while representing less than 14% of the US population.

* Hispanic Origin includes all people categorized as White and any Hispanic origin, including Mexican, Puerto Rican, Cuban, Central or South American, European Spanish, Hispanic-origin not specified or other origin, and Unknown.

** Unknown includes all people coded as blank

*** Asian includes all people categorized as Chinese, Japanese, Hawaiian (including part-Hawaiian), Filipino, Asian Indian, Korean, Samoan, Vietnamese, Guamanian, Other Asian or Pacific Islander, and Asian or Pacific Islander-no specific (individual) race.

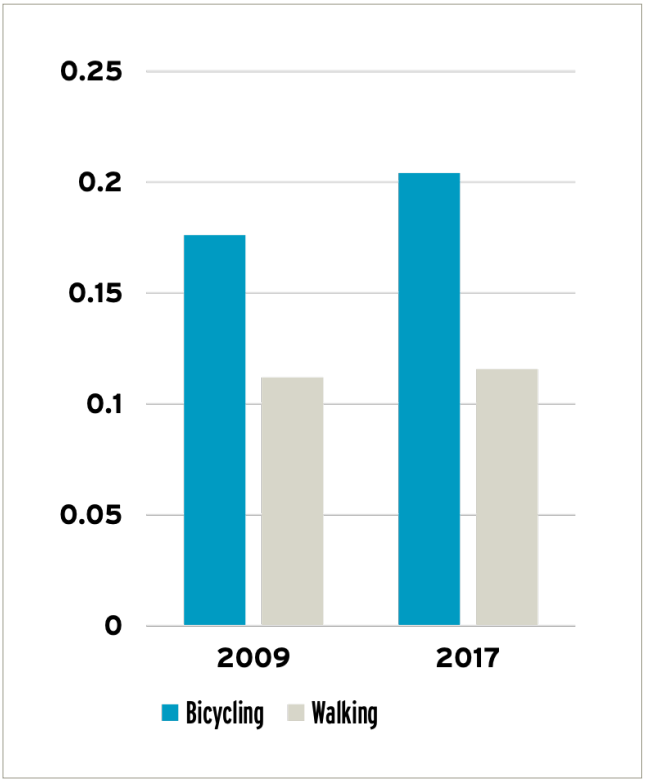
**** All other races includes all people categorized as All Other Races, Multiple Races (individual races not specified; ex. "mixed"), and Other Indian (includes South and Central America, any other, except American or Asian Indians)

44 NHTSA. *FARS Database* (Query: Table Option 1; Person Fields "Hispanic Origin," "Injury Severity," "Person Type," and "Race;" Injury Severity = "(4)Fatal Injury (K), Person Type = "(5)Pedestrian.").

45 U.S. Census Bureau. *United States Quick Facts*. Available at https://www.census.gov/quickfacts/fact/table/US/RHI225216

Bicyclist & Pedestrian Deaths per Million Trips [46]

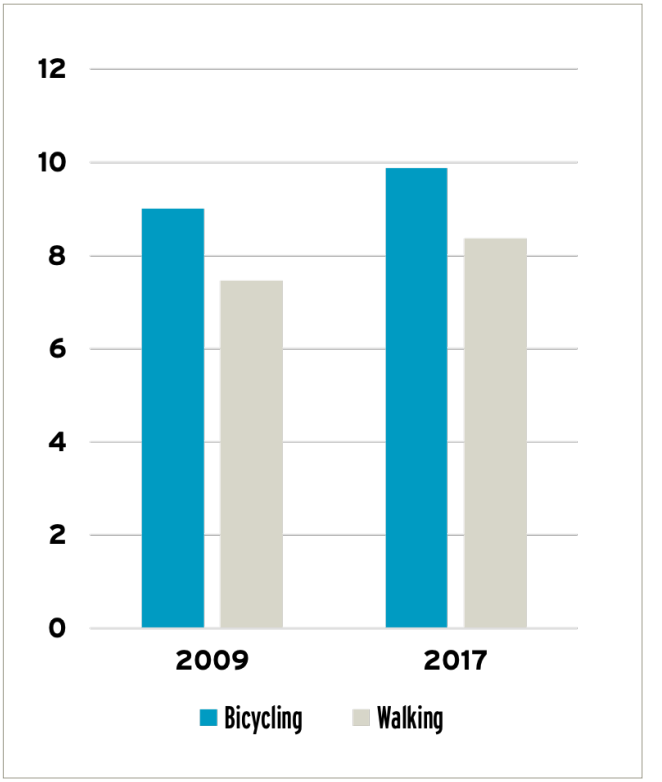
FIGURE 1.4.13 - DEATHS PER MILLION TRIPS



