

The Burden of Pain Among Adults in the United States

Findings from the National Health and Nutrition Examination Survey,
the National Health Care Surveys, and the National Health Interview Survey



The burden of pain among adults in the United States

Over 100 million adults in the United States—51% of the estimated 215 million population aged 20 years and older—report pain at one or more body sites including the joints, low back, neck, face/jaw, or experience dental pain or headaches/migraines. Over one-quarter of adults aged 40 years and older report low back pain in the past 3 months. One-quarter of women aged 20–39 years report having severe headaches or migraines in the past 3 months.

Numerous diseases and conditions are also associated with pain, including arthritis, peripheral neuropathy, fibromyalgia, and shingles. Annually, there are 5.4 million ambulatory and inpatient health care visits with a diagnosis of fibromyalgia, 1.9 million diabetic neuropathy visits, and 1.5 million shingles visits. 50% of adults with diabetes who have peripheral neuropathy report symptoms of pain/tingling in their feet or numbness/loss of feeling in the past 3 months. 44% of adults with arthritis report limitations in their usual activities due to their arthritis or joint pain.

Pain may also be caused by bodily injury or harm. In 2006, there were approximately 34 million injury-related physician office visits. Analgesic drug therapy was reported at 40% of these injury-related visits.

Adults with pain have worse health status and experience more disability in terms of lost work days, activity limitations, reduced sleep, and increased psychological distress than adults without pain. One in 3 adults with face or jaw pain report fair or poor health status, nearly 1 in 5 adults with neck pain report being unable to work, and 1 in 9 adults with severe headaches/migraines report psychological distress.

This issue of Pfizer Facts presents new analyses of national data sources to gain insight into the burden of pain among adults in the United States. We present information on the prevalence of pain at specific body sites and certain pain-related diseases and conditions such as arthritis, peripheral neuropathy, fibromyalgia, and shingles, as well as information on associated health status and health care resource utilization. We present analyses of the National Health Interview Survey (NHIS), the National Health Care Surveys, and the National Health and Nutrition Examination Survey (NHANES). We provide this information in an effort to heighten awareness and encourage discussion pertaining to pain among adults.

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Highlights

Pain at selected body sites

- Over one-half of adults aged 20 years and older report feeling pain at one or more body locations including the joints, back, neck, head, mouth, or face/jaw. Joint pain (28%) and low back pain (26%) are most prevalent.
- Joint pain increases with age and is generally more prevalent among women (31%) than men (26%), and among white, non-Hispanic adults (31%), than black, non-Hispanic adults (26%) and Hispanic adults (18%). 29% of adults with joint pain report having severe pain. The knee is the most common site of joint pain regardless of age or gender.
- One in 3 older women and 1 in 4 older men report low back pain in the past 3 months. Prevalence increases with body weight—low back pain is reported by about 1 in 5 normal weight adults, 1 in 4 overweight adults, and 1 in 3 obese adults.
- 13% of adults report neck pain in the past 3 months. Neck pain is reported more often by women (15%) than men (11%) and white, non-Hispanic adults (14%) than black, non-Hispanic adults (10%) or Hispanic adults (11%).
- One in 8 adults report severe headaches or migraines in the past 3 months. It is more prevalent among women (17%) than men (7%) and adults aged 20–39 (15%) and 40–64 (13%) years than adults 65 and older (5%).
- One in 8 adults report dental pain in the past year. Men and women have a similar prevalence of dental pain regardless of age.
- 4% of adults report facial ache or pain in the jaw muscles or the joint in front of the ear. Regardless of age, more women (6%) than men (2%) report having this type of pain.

Pain at selected body sites and health status

- 25–33% of adults with pain at selected body sites report fair or poor health, 15–22% report being unable to work, 12–17% report sleeping less than 6 hours per day, and 6–13% report psychological distress.
- Also, 29–39% of adults with joint pain, low back pain, and neck pain report arthritis-attributable activity limitations.

Pain at selected body sites and health care utilization

- Annually, adults have an average of 11 million physician office visits with a diagnosis of joint pain, over 1.1 million outpatient hospital visits, about 1.5 million emergency department visits, and have over 177 thousand inpatient hospitalizations.
- Annually, adults have an average of 7 million physician office visits with a diagnosis of back pain, 762 thousand outpatient hospital visits, over 1.5 million emergency department visits, and have about 227 thousand inpatient hospitalizations.
- Annually, adults have an average of 11 million physician visits with a headache diagnosis, over 1 million outpatient hospital visits, 3.3 million emergency department visits, and 445 thousand inpatient hospitalizations.
- The majority of health care utilization for joint pain, back pain, and headaches was by women and white, non-Hispanic adults.

Pain at selected body sites and analgesic drug use

- 23–27% of adults with joint pain, low back pain, neck pain, or severe headaches/migraines report prescription analgesic drug use in the past month.
- 15–22% of adults with joint pain, low back pain, neck pain, or severe headaches/migraines report using a non-prescription analgesic or certain non-narcotic prescription analgesics nearly every day for a month or longer.

Pain and selected diseases or conditions

Arthritis

- 22% of adults aged 20 years and older have been told by a physician or health professional that they have arthritis.
- It is more common among women (25%) than men (18%), older age groups (48%, 65 and older; 25%, 40–64 years) than younger (6%, 20–39 years), and white, non-Hispanic adults (25%) than black, non-Hispanic (19%) and Hispanic (12%) adults.
- Arthritis is also more common among obese (30%) or overweight (21%) adults than normal weight adults (16%).
- 31% of adults with arthritis report fair or poor health compared to 9% of adults without arthritis. Adults with arthritis are also 11 times more likely to report arthritis-attributable activity limitations, 5 times more likely to report being unable to work, nearly twice as likely to report reduced hours of sleep, and 3 times as likely to report psychological distress.
- 37% of adults with arthritis report prescription analgesic drug use and 31% use a non-prescription or non-narcotic prescription analgesic nearly every day for a month or longer.

Peripheral Neuropathy

- 14% of adults aged 40 years and older have peripheral neuropathy; three-fourths experience no related symptoms of pain/tingling or numbness in their feet.
- Adults with diabetes have twice the prevalence of peripheral neuropathy as those with no diabetes (28% vs. 11%, respectively).
- 50% of adults with diabetes who have peripheral neuropathy are symptomatic compared to less than 20% among adults with no diabetes.

Diabetic Neuropathy

- Annually, adults have an average of 1.4 million physician office visits with a diagnosis of diabetic neuropathy, 132 thousand outpatient hospital visits, 40 thousand emergency department visits, and 392 thousand inpatient hospitalizations.
- The majority of ambulatory and inpatient visits for diabetic neuropathy are by women (46–65%), adults aged 40–64 (46–57%), and white, non-Hispanic adults (54–70%).
- An analgesic drug was prescribed, administered, or continued at 37% of physician office visits with a primary diagnosis of diabetic neuropathy.

Fibromyalgia

- Annually, there are about 5.4 million health care visits with a fibromyalgia diagnosis: 4.5 million physician office visits, 390 thousand outpatient hospital visits, 413 thousand emergency department visits, and 157 thousand inpatient hospitalizations.
- The majority of this health care utilization is by women, adults aged 40–64 years, and white, non-Hispanic adults. However, emergency departments have relatively more visits by men, adults aged 20–39, and black, non-Hispanic adults.
- An analgesic drug was prescribed, administered, or continued at 71% of the physician office visits with a primary diagnosis of fibromyalgia; 29% of office visits had an antidepressant drug mention and 14% had an anxiolytic, sedative, or hypnotic drug mention.

Shingles

- Annually, adults have about 1.2 million physician office visits and 33 thousand inpatient hospitalizations with a diagnosis of shingles.
- The majority of health care visits are by women, adults aged 40–64 years, and white, non-Hispanic adults, with the exception of inpatient hospitalizations where over two-thirds are by adults aged 65 and older.
- At over half of all physician office visits with a primary diagnosis of shingles, an analgesic drug was prescribed, administered, or continued.

Injury

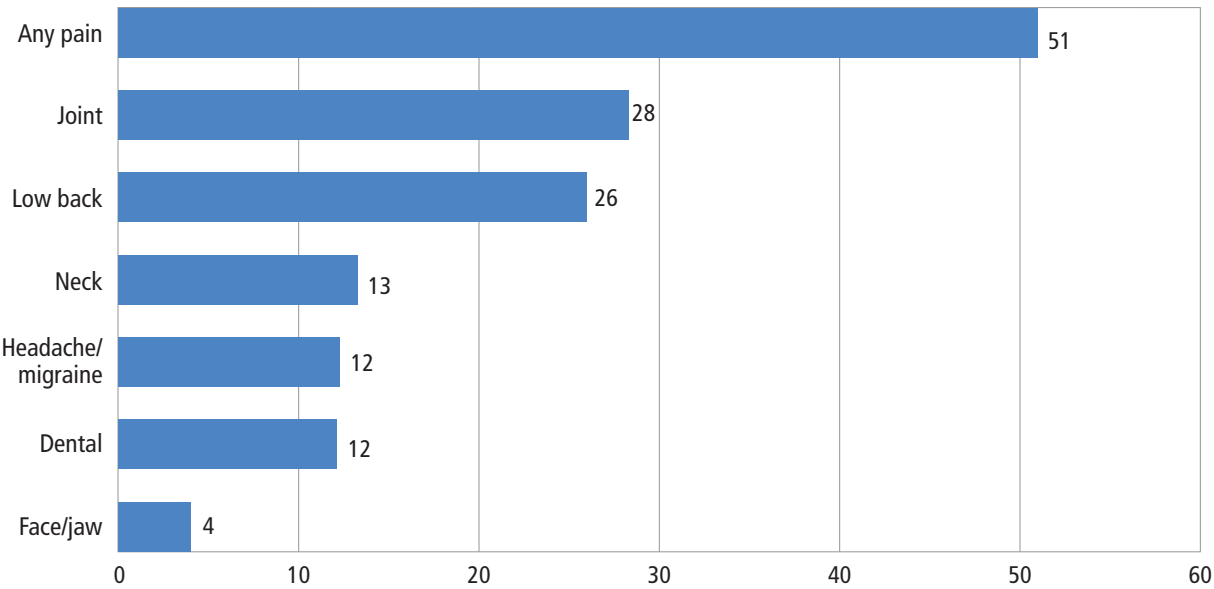
- There are ~34 million injury-related physician office visits because of body sprains or strains, fractures, contusions, dislocations, crushes, or burns.
- Sprains and strains are most common (~17 million office visits), followed by fractures (8 million) and contusions (7 million).
- Analgesic drugs are prescribed, administered, or continued at 40% of injury-related physician office visits.



Pain at selected body sites

51% of all adults aged 20 years and older report feeling pain at a joint, their back, neck, head, mouth, or face/jaw. Joint pain and low back pain are most prevalent (28% and 26%, respectively).

Prevalence of pain at selected body sites among adults



Percent of adult population

Source: NHIS 2007

The *Any pain* category includes all other pain sites listed. *Joint pain* prevalence is in the past month; *Dental pain* is in the past year; all other body sites are in the past 3 months.

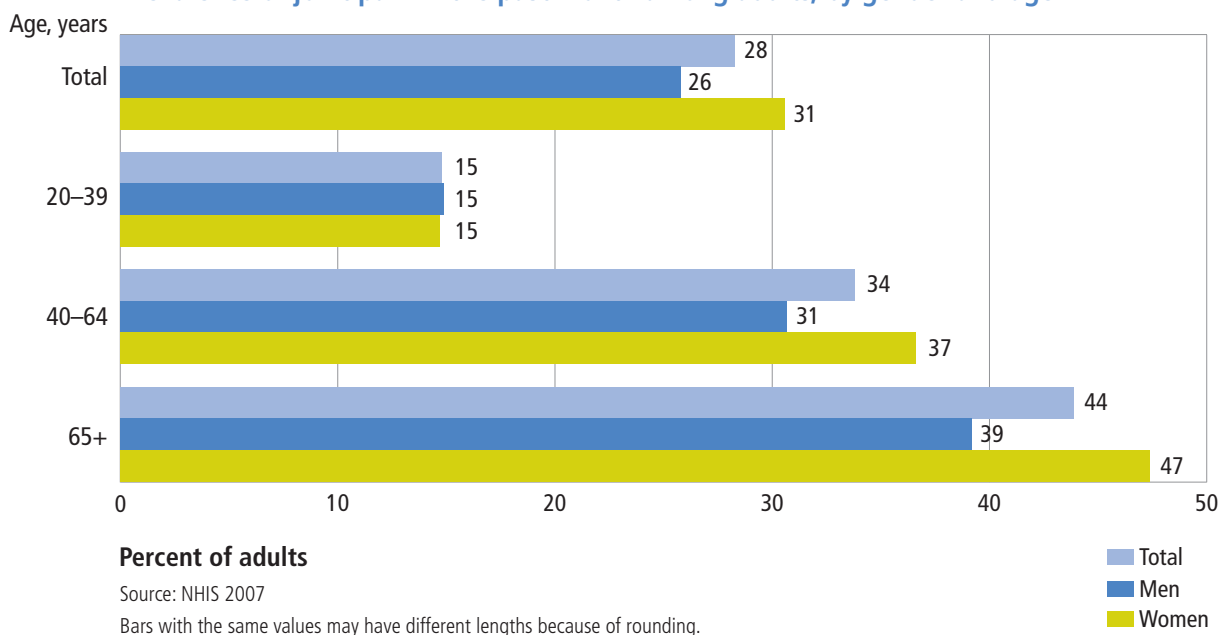
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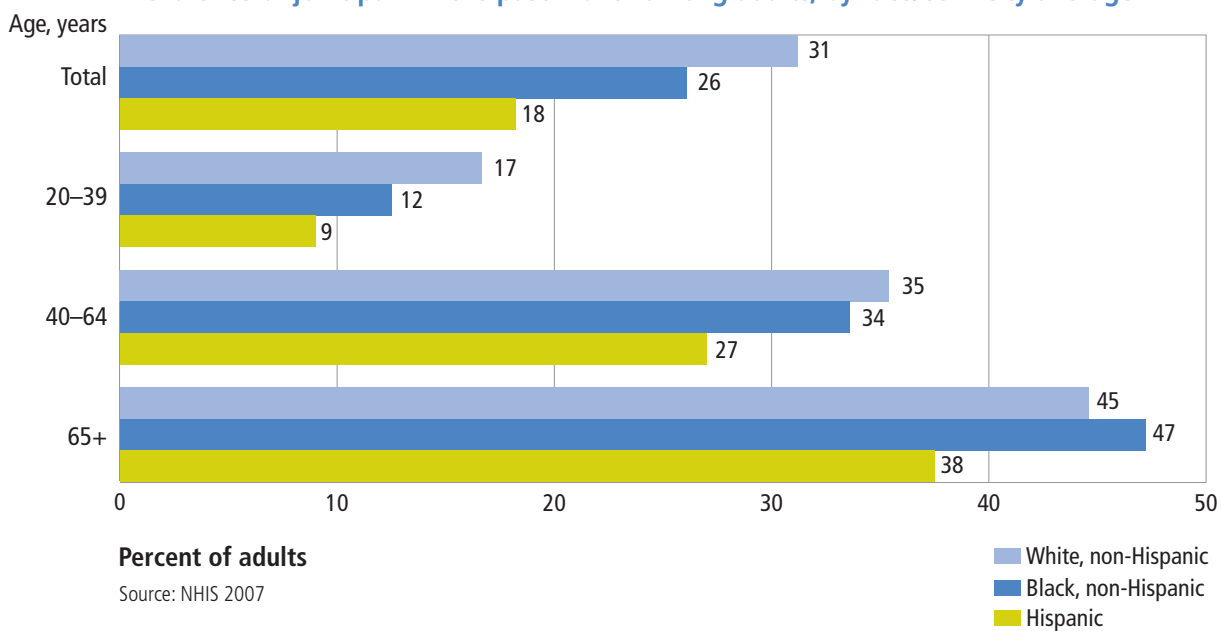
Joint pain

28% of adults report joint pain, aching, or stiffness in the past month. Joint pain increases with age: 15% among adults aged 20–39 years; 34% among adults aged 40–64 years; 44% among those aged 65 and older. Nearly 50% of older women (47%) and older black, non-Hispanic adults (47%) report joint pain.