Bicycling appears to be significantly more dangerous than walking on a per trip basis. This may reflect the short distance of many walking trips, with more than 80% of walking trips being 1 mile or less while less than 60% of bicycling trips are 1 mile or less.[47] The rate of death per million trips increased for both bicycling and walking between 2009 and 2017.

Bicyclist & Pedestrian Deaths per Billion Minutes [48]

FIGURE 1.4.14 - DEATHS PER BILLION MINUTES



Bicycling continues to appear to be more dangerous than walking when examined by death rate per billion minutes. The rate of death per billion minutes increased for both bicycling and walking between 2009 and 2017.

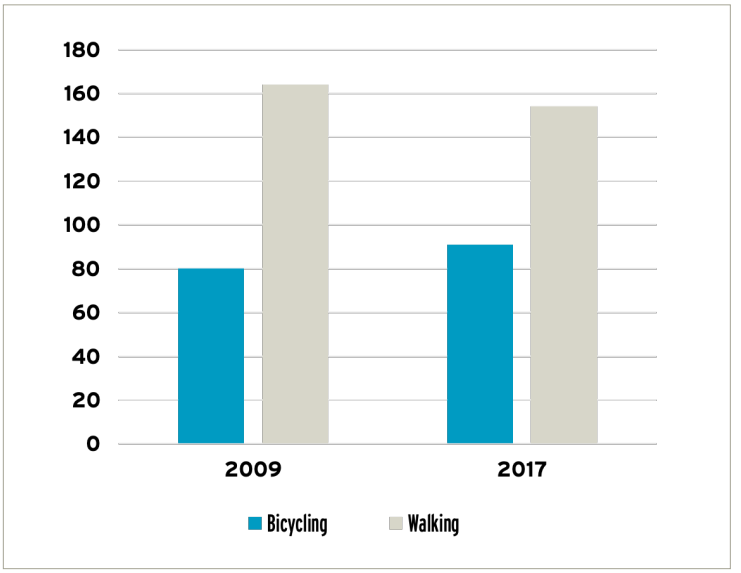
46 Insurance Institute for Highway Safety. *Fatality Facts.* Available at http://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/pedestrians (uses data from NHTSA FARS and includes fatalities categorized as "other and/or unknowns". "2017" data reflects a 5-year average of available fatality data from 2012-2016 and "2009" data reflects a 5-year average of available fatality data from 2005-2009). Ralph Buehler (2017). *Analysis of 2009 and 2017 National Household Travel Survey data for the League of American Bicyclists.*

47 U.S. DOT Federal Highway Administration. *2017 National Household Travel Survey* (Person Trips with Trip distance in miles, derived from route geometry returned by Google Maps API, or from reported loop-trip distance and mode, derived). Available at https://nhts.ornl.gov/.

48 See footnote 46.

Bicyclist & Pedestrian Deaths per Billion Miles [49]