Prevalence of joint pain in the past month among adults, by gender and age



Prevalence of joint pain in the past month among adults, by race/ethnicity and age

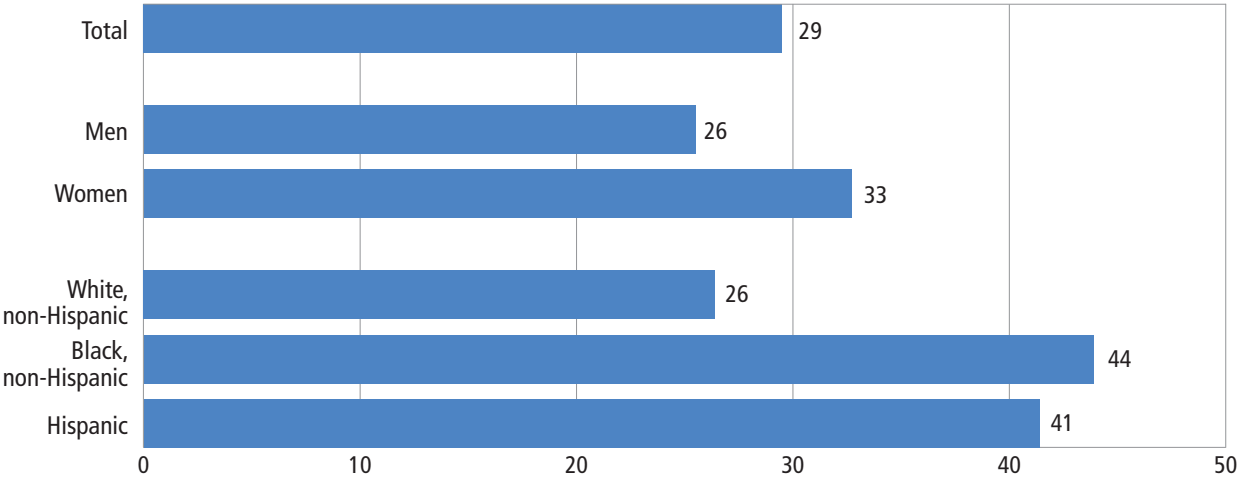


The burden of pain among adults in the United States

One in 4 men and 1 in 3 women with joint pain report having severe pain.

Black, non-Hispanic (44%), and Hispanic (41%) adults with joint pain report more severe pain than white, non-Hispanic adults who have joint pain (26%).

Prevalence of severe pain among adults with joint pain



Percent of adults with joint pain

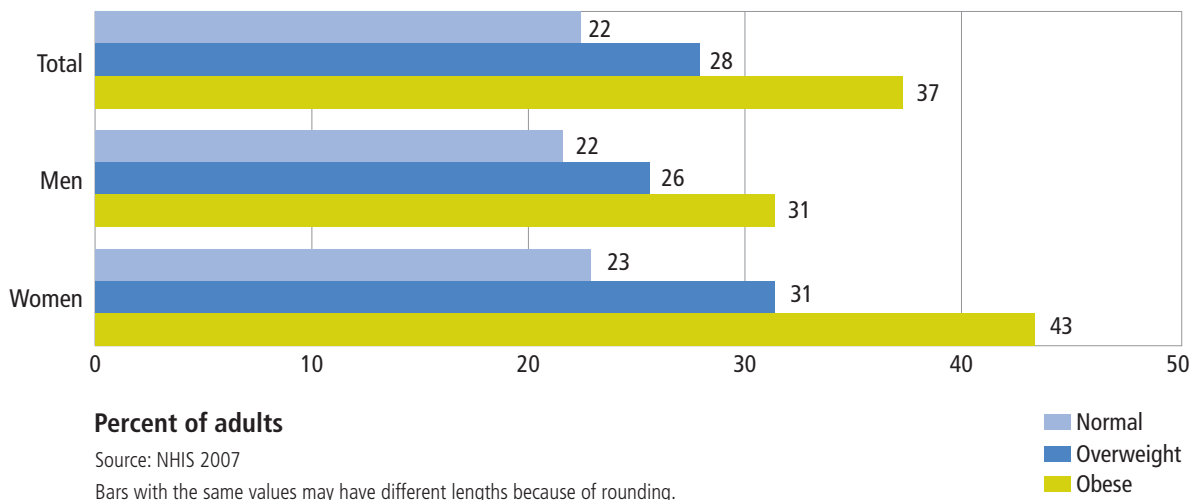
Source: NHIS 2006

Bars with the same values may have different lengths because of rounding.

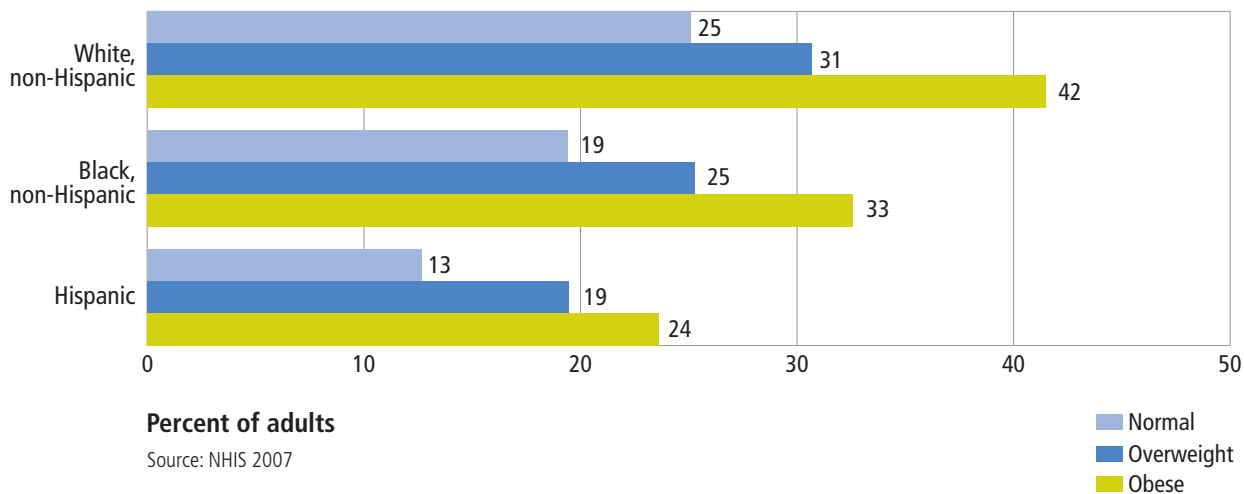
The burden of pain among adults in the United States

Weight is associated with joint pain—22% among normal weight adults; 28% among overweight adults; 37% among obese adults.

Prevalence of joint pain in the past month among adults, by body weight and gender

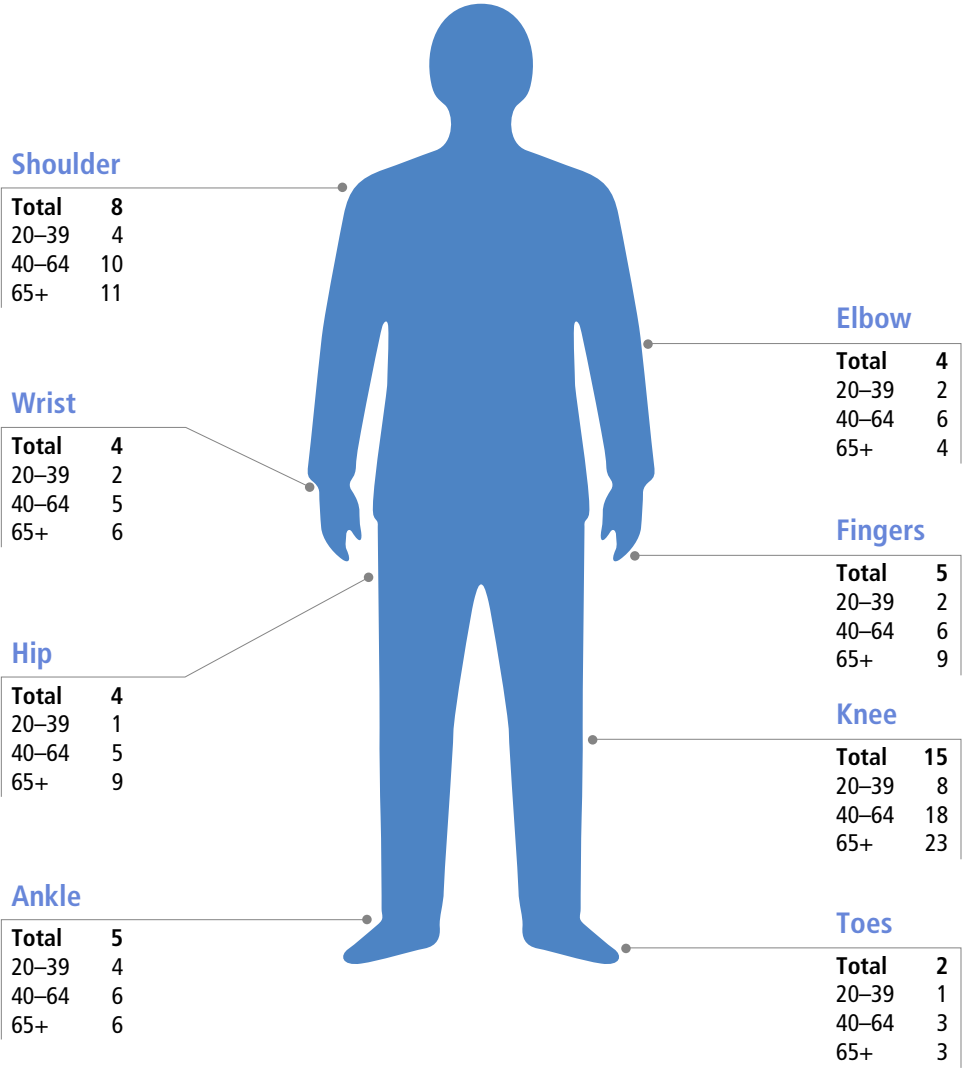


Prevalence of joint pain in the past month among adults, by body weight and race/ethnicity



The knee is the most common site of joint pain regardless of age or gender. This is followed by the shoulder for men aged 40 years and older.

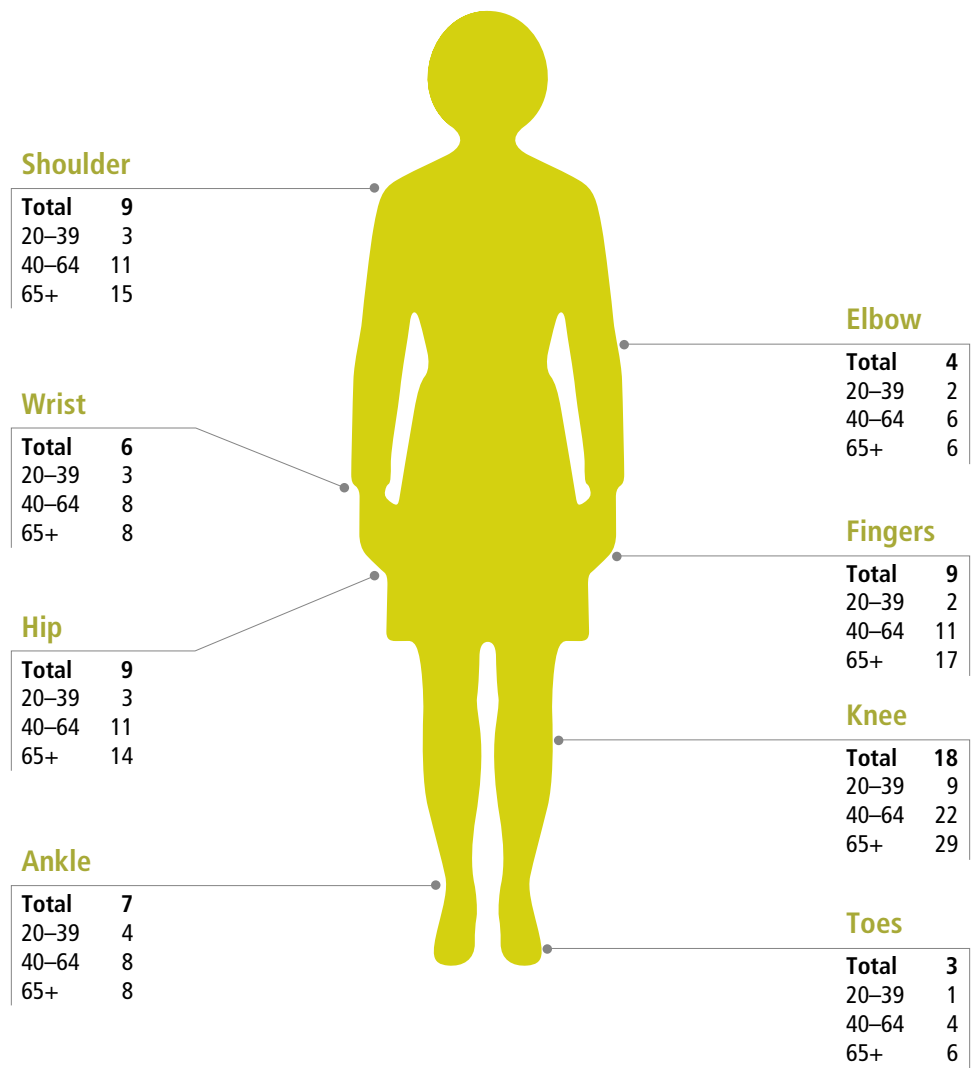
Prevalence of joint pain at specific body sites among men aged 20 years and older by age groups



Percent
Source: NHIS 2007

After the knee, the fingers are the most common site of joint pain for women aged 65 years and older.

Prevalence of joint pain at specific body sites among women aged 20 years and older by age groups



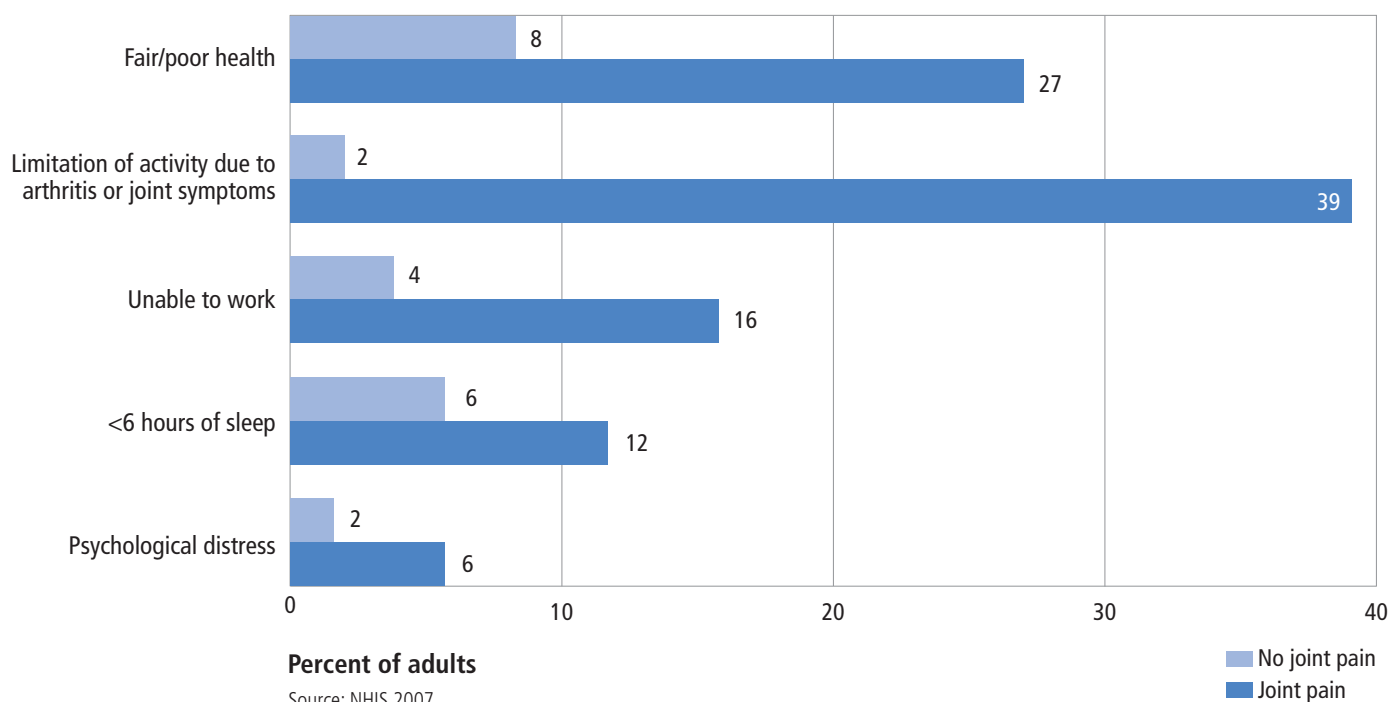
Percent

Source: NHIS 2007

Joint pain and health status

Joint pain is associated with substantial activity limitation, work disability, and reduced quality of life. Adults with joint pain are more than 3 times as likely to report fair/poor health than those with no joint pain (27% vs. 8%, respectively), 20 times more likely to report arthritis-attributable activity limitations, 4 times as likely to report being unable to work, twice as likely to report reduced sleep (<6 hours per day), and 3 times more likely to report psychological distress.

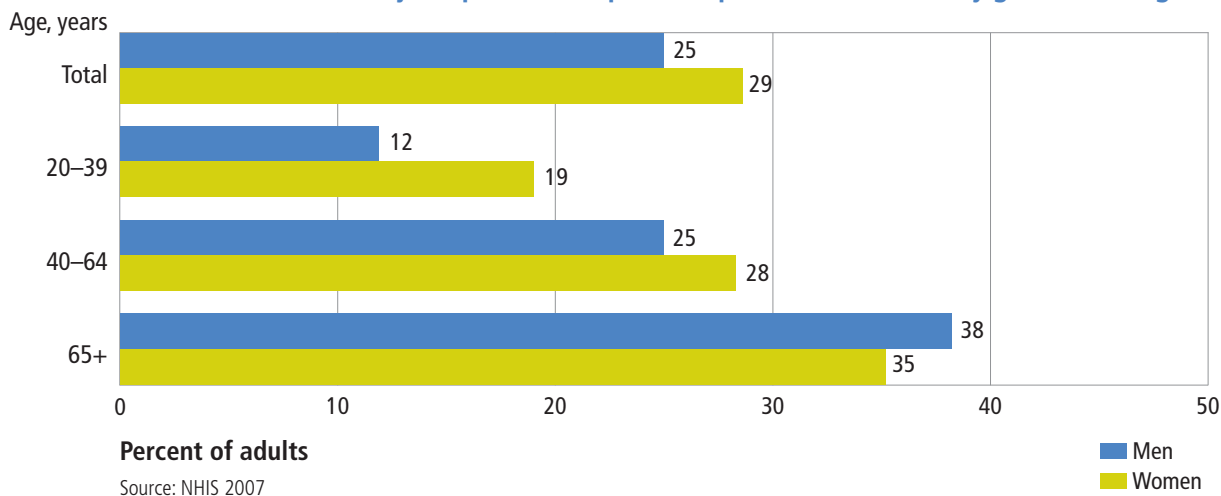
Prevalence of selected health status indicators among adults with or without joint pain



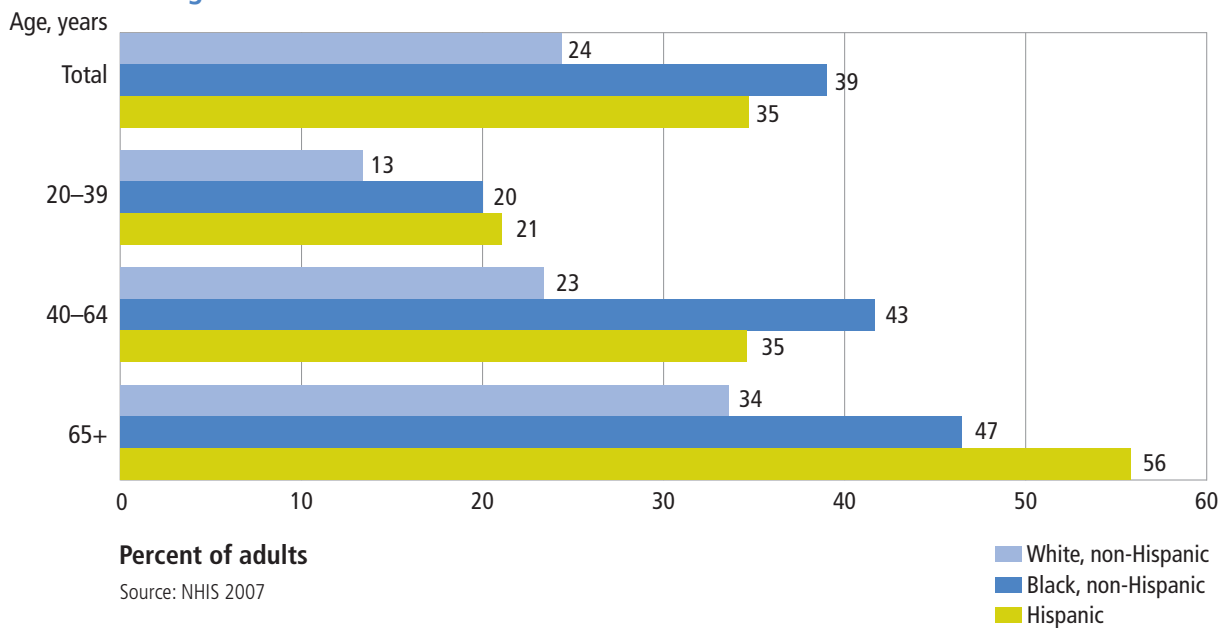
The burden of pain among adults in the United States

Over one-half of Hispanic older adults with joint pain report fair or poor health status (56%).

Percent of adults with joint pain who report fair/poor health status, by gender and age



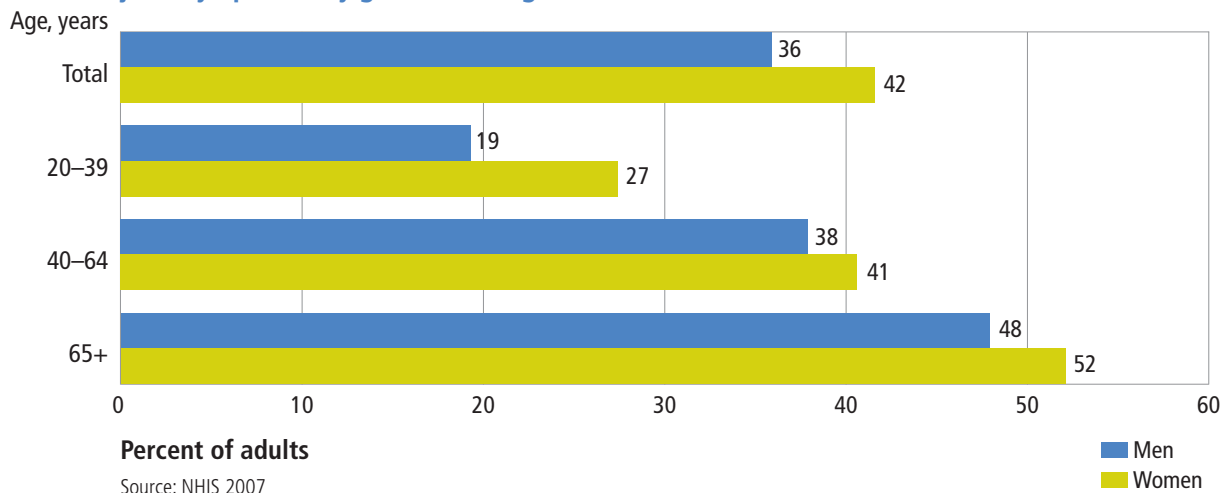
Percent of adults with joint pain who report fair/poor health status, by race/ethnicity and age



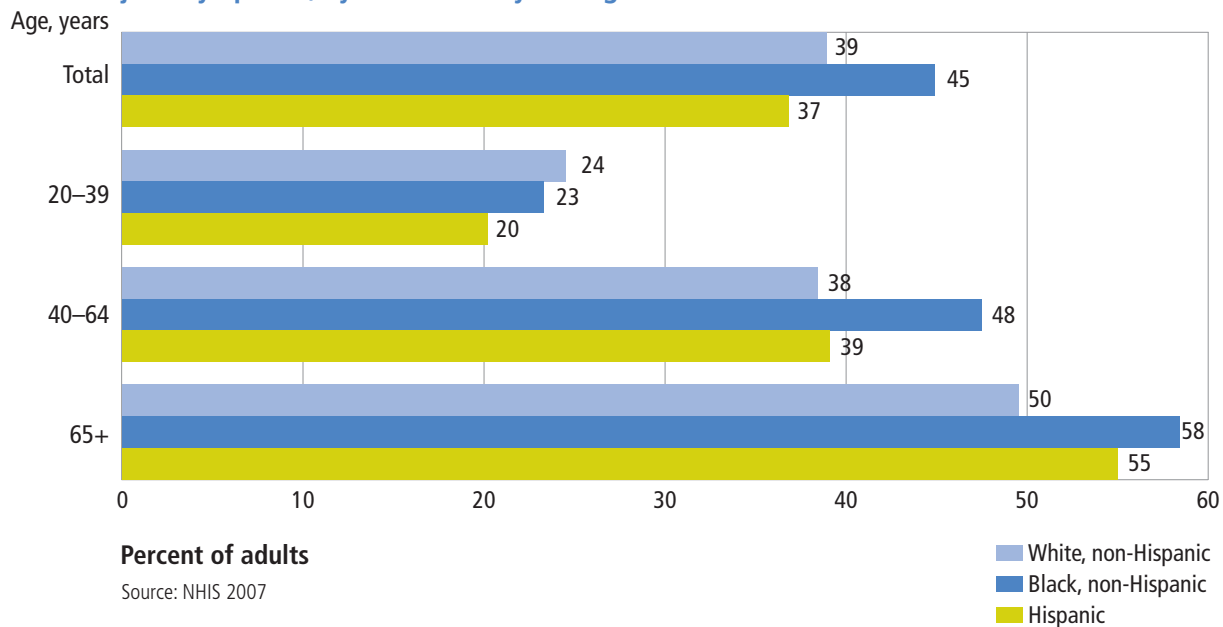
The burden of pain among adults in the United States

About half of all older adults with joint pain report arthritis-attributable activity limitations.

Percent of adults with joint pain who report activity limitations because of arthritis or joint symptoms, by gender and age



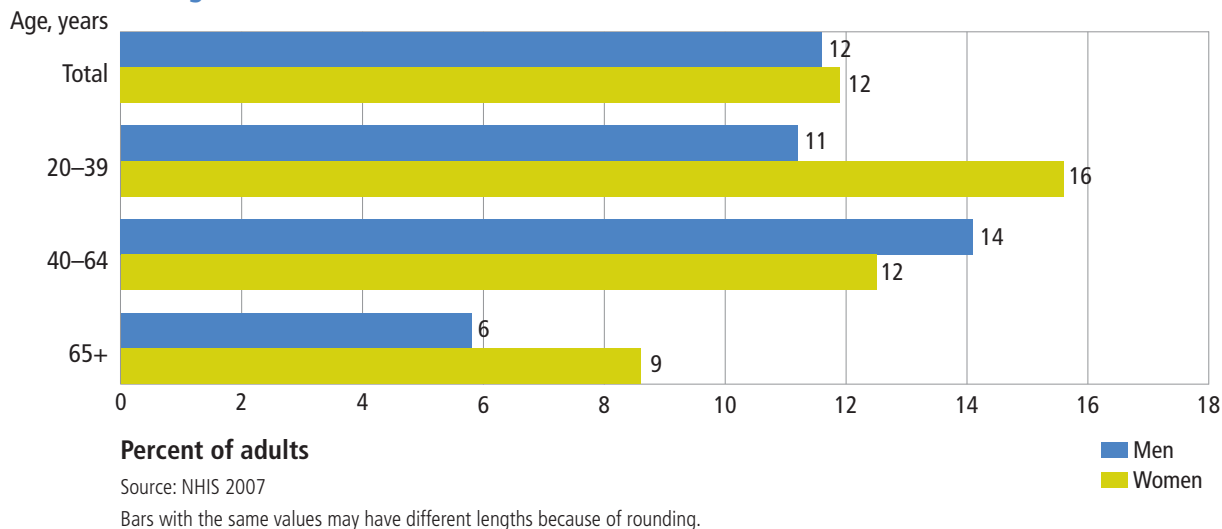
Percent of adults with joint pain who report activity limitations because of arthritis or joint symptoms, by race/ethnicity and age



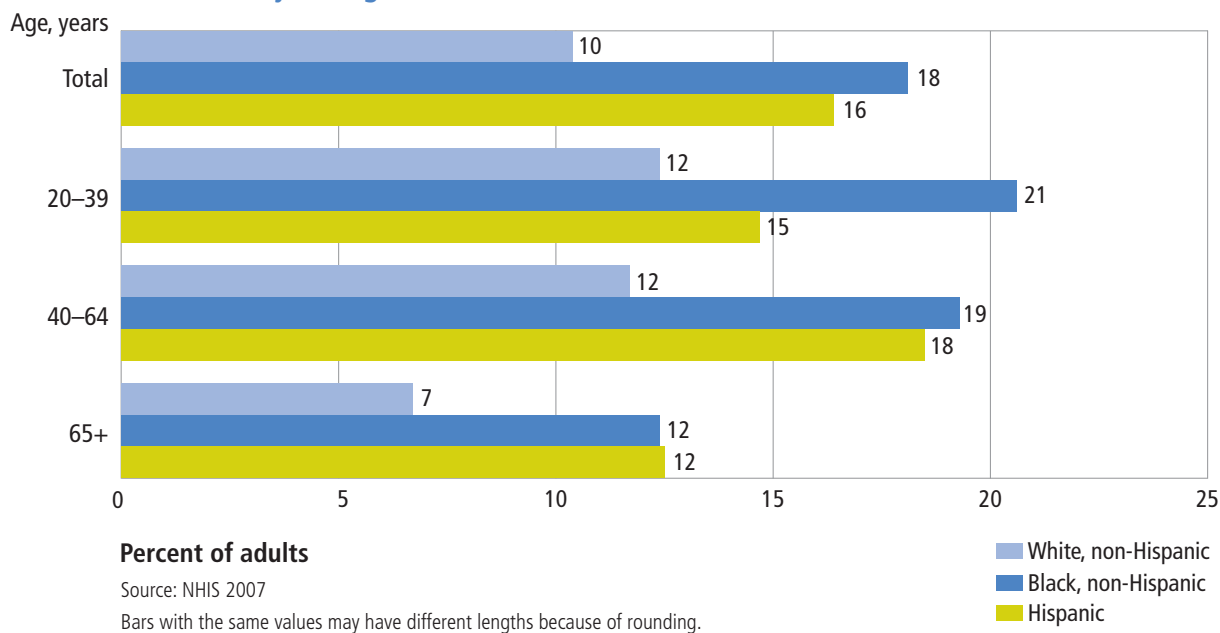
The burden of pain among adults in the United States

More younger adults with joint pain report reduced daily sleep hours (11–16%) than older adults with joint pain (6–9%).

Percent of adults with joint pain who report less than 6 usual hours of sleep, by gender and age



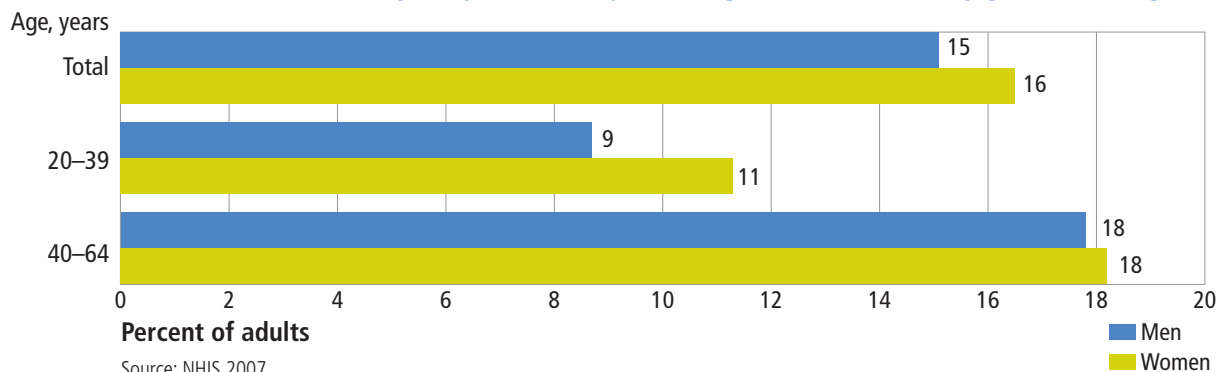
Percent of adults with joint pain who report less than 6 usual hours of sleep, by race/ethnicity and age



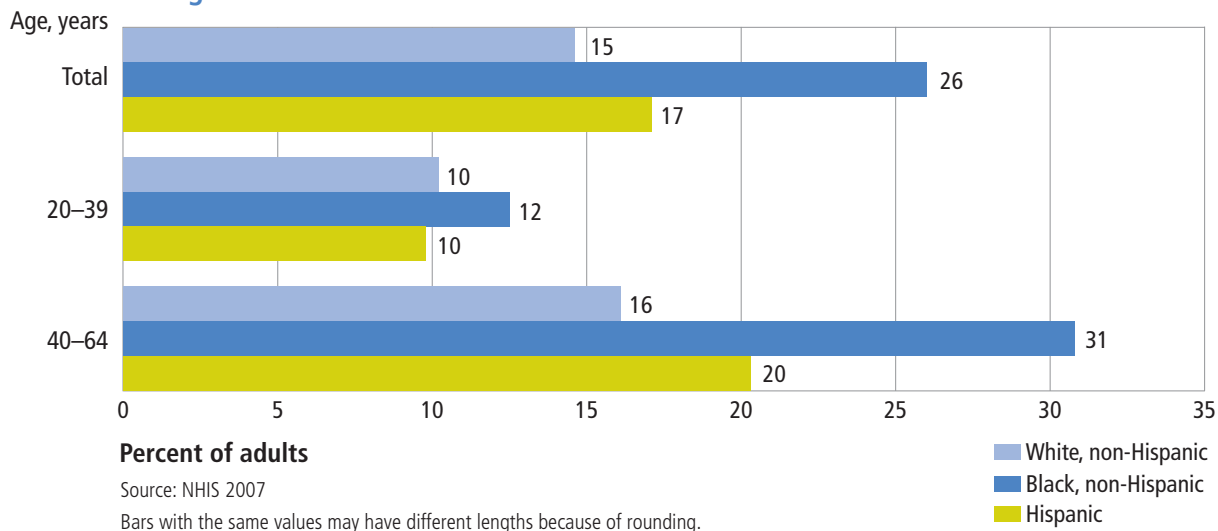
The burden of pain among adults in the United States

Nearly one-third of black, non-Hispanic adults aged 40–64 years with joint pain report being unable to work.