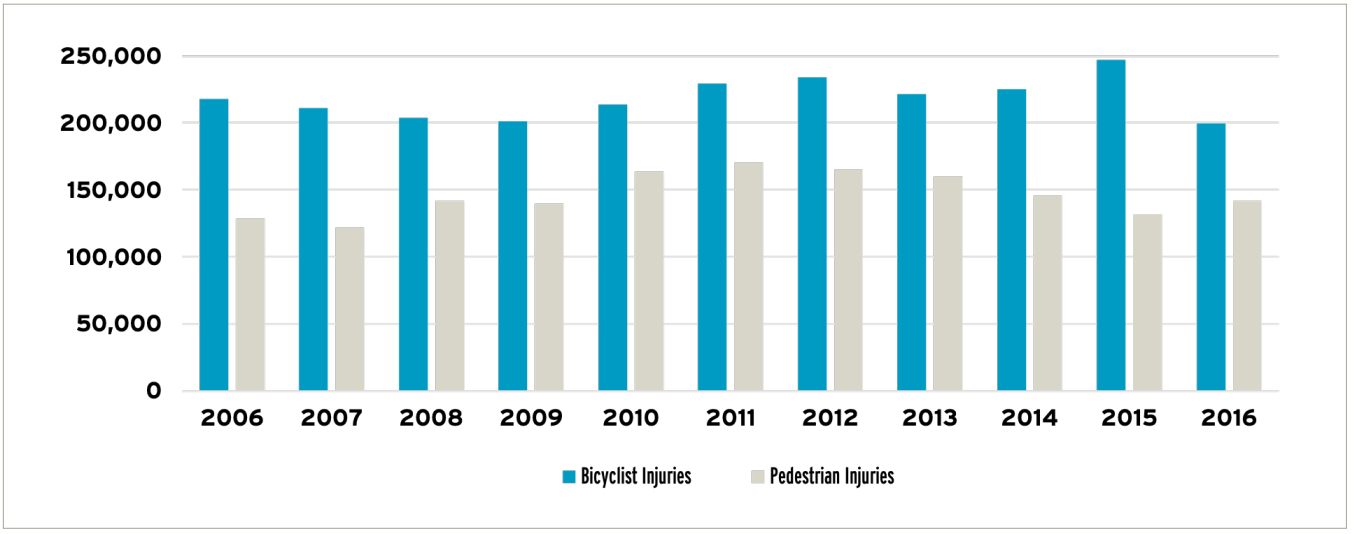
FIGURE 1.4.15 - DEATHS PER BILLION MILES



Unlike the two other exposure measures derived from the National Household Travel Survey (NHTS) – deaths per million trips and deaths per billion minutes – walking appears to be significantly more dangerous than bicycling according to deaths per billion miles. According to the NHTS, the average (mean) bicycle trip length was 2.38 miles while the average (mean) walking trip length was .87 miles. [50]

On-Road Bicyclist & Pedestrian Injuries [51]

FIGURE 1.4.16 - BICYCLIST & PEDESTRIAN INJURIES



49 See footnote 46.

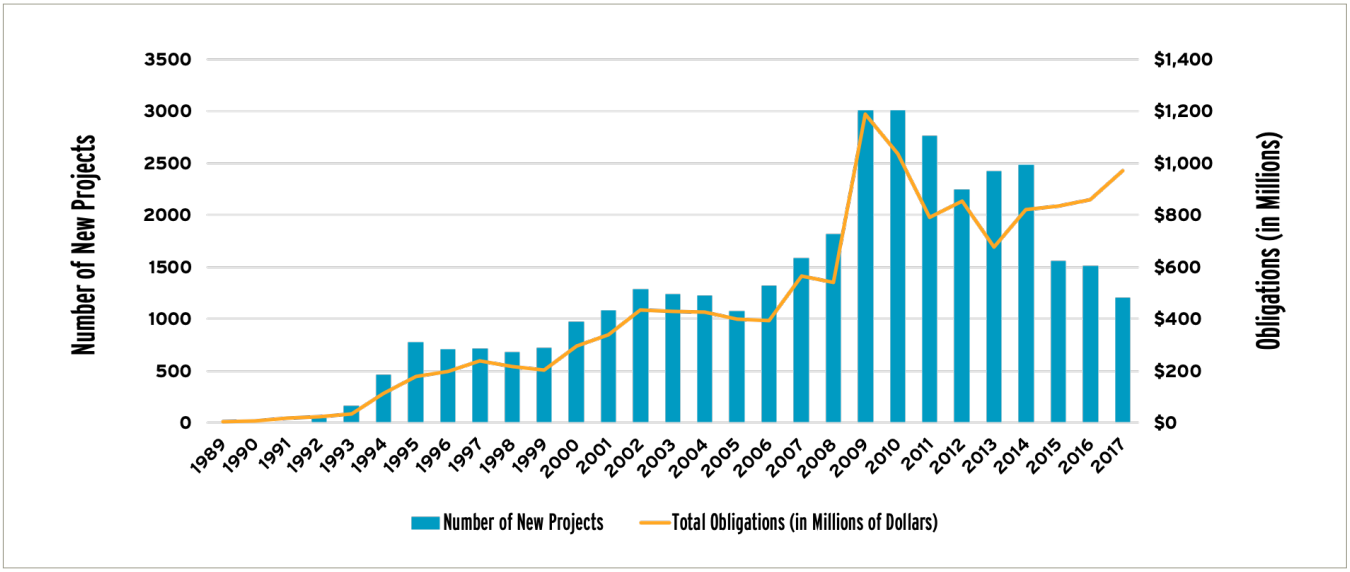
50 See footnote 47.