Percent of adults with joint pain who report being unable to work, by gender and age



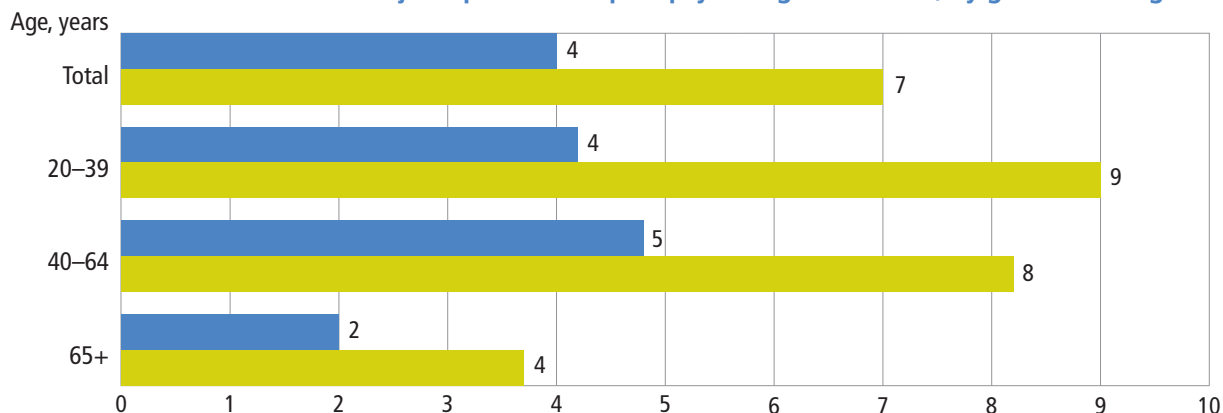
Percent of adults with joint pain who report being unable to work, by race/ethnicity and age



The burden of pain among adults in the United States

More young women with joint pain experience psychological distress than young men with joint pain (9% vs. 4%, respectively).

Percent of adults with joint pain who report psychological distress, by gender and age



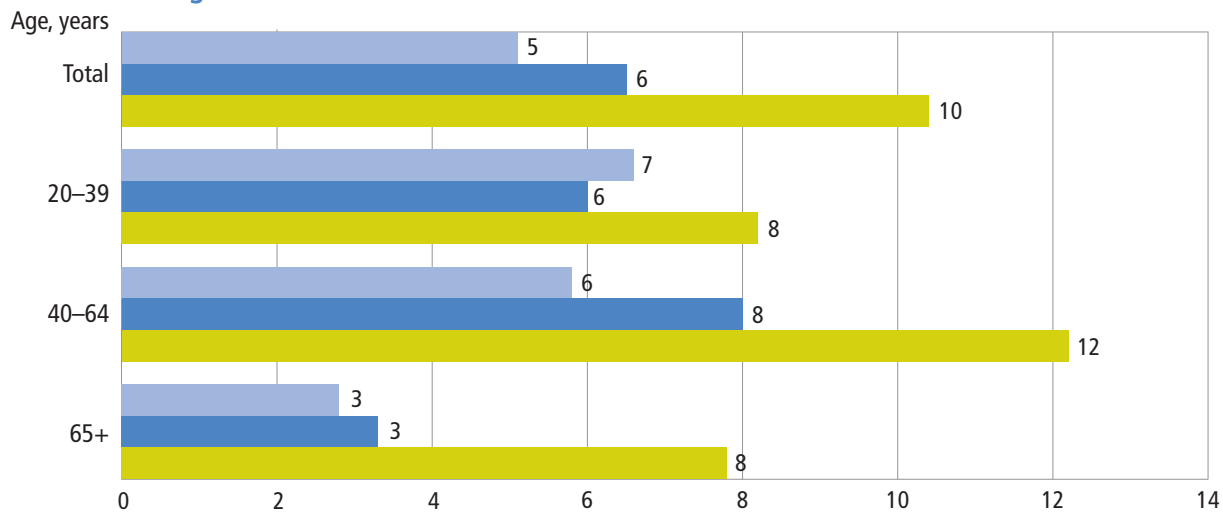
Percent of adults

Source: NHIS 2007

Bars with the same values may have different lengths because of rounding.

Men
Women

Percent of adults with joint pain who report psychological distress, by race/ethnicity and age



Percent of adults

Source: NHIS 2007

Bars with the same values may have different lengths because of rounding.

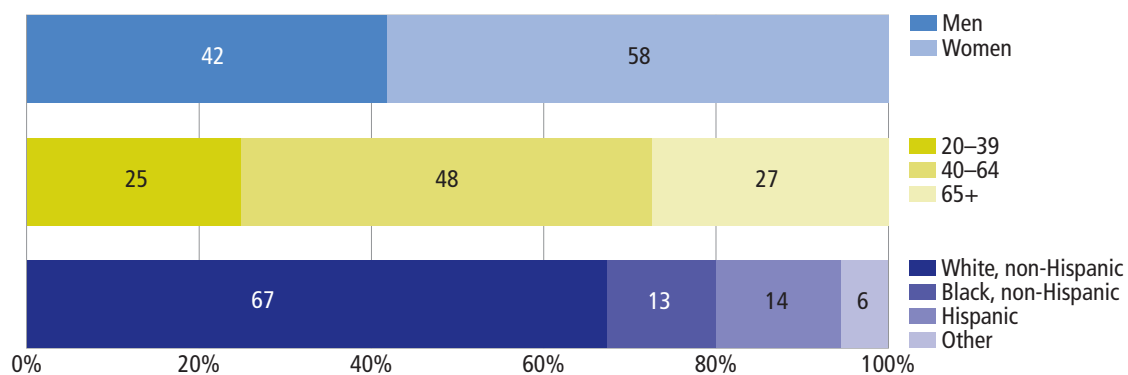
White, non-Hispanic
Black, non-Hispanic
Hispanic

Joint pain and health care utilization

In 2006, adults made over 11 million physician office visits with a diagnosis of joint pain, over 1.1 million outpatient hospital visits, about 1.5 million emergency department visits, and 177 thousand inpatient hospitalizations.

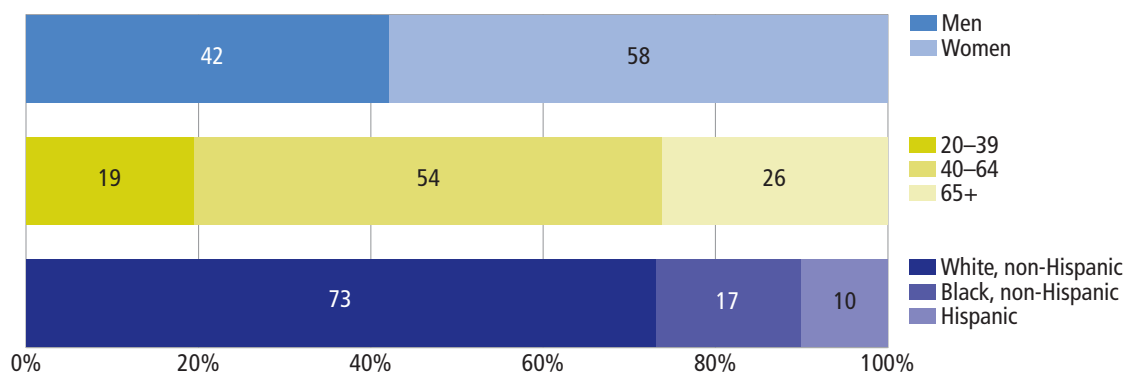
The majority of health care visits for joint pain were by women, adults aged 40–64 years, and white, non-Hispanic adults.

Percent of physician office visits among adults with a diagnosis of joint pain



Source: NAMCS 2006

Percent of outpatient hospital visits among adults with a diagnosis of joint pain

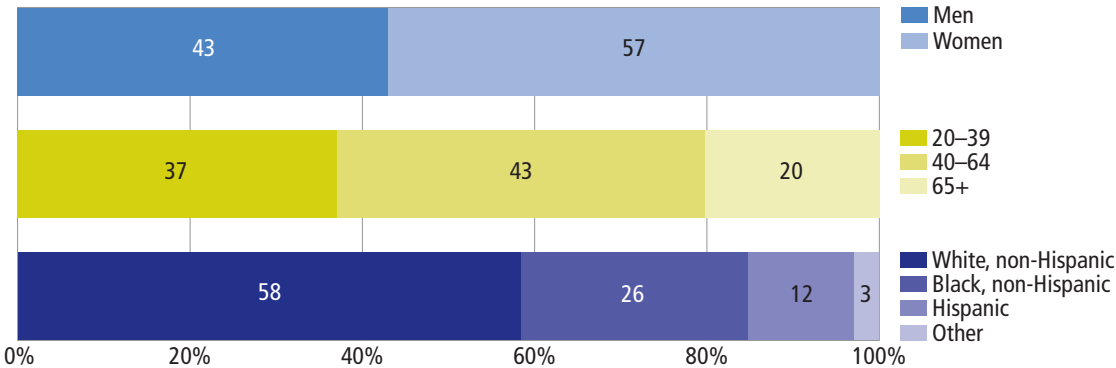


Source: NHAMCS 2006

Totals may not add to 100% because of rounding.

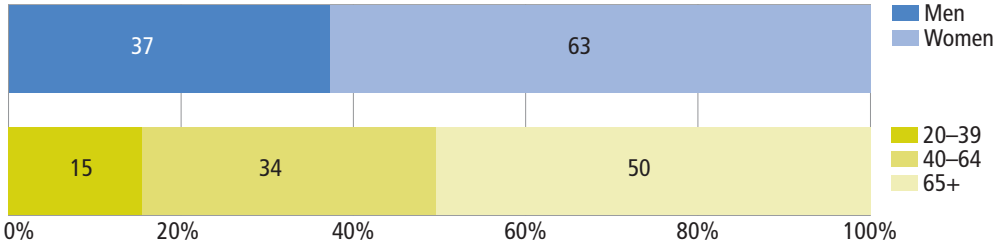
The burden of pain among adults in the United States

Percent of emergency department visits among adults with a diagnosis of joint pain



Source: NHAMCS 2006
Totals may not add to 100% because of rounding.

Percent of inpatient hospitalizations among adults with a diagnosis of joint pain



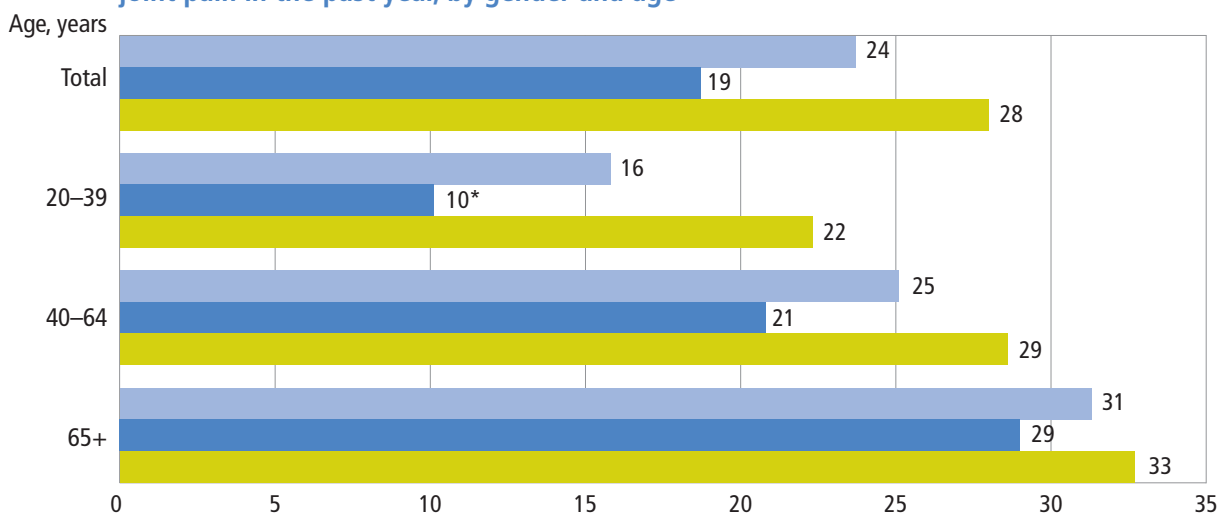
Source: NHDS 2006
Totals may not add to 100% because of rounding.

Joint pain and analgesic drug use

24% of adults with joint pain report prescription analgesic drug use in the past month.

22% of adults with joint pain report using a non-prescription analgesic or certain non-narcotic prescription analgesics nearly every day for a month or longer.

Prevalence of prescription analgesic drug use in the past month among adults with joint pain in the past year, by gender and age



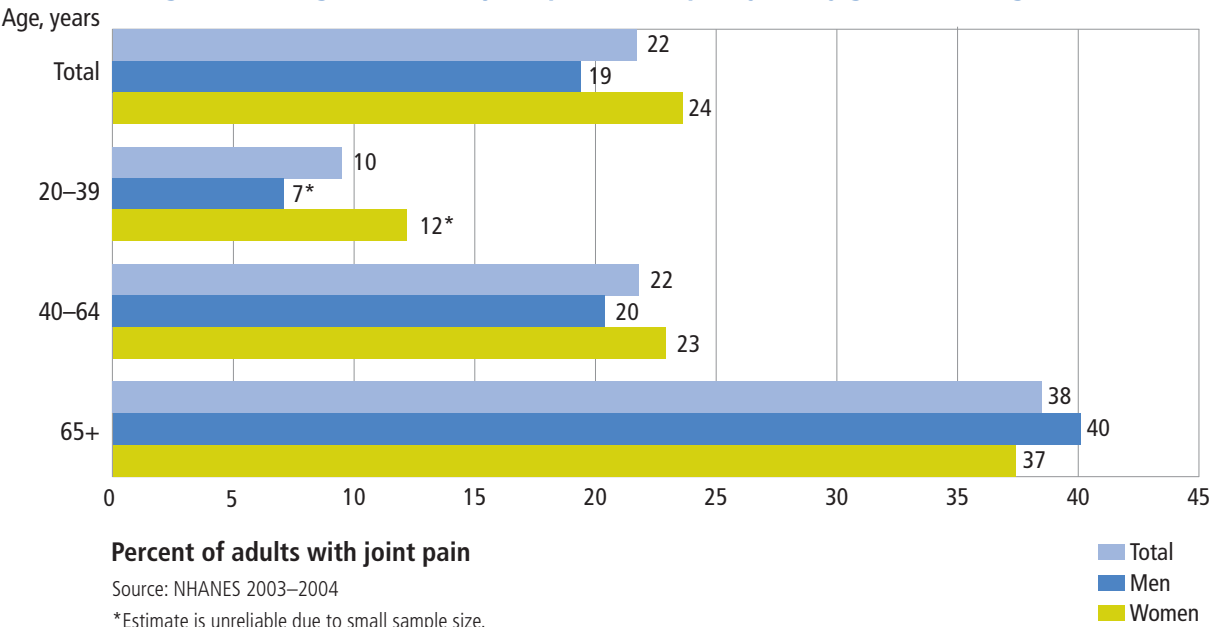
Percent of adults with joint pain

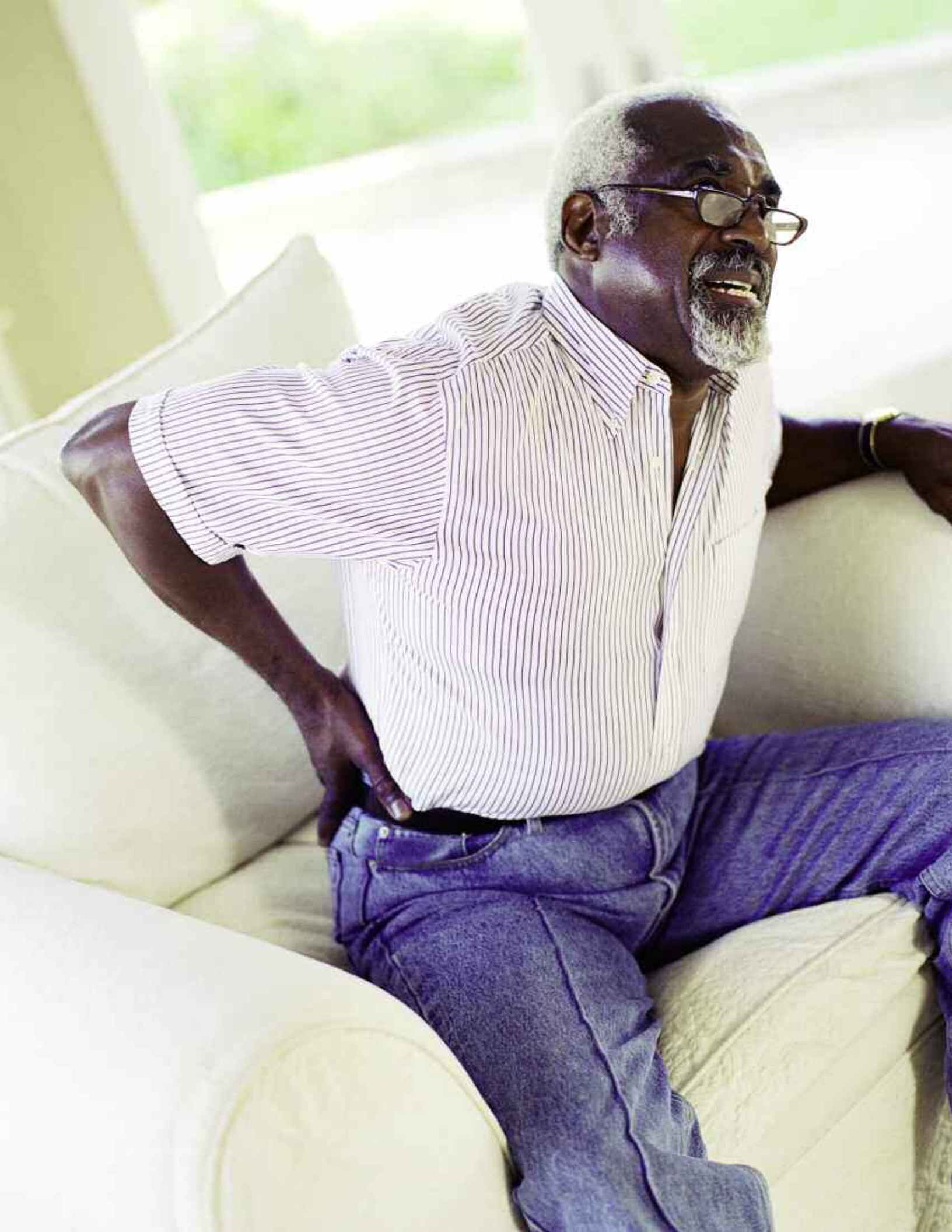
Source: NHANES 2003–2004

*Estimate is unreliable due to small sample size.

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Prevalence of frequent monthly use of non-prescription and select prescription analgesics among adults with joint pain in the past year, by gender and age

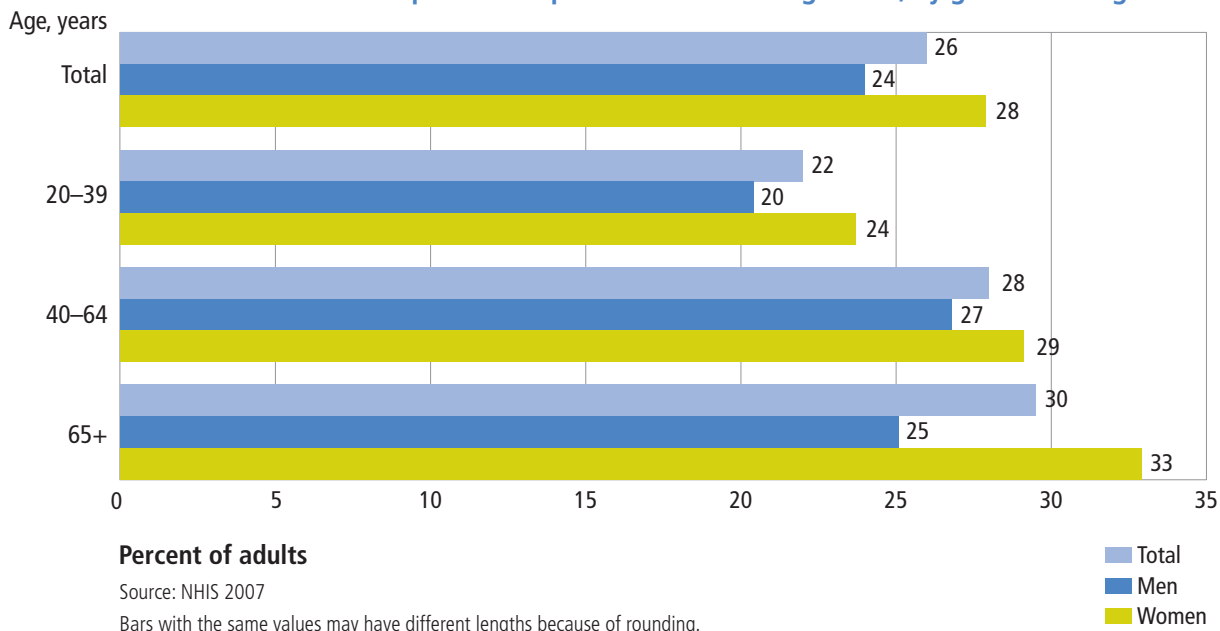




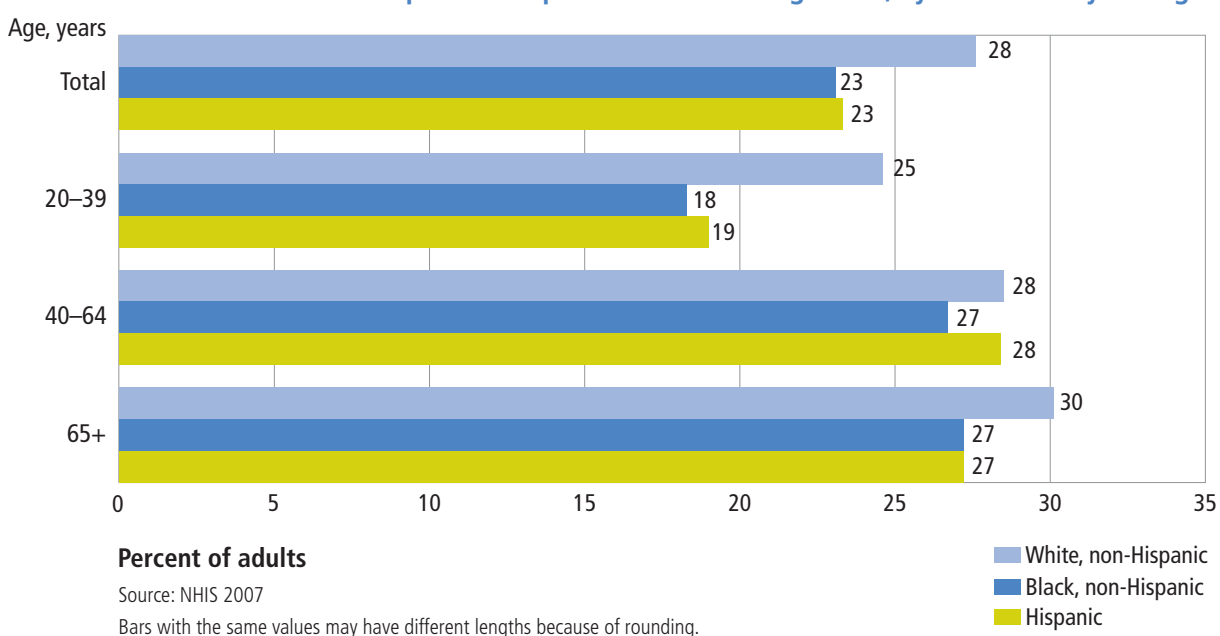
Low back pain

Over one-quarter of adults report low back pain in the past 3 months (26%). One in 3 older women and 1 in 4 older men report low back pain.

Prevalence of low back pain in the past 3 months among adults, by gender and age



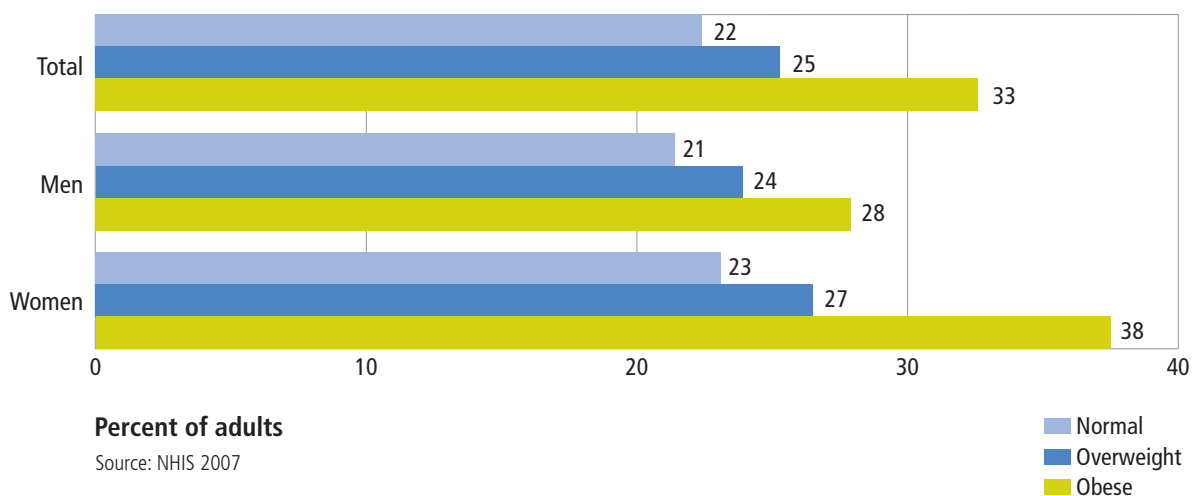
Prevalence of low back pain in the past 3 months among adults, by race/ethnicity and age



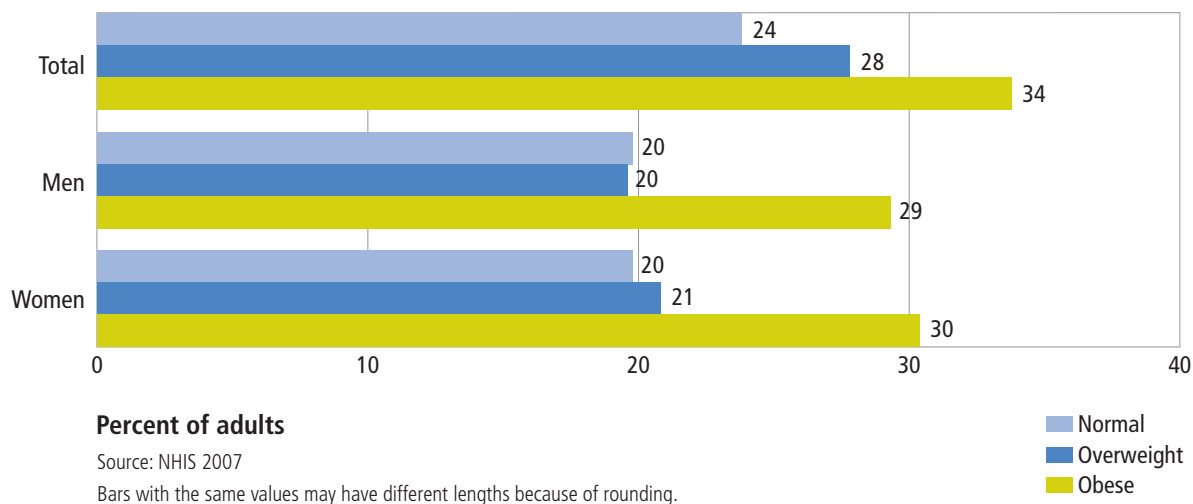
The burden of pain among adults in the United States

Low back pain increases as body weight increases—about 1 in 5 normal weight adults, 1 in 4 overweight adults, and 1 in 3 obese adults report low back pain.

Prevalence of low back pain in the past 3 months among adults, by body weight and gender



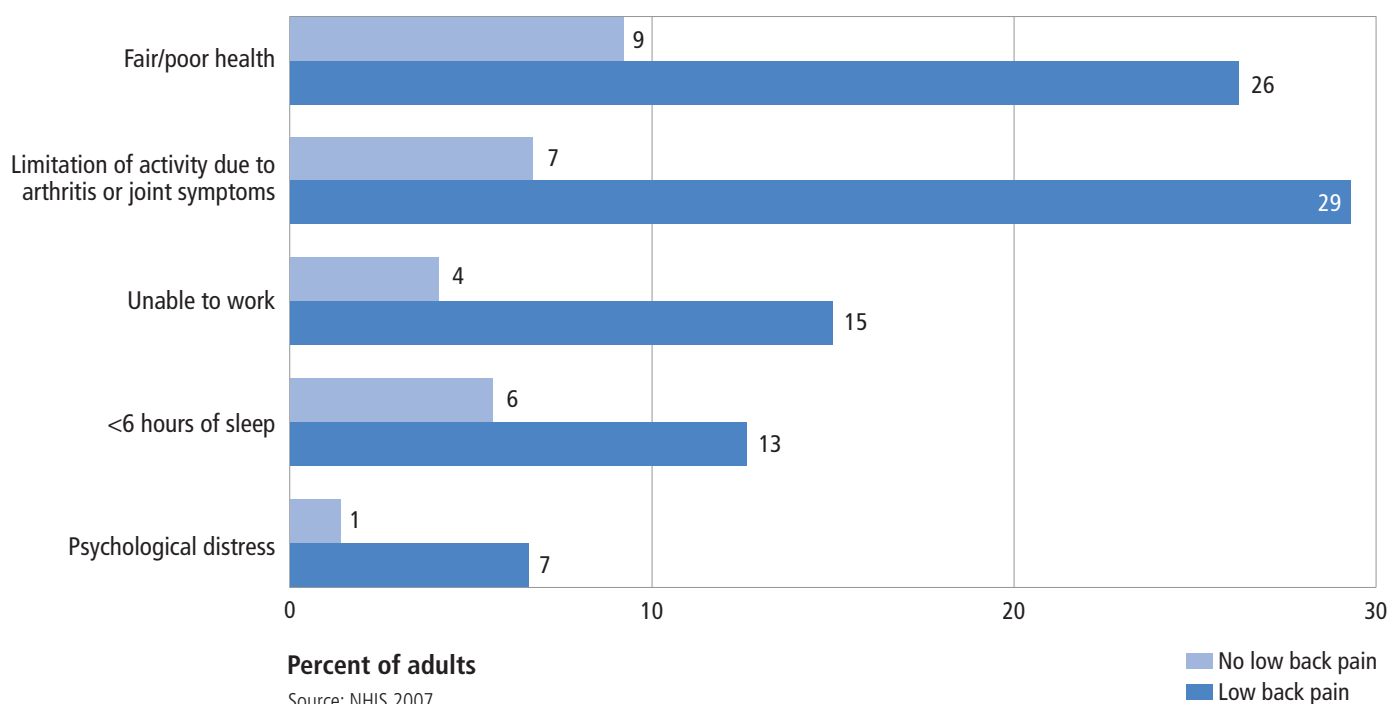
Prevalence of low back pain in the past 3 months among adults, by body weight and race/ethnicity



Low back pain and health status

Adults with low back pain are nearly 3 times as likely to report fair or poor health than those without back pain (26% vs. 9%, respectively), more than 4 times as likely to report arthritis-attributable activity limitations, 4 times as likely to be unable to work, twice as likely to report reduced sleep (<6 hours per day), and 7 times more likely to report psychological distress.

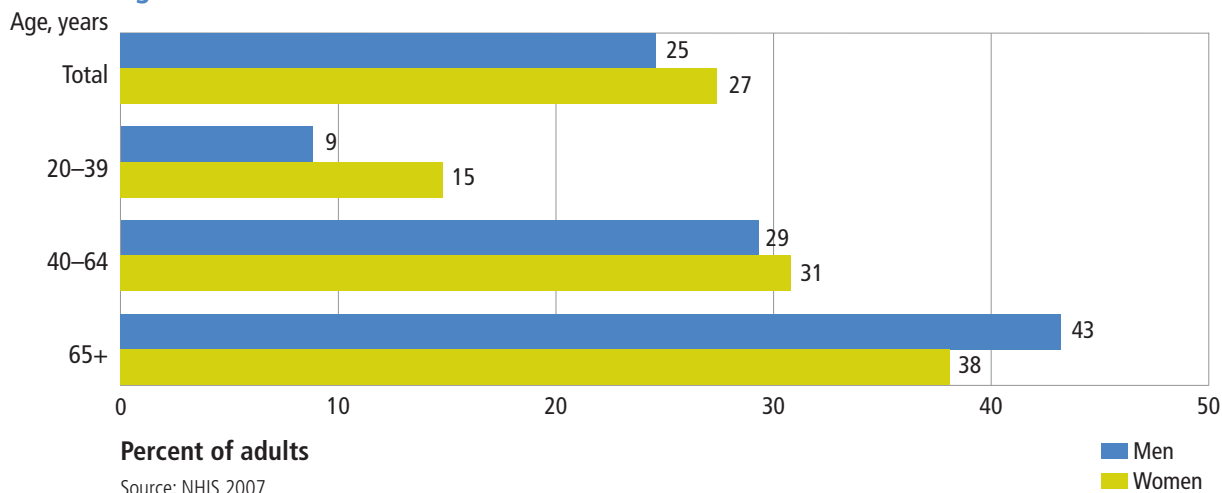
Prevalence of selected health status indicators among adults with or without low back pain



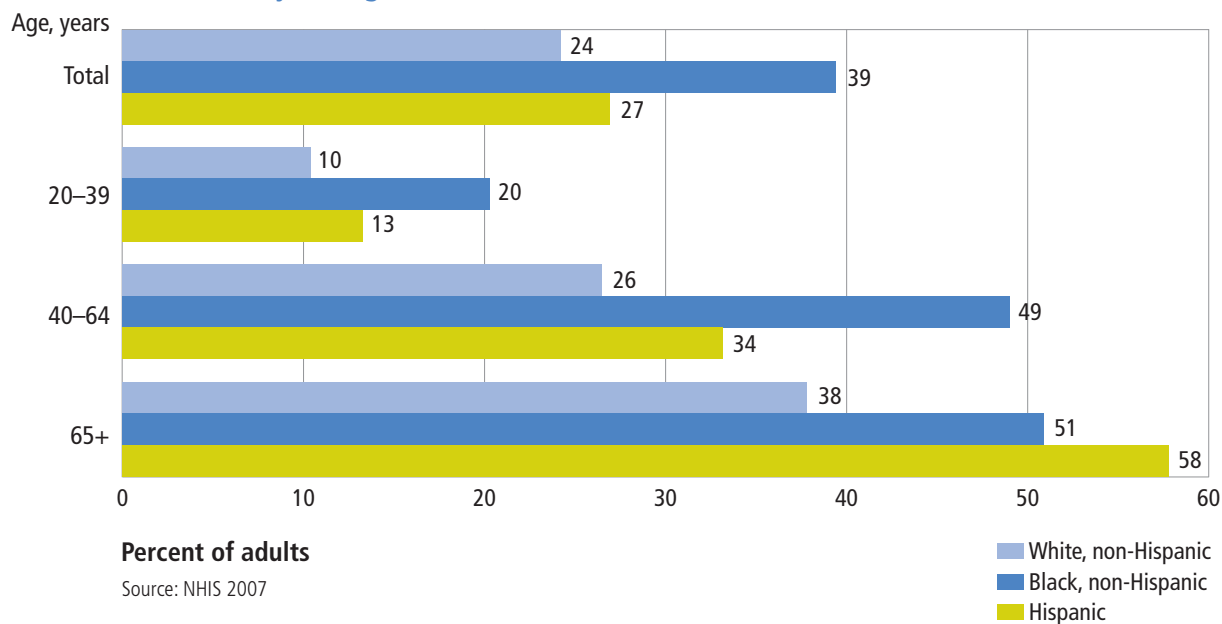
The burden of pain among adults in the United States

Self-rated fair or poor health is reported by about one-half of black, non-Hispanic adults aged 40 years and older and 58% of Hispanic adults aged 65 years and older with low back pain.