51 Centers for Disease Control and Prevention Web-based Injury Statistics Query and Reporting System. *On-road non-fatal injuries* (2006-2016). Available at https://www.cdc.gov/injury/wisqars/index.html. Insurance Institute for Highway Safety. *Fatality Facts*. Available at http://www.iihs.org/iihs/topics/t/pedestrians-and-bicyclists/fatalityfacts/pedestrians.

1.5 - NATION: FEDERAL FUNDING & PLANNING FOR BICYCLING & WALKING

Federal Funding for Bicycling & Walking Infrastructure [52]

FIGURE 1.5.1 - # OF PROJECTS & TOTAL OBLIGATIONS TO PEDESTRIANS & BICYCLE FACILITIES & PROGRAMS BY YEAR



The number of bicycle and pedestrian projects funded by federal programs was not tracked until 1992 after the passage of the landmark Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA created the Transportation Enhancements Program, which for the first time provided a program where bicycle and pedestrian projects were emphasized as three of ten eligible project types. This program provided more than $1 billion for eligible projects during the six years of funding authorized by ISTEA. Prior to ISTEA,[53] federal transportation programs had spent less than $48 million on bicycle and pedestrian projects in the preceding 18 years. [54]

52 Federal Highway Administration. *Federal-Aid Highway Program Funding for Pedestrian and Bicycle Facilities and Programs*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/bipedfund.cfm

53 Fazzalaro, J. Connecticut Office of Legislative Research (2003). *RE: Federal Transportation Funds for Bicycle and Pedestrian Facilities*. Available at https://www.cga.ct.gov/PS98/rpt%5Colr%5Chtm/98-R-0010.htm.

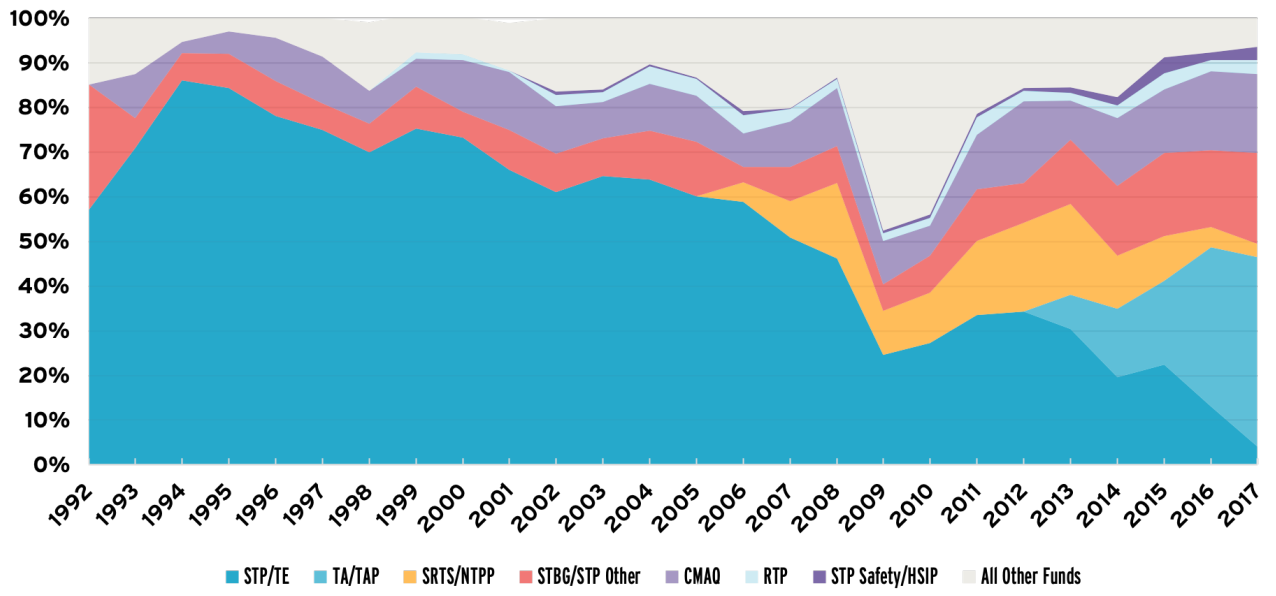
54 See footnote 52. See also Federal Highway Administration. *Federal-Aid Highway Program Funding 1988-1991 for Pedestrian and Bicycle Facilities and Programs*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/bipedfund_preistea.cfm.