Percent of adults with low back pain who report fair/poor health status, by gender and age



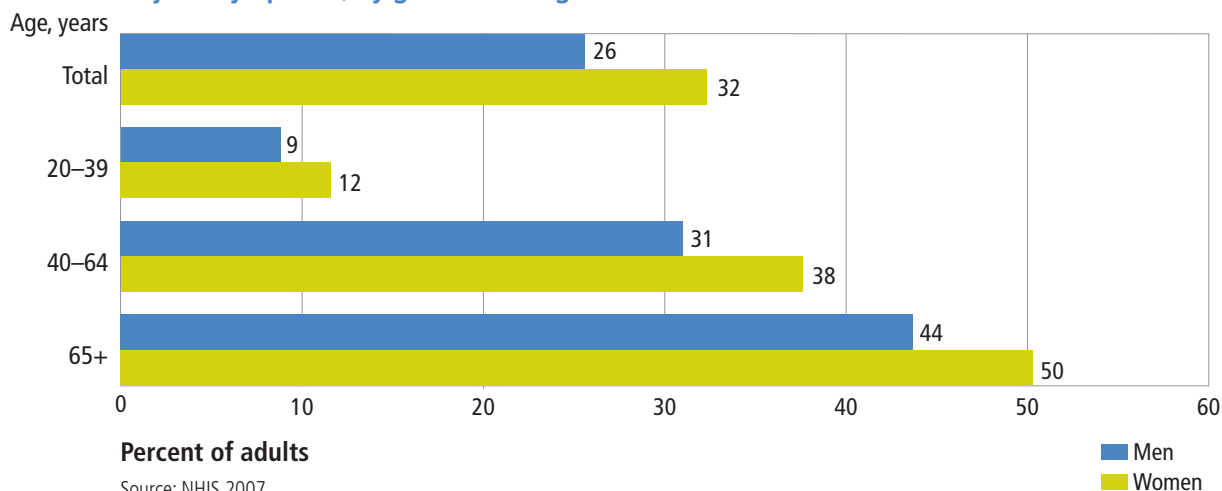
Percent of adults with low back pain who report fair/poor health status, by race/ethnicity and age



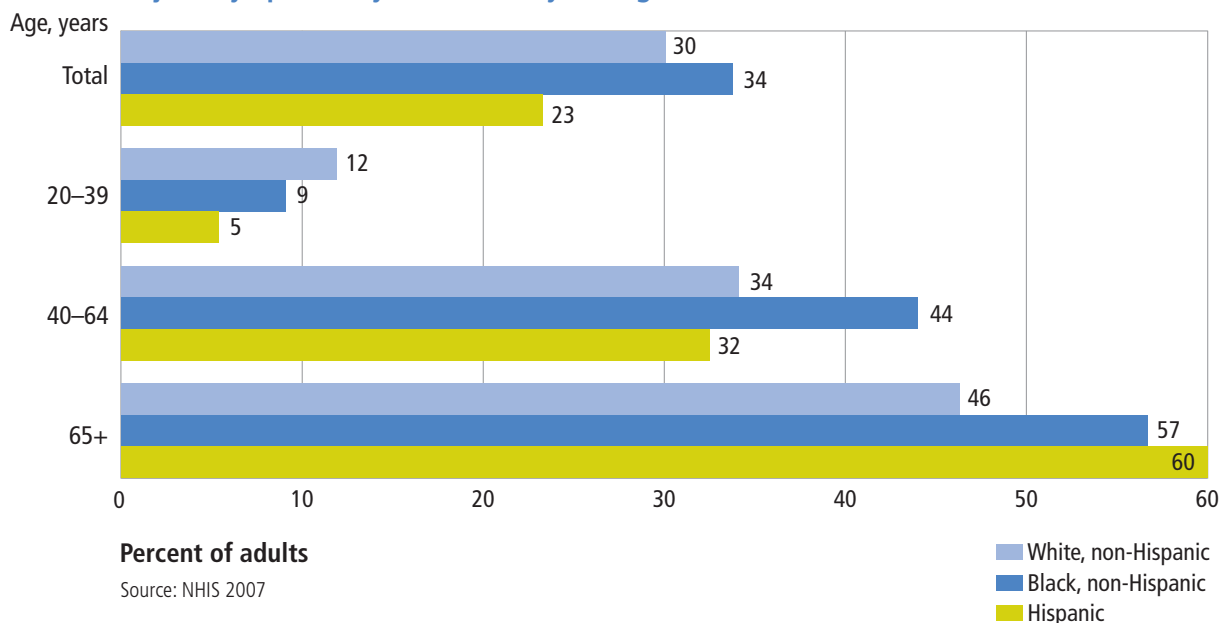
The burden of pain among adults in the United States

Arthritis-attributable activity limitations are reported by 50% of older women and about 60% of older black, non-Hispanic, and Hispanic adults with low back pain.

Percent of adults with low back pain who report activity limitations because of arthritis or joint symptoms, by gender and age



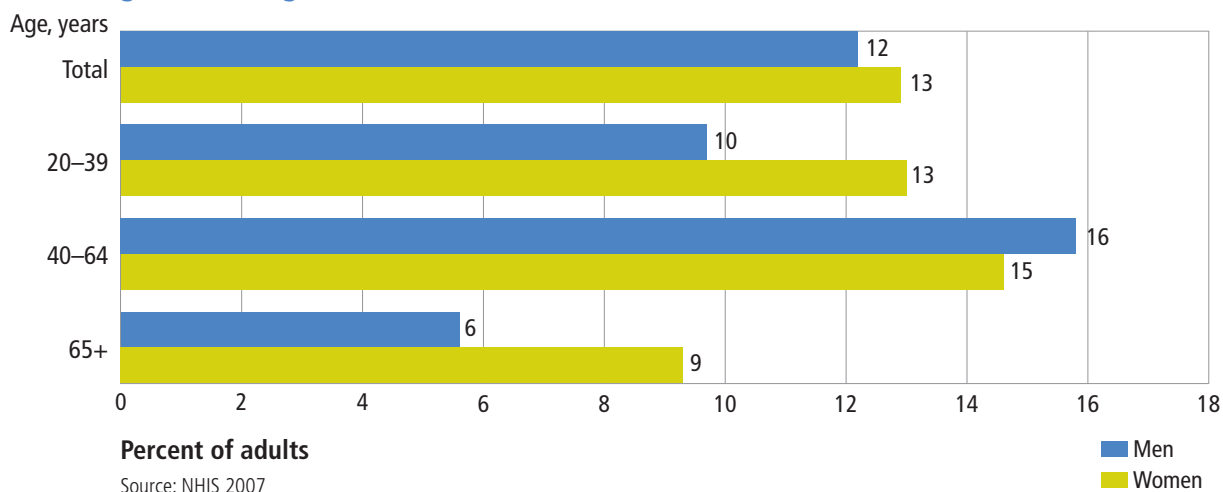
Percent of adults with low back pain who report activity limitations because of arthritis or joint symptoms, by race/ethnicity and age



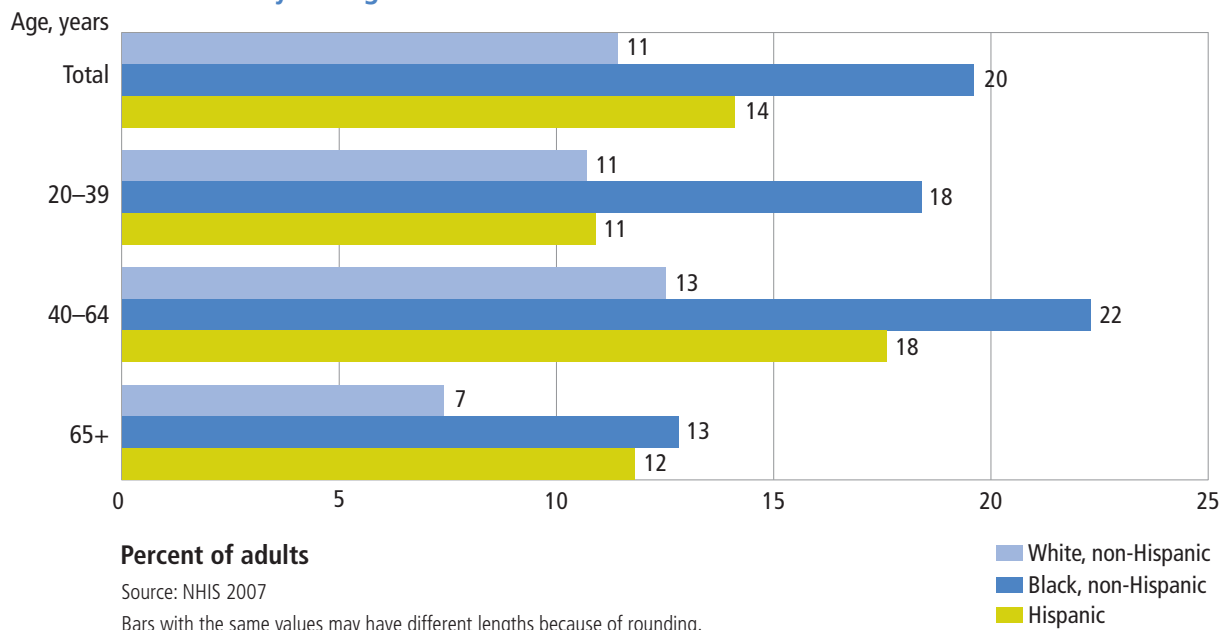
The burden of pain among adults in the United States

Reduced daily sleep hours are reported by 1 in 5 black, non-Hispanic adults with low back pain, 1 in 7 Hispanic adults, and 1 in 9 white, non-Hispanic adults.

Percent of adults with low back pain who report less than 6 usual hours of sleep, by gender and age



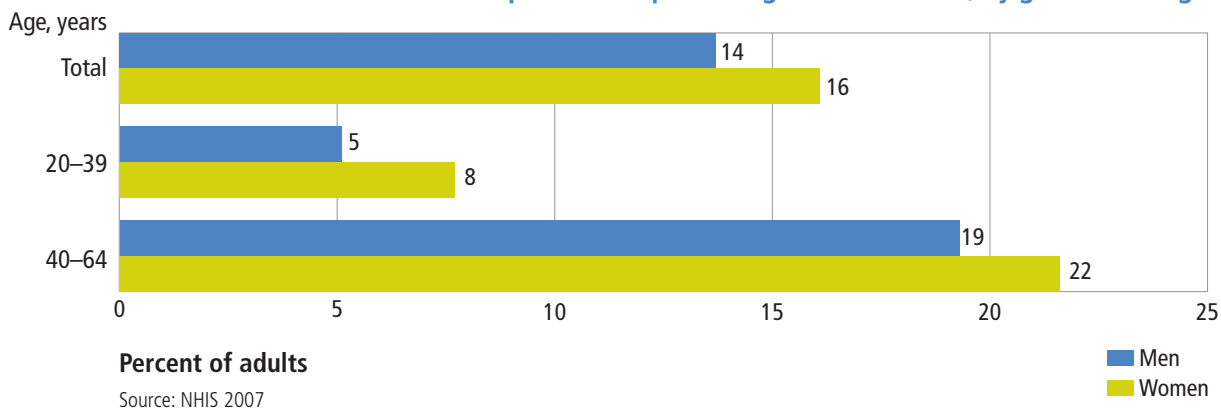
Percent of adults with low back pain who report less than 6 usual hours of sleep, by race/ethnicity and age



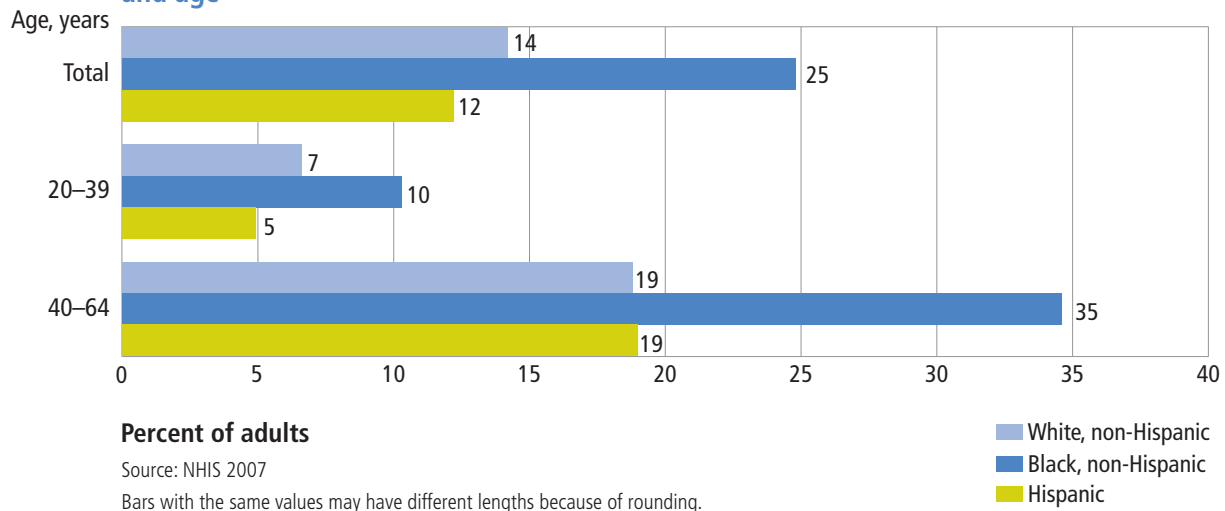
The burden of pain among adults in the United States

About 1 in 5 adults aged 40–64 years with low back pain report being unable to work regardless of gender or race-ethnicity. The exception is black, non-Hispanic adults aged 40–64 years, where over one-third of those with low back pain report being unable to work (35%).

Percent of adults with low back pain who report being unable to work, by gender and age



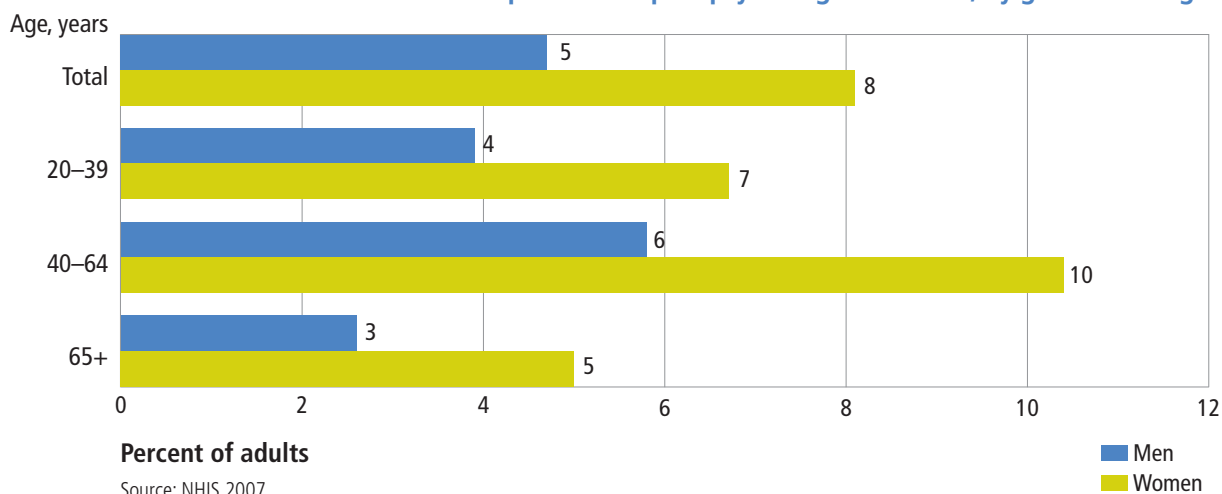
Percent of adults with low back pain who report being unable to work, by race/ethnicity and age



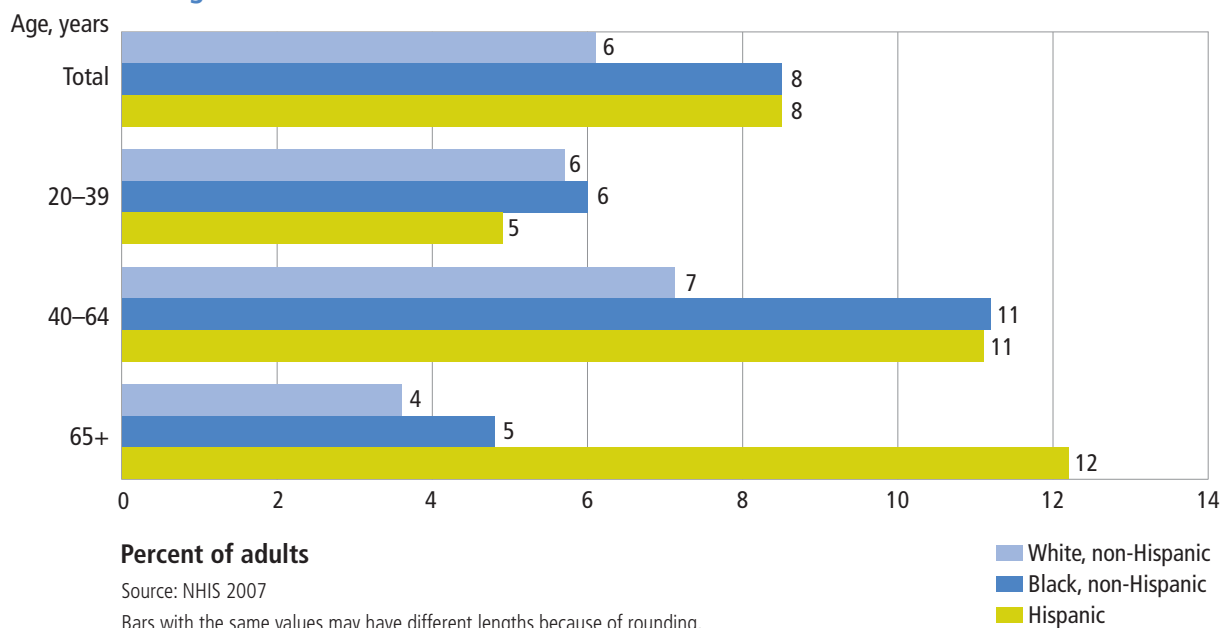
The burden of pain among adults in the United States

Older Hispanic adults with low back pain are about 3 times more likely to report psychological distress (12%) than older white, non-Hispanic (4%) and black, non-Hispanic (5%) adults with low back pain.

Percent of adults with low back pain who report psychological distress, by gender and age



Percent of adults with low back pain who report psychological distress, by race/ethnicity and age

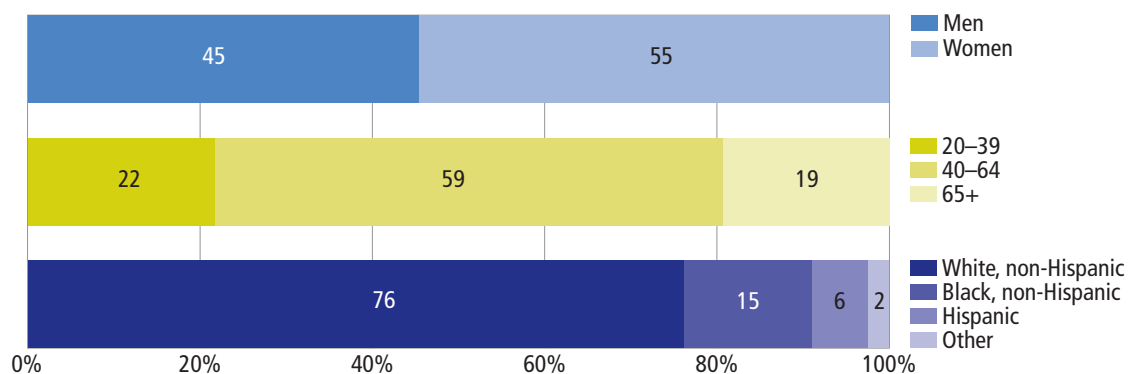


Low back pain and health care utilization

In 2006, adults made about 7 million physician office visits with a diagnosis of back pain, 762 thousand outpatient hospital visits, over 1.5 million emergency department visits, and 227 thousand hospitalizations.

The majority of health care visits for back pain were by women, adults aged 40–64 years, and white, non-Hispanic adults.

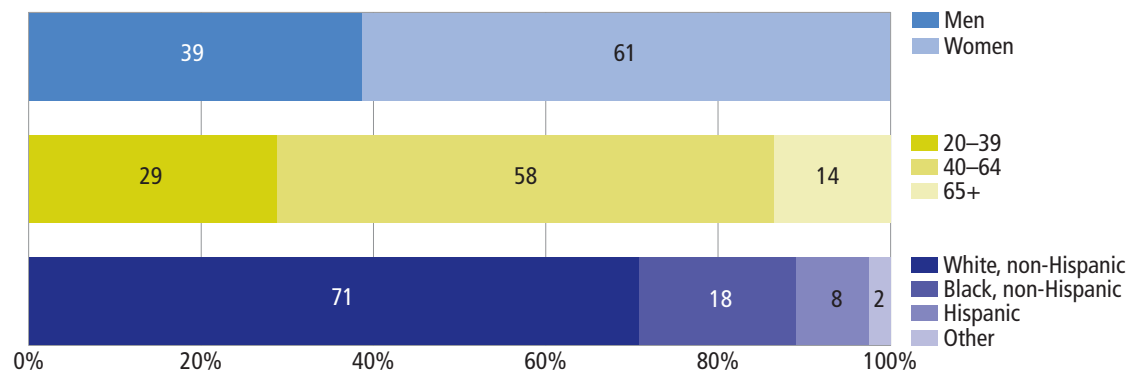
Percent of physician office visits among adults with a diagnosis of low back pain



Source: NAMCS 2006

Totals may not add to 100% because of rounding.

Percent of outpatient hospital visits among adults with a diagnosis of low back pain

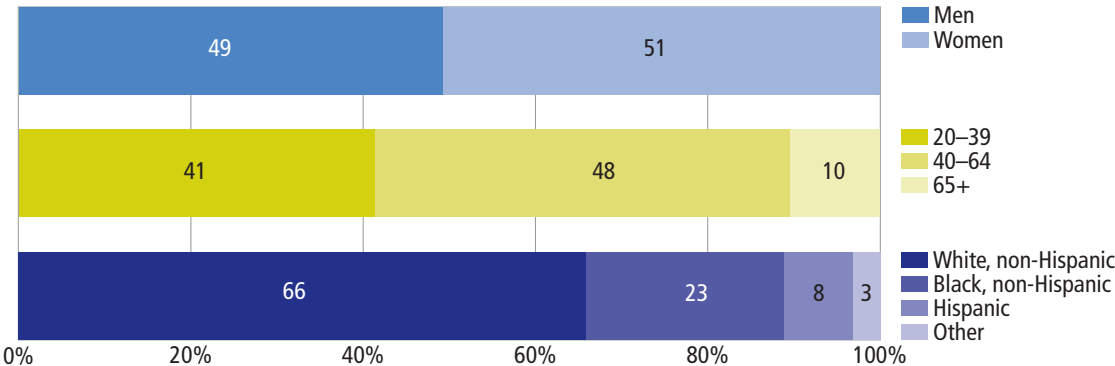


Source: NHAMCS 2006

Totals may not add to 100% because of rounding.

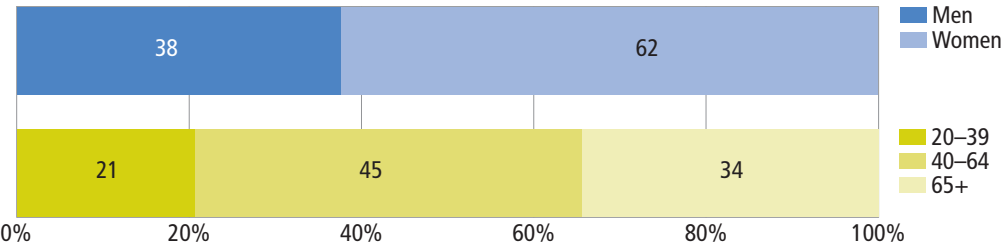
The burden of pain among adults in the United States

Percent of emergency department visits among adults with a diagnosis of low back pain



Source: NHAMCS 2006

Percent of inpatient hospitalizations among adults with a diagnosis of low back pain



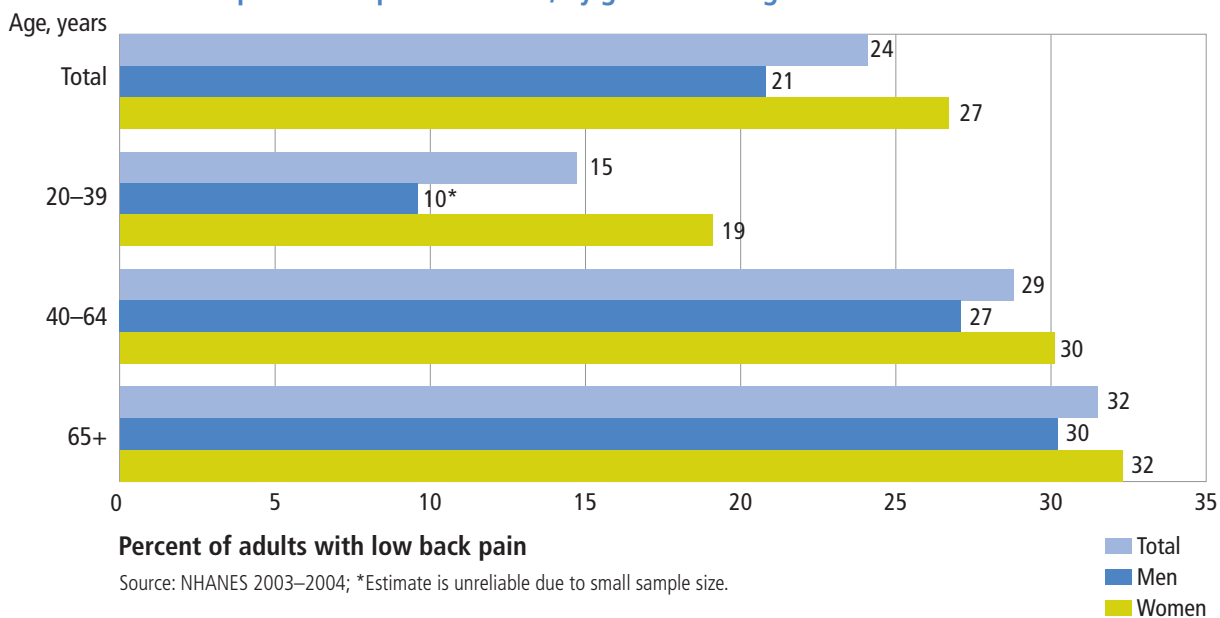
Source: NHDS 2006

Low back pain and analgesic drug use

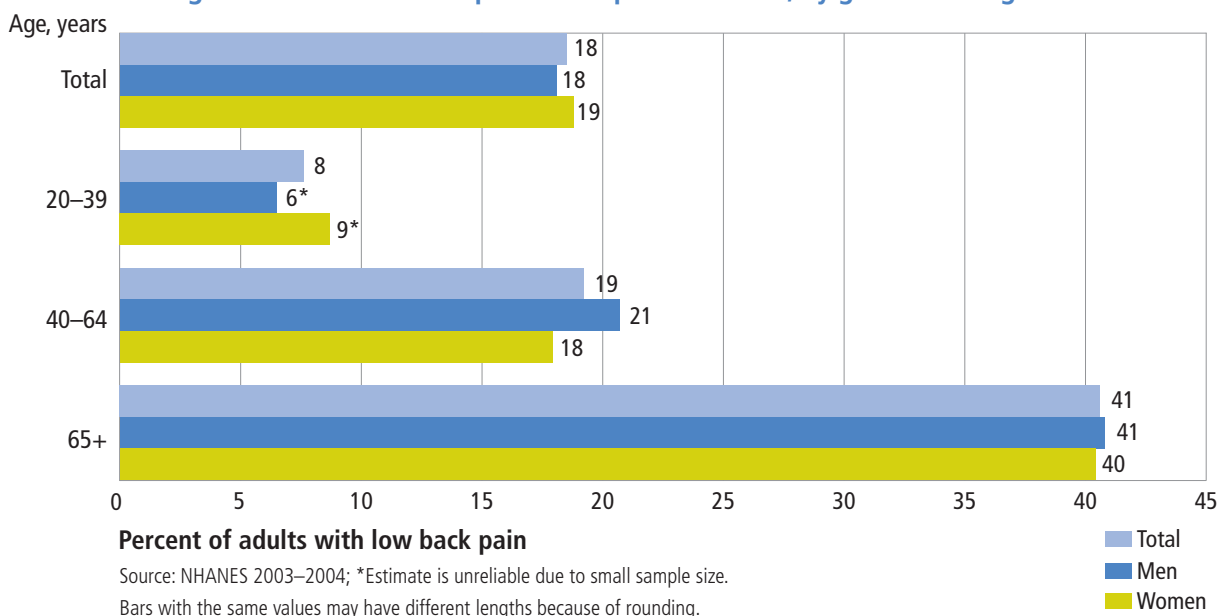
24% of adults with low back pain report prescription analgesic drug use in the past month.

18% of adults with low back pain report using a non-prescription analgesic or certain non-narcotic prescription analgesics nearly every day for a month or longer.

Prevalence of prescription analgesic drug use in the past month among adults with low back pain in the past 3 months, by gender and age



Prevalence of frequent monthly use of nonprescription and select prescription analgesics among adults with low back pain in the past 3 months, by gender and age

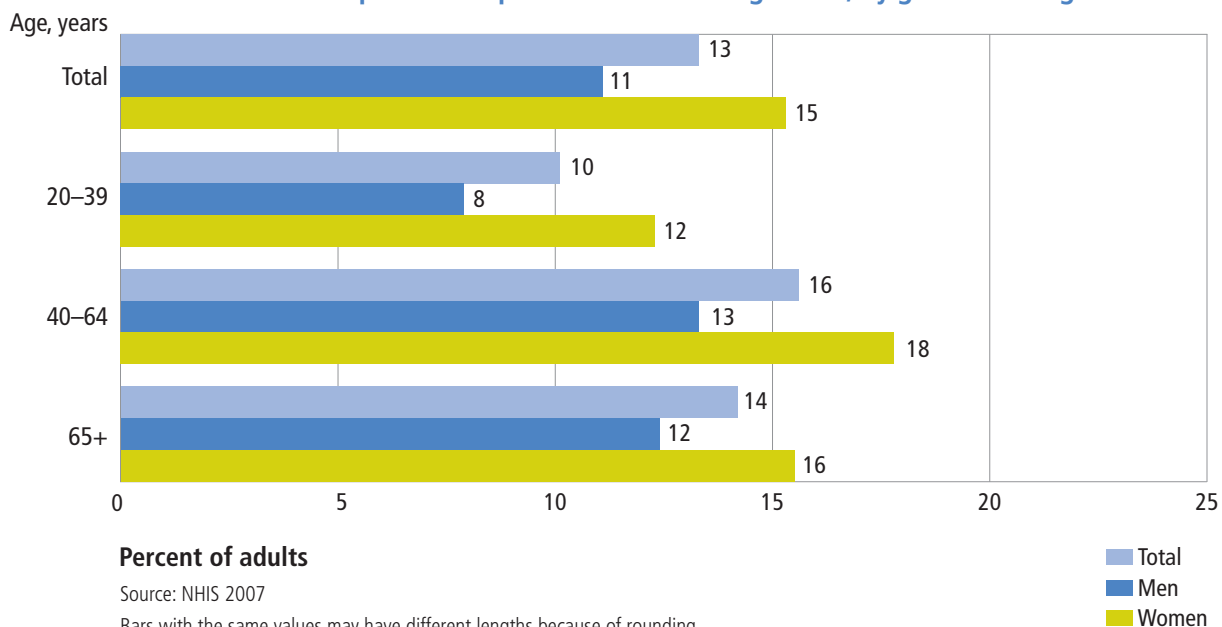




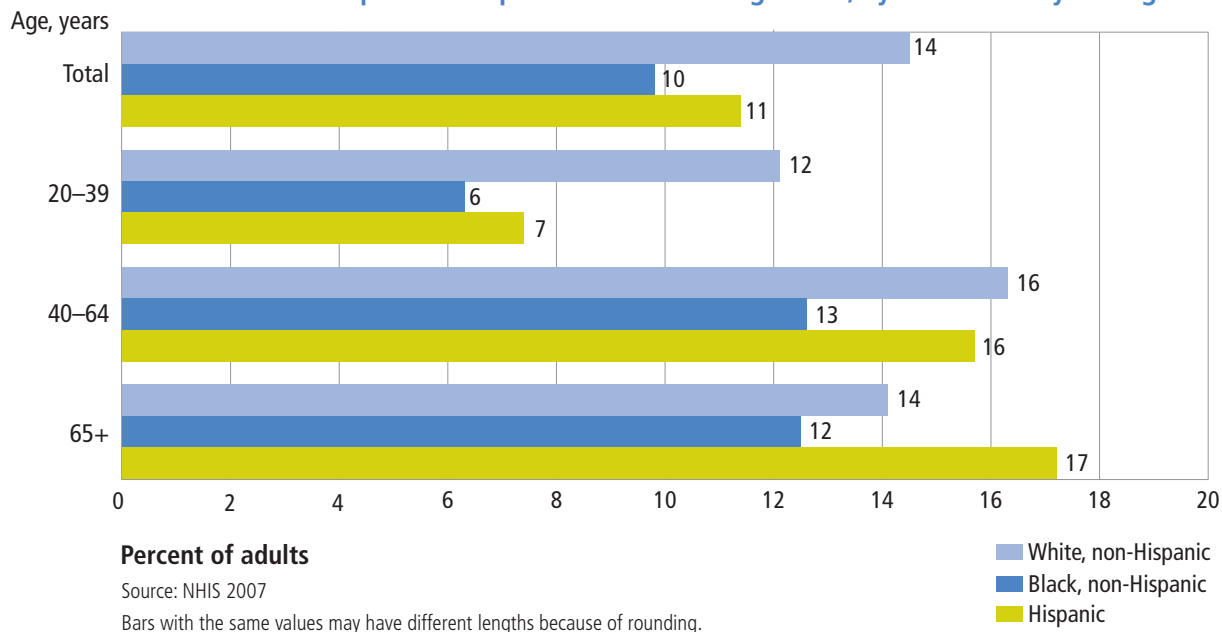
Neck pain

13% of adults report neck pain in the past 3 months. Neck pain is reported more often by women than men (15% vs. 11%, respectively) and white, non-Hispanic adults (14%) than black, non-Hispanic adults (10%) or Hispanic adults (11%).