So far, bicycling and pedestrian funding reached its highest point after the American Recovery and Reinvestment Act of 2009, which provided an influx of "stimulus" funding for transportation infrastructure.

There has usually been a close correlation between federal spending on bicycling and walking and the number of new projects, but since 2014 this relationship seems to have changed – with spending increasing despite fewer new projects.

Federal Funding Programs for Bicycling & Walking Infrastructure [55]

FIGURE 1.5.2 - FEDERAL FUNDING FOR BIKING & WALKING PROJECTS & PROGRAMS BY FHWA FUNDING PROGRAMS



CMAQ	Congestion Mitigation and Air Quality Improvement Program
TA/TAP	Transportation Alternatives Program
STP/TE	Surface Transportation - Transportation Enhancements
STBG/STP OTHER	Surface Transportation Block Grant/ Surface Transportation Program Other
SRTS/NTPP	Safe Routes to School/ Nonmotorized Transportation Pilot Project
STP SAFETY/ HSIP	Surface Transportation Safety/ Highway Safety Improvement Program
RTP	Recreational Trails Program
ALL OTHER FUNDS	All Other Funds

In 2012, the Moving Ahead for Progress in the 21st Century Act (MAP-21) consolidated Transportation Enhancements (STP/TE), Recreation Trails (RTP), and Safe Routes to School (SRTS) programs into the Transportation Alternatives Program (TA/TAP). In 2015, the Fixing America's Surface Transportation (FAST) Act changed TAP from a stand-alone program to a set-aside within the Surface Transportation Program, but it remains separate for this chart. The sharp influx of funding from "All other funds" in 2009 and 2010 reflects the American Recovery and Reinvestment Act.

55 Federal Highway Administration. *Federal-Aid Highway Program Funding for Bicycle and Pedestrian Facilities and Programs, FY 1992 to 2017 Obligations*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/bipedfund.cfm .

Over time, bicycle and pedestrian projects have become funded from a broader range of federal funding programs. In 1994, over 85% of funding for bicycle and pedestrian projects came from the Transportation Enhancements Program – which funded at least 50% of bicycle and pedestrian projects until 2008. The prominent increase in "All Other Funds" in the graph above coincides with the American Recovery and Reinvestment Act enacted in 2009. Since 2008, no federal funding program has provided more than 50% of funding for bicycle and pedestrian projects.

The Fixing America's Surface Transportation (FAST) Act required states to report the number and value of project applications received for TAP funds. In 2016, the first year that states reported the number and value of project applications, states did not fund approximately 50% of applications representing over $1.3 billion in projects. [5 6]

Velodrome, photo by Minnesota DOT (@Flickr)

56 Federal Highway Administration. *Transportation Alternatives Annual Report*. Available at https://www.fhwa.dot.gov/environment/transportation_alternatives/annual_reports/.

Federal Planning for Biking & Walking

FIGURE 1.5.3 - FEDERAL PLANNING FOR BIKING & WALKING

YEAR		FEDERAL ACTION
1991	CTAB	The **Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)** is passed by Congress, representing the first major federal commitment to funding bicycle and pedestrian infrastructure. [55]
1994		The **1994 National Bicycling and Walking Study: Transportation Choices for Changing America**, produced by FHWA and NHTSA, represented the first comprehensive examination of the state of nonmotorized transportation in the United States.[56]
1999		Pedestrian and Bicycle Information Center created, funded by FHWA and NHTSA. [57]
2000		The FHWA publication, ***Accommodating Bicycle and Pedestrian Travel: A Recommended Approach***, focuses on the design and inclusion of pedestrian and bicycle facilities. [58]
2004		**Focus States and Cities** launched to focus resources in states and cities with high pedestrian fatalities. [59]
2005	CTAB	The **Safe, Accountable, Flexible, Efficient, Transportation Equity Act: a Legacy for Users (SAFETEA-LU)** is passed by Congress, continuing funding for bicycle and pedestrian infrastructure and establishing the Nonmotorized Transportation Pilot Program. [60]
2006		BIKESAFE and PEDSAFE countermeasure selection guides are launched, they have since been updated in 2014 and 2013, respectively. [61]
2010		DOT issued its **Policy Statement on Bicycle and Pedestrian Accommodations, Regulations, and Recommendations**. [62]
2010		U.S. DOT and FHWA released Pedestrian Safety Strategic Plan: Recommendations for Research & Product Development. [63]
2012	CTAB	The **Moving Ahead for Progress in the 21st Century (MAP-21) Act** passed by Congress, consolidated pedestrian and bicyclist funding into the Transportation Alternatives Program (TAP). [64]
2013		On August 20, 2013, FHWA issued a **memorandum to support flexibility in pedestrian and bicycle facility design**. [65]
2014		U.S. DOT launched **Safer People, Safer Streets: U.S. Department of Transportation Action Plan to Increase Walking and Biking and Reduce Pedestrian and Bicyclist Fatalities**.
2015	CTAB	The **Fixing America's Surface Transportation (FAST) Act** passed by Congress, requires federally funded projects on the National Highway System (NHS) to consider access for people who bike and walk.
2015		FHWA released the ***Separated Bike Lane Planning and Design Guide*** in May 2015. [66]
2015		**Focus States and Cities** expanded to include focused resources for states and cities with high bicyclist fatalities. [67]
2016		**Traffic Monitoring Analysis System (TMAS)** updated to receive and report on pedestrian and bicycle counts. [68]
2018		States publish safety performance targets, including goals for non-motorized fatalities and serious injuries. [69]

CTAB = Congressional Transportation Authorization Bill

Note: References for Figure 1.5.3 can be found on the following page.

57 Federal Highway Administration. *2015 Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance Chapter 11 Pedestrian and Bicycle Transportation*. Available at https://www.fhwa.dot.gov/policy/2015cpr/chap11.cfm#_Toc446493398.

58 See footnote 57.

59 Pedestrian and Bicycle Information Center. *What We Do: PBIC Mission*. Available at http://www.pedbikeinfo.org/whatwedo.cfm.

60 See footnote 57.

61 Federal Highway Administration. *Pedestrian and Bicycle Safety Focus States and Cities*. Available at https://safety.fhwa.dot.gov/ped_bike/ped_focus/.

62 See footnote 57.

63 Federal Highway Administration. *BIKESAFE Background*. Available at http://www.pedbikesafe.org/bikesafe/authors.cfm.

64 U.S. Department of Transportation. *United States Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/policy_accom.cfm.

65 Federal Highway Administration. *Pedestrian Safety Strategic Plan: Recommendations for Research and Product Development*. Available at https://safety.fhwa.dot.gov/ped_bike/pssp/fhwasa10035/.

66 See footnote 57.

67 Federal Highway Administration. *Memorandum: Bicycle and Pedestrian Facility Design Flexibility*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/.

68 Federal Highway Administration. *Separated Bike Lane Planning and Design Guide*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/separated_bikelane_pdg/page00.cfm.

69 Federal Highway Administration. *A Focused Approach to Pedestrian and Bicycle Safety*. Available at https://www.fhwa.dot.gov/publications/publicroads/17julaug/06.cfm.

70 Federal Highway Administration. *Coding Nonmotorized Station Location Information in the 2016 Traffic Monitoring Guide Format*. Available at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/tmg_coding/.

71 Federal Highway Administration. *Safety Performance Management (Safety PM)*. Available at https://safety.fhwa.dot.gov/hsip/spm/state_safety_targets/.