Prevalence of neck pain in the past 3 months among adults, by gender and age



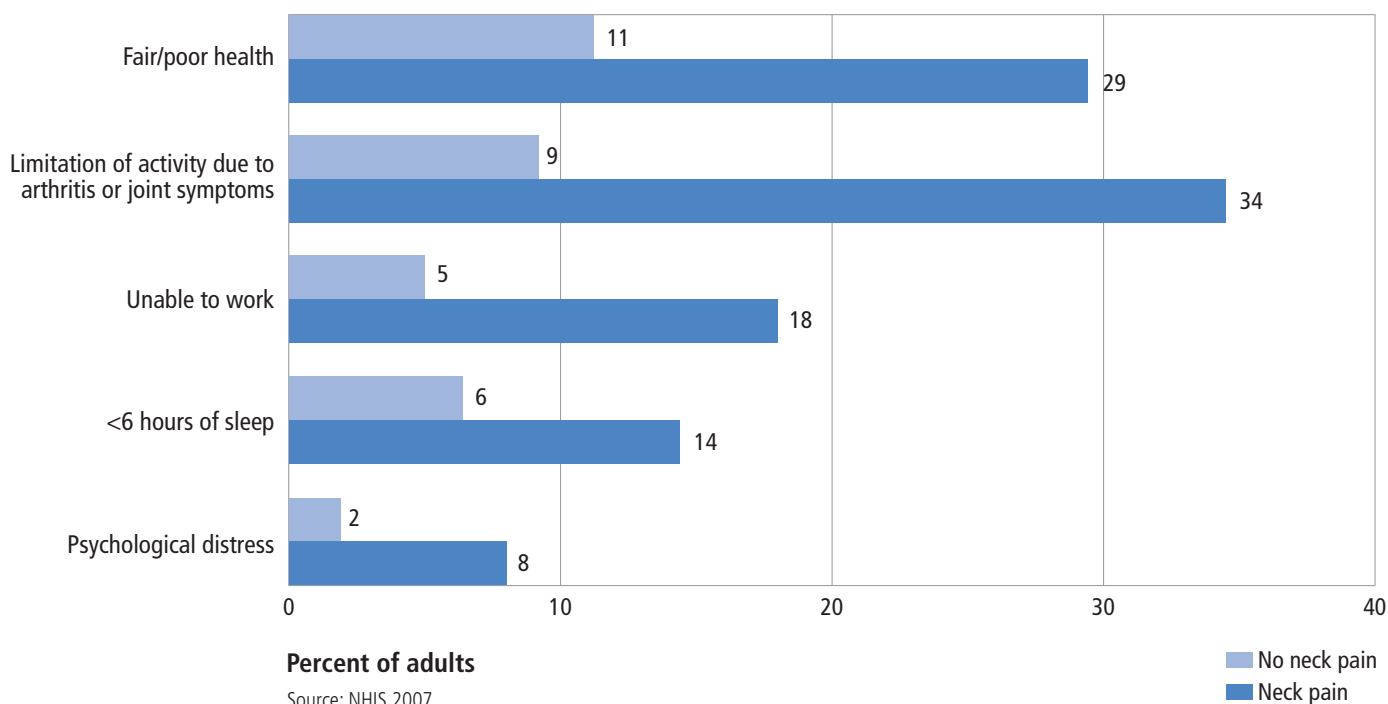
Prevalence of neck pain in the past 3 months among adults, by race/ethnicity and age



Neck pain and health status

Adults with neck pain are more than twice as likely to report fair or poor health than those without neck pain (29% vs. 11%, respectively), nearly 4 times as likely to report arthritis-attributable activity limitations, nearly 4 times as likely to report being unable to work, more than twice as likely to report reduced sleep (<6 hours per day), and 4 times more likely to report psychological distress.

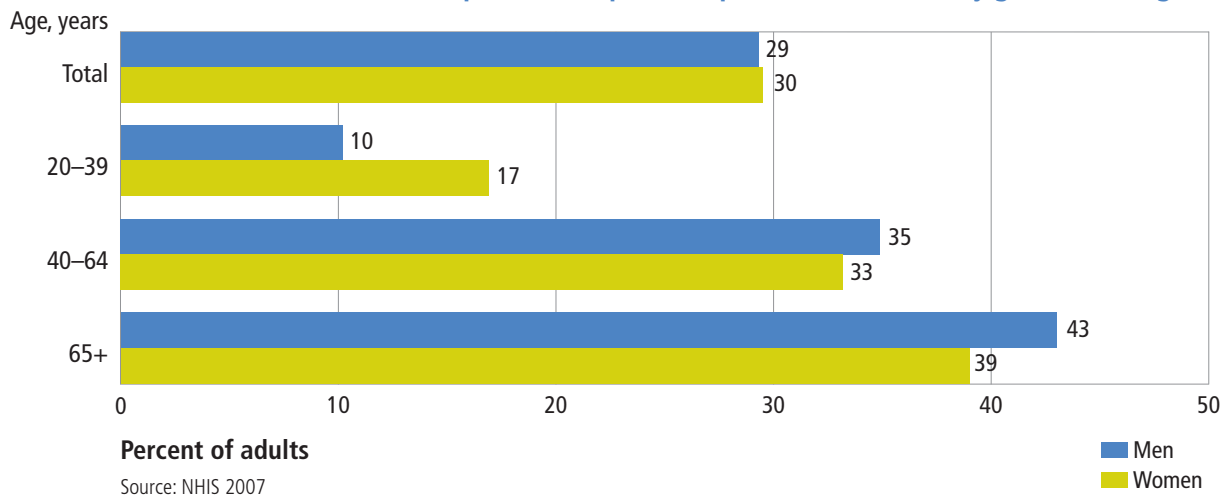
Prevalence of selected health status indicators among adults with or without neck pain



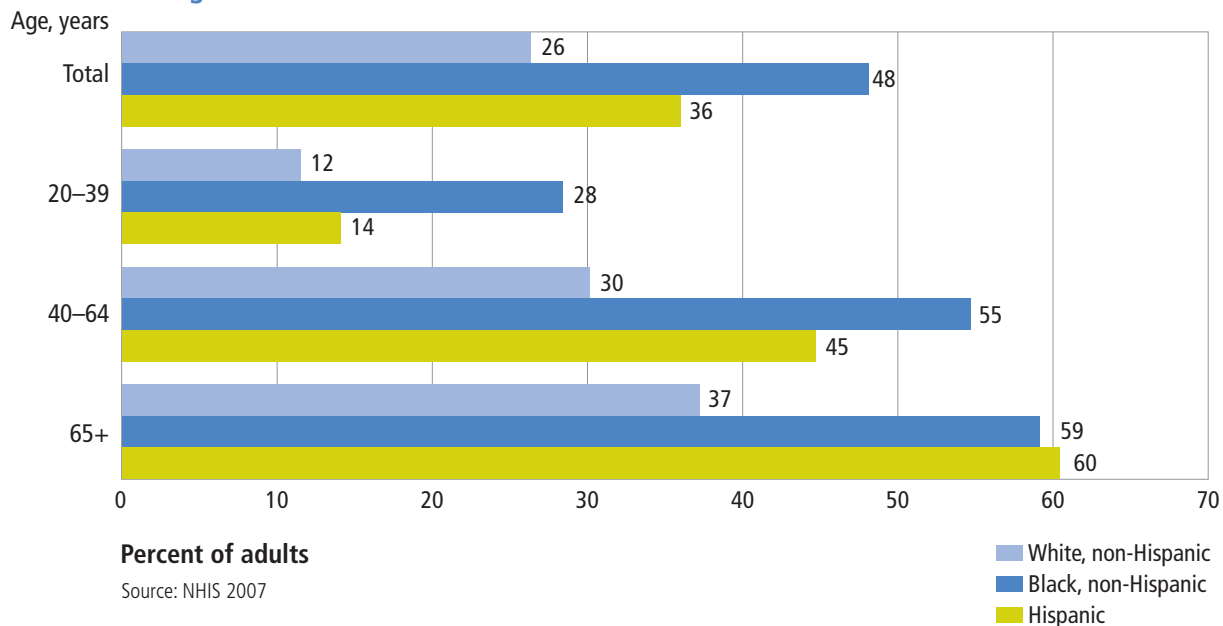
The burden of pain among adults in the United States

Self-rated fair/poor health is reported by 55% of black, non-Hispanic adults aged 40–64 years and 60% of Hispanic adults aged 65 years and older with neck pain.

Percent of adults with neck pain who report fair/poor health status, by gender and age



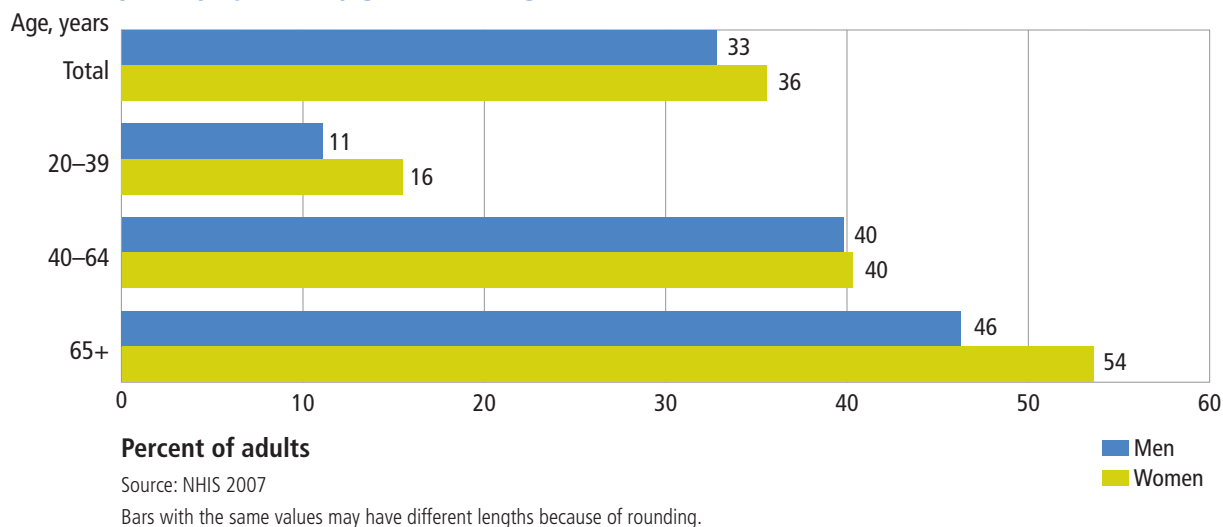
Percent of adults with neck pain who report fair/poor health status, by race/ethnicity and age



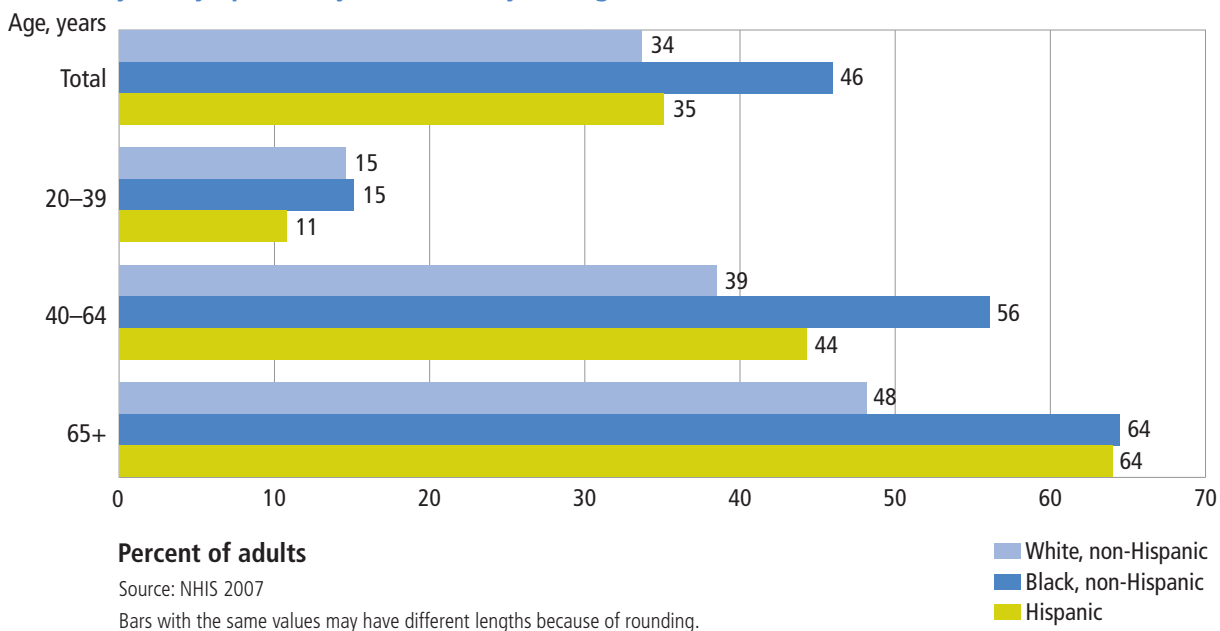
The burden of pain among adults in the United States

Arthritis-attributable activity limitations are reported by nearly two-thirds of older black, non-Hispanic and Hispanic adults (64%), and one-half of older white, non-Hispanic adults (48%) with neck pain.

Percent of adults with neck pain who report activity limitations because of arthritis or joint symptoms, by gender and age



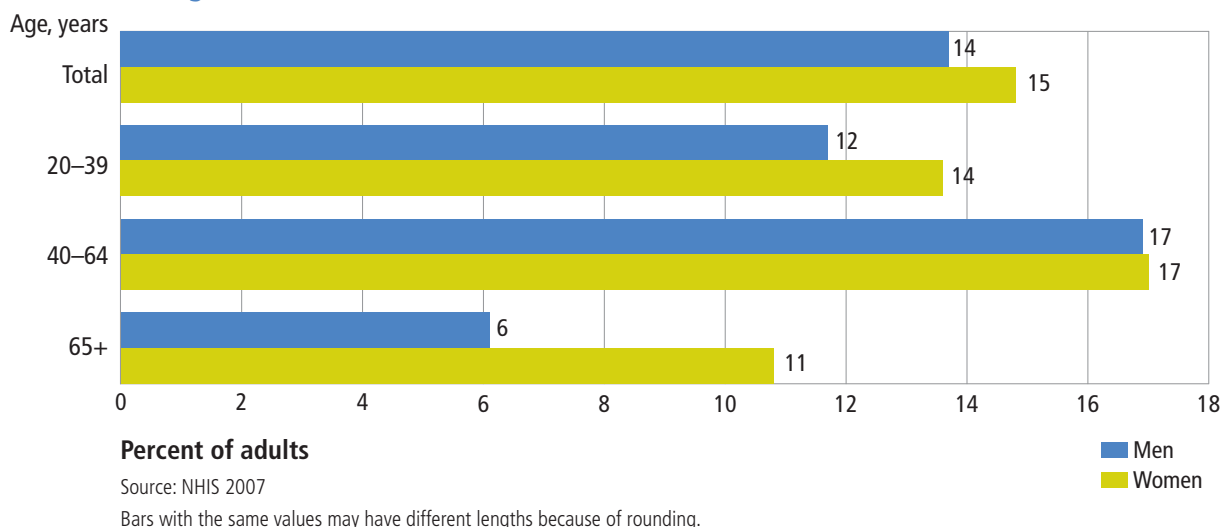
Percent of adults with neck pain who report activity limitations because of arthritis or joint symptoms, by race/ethnicity and age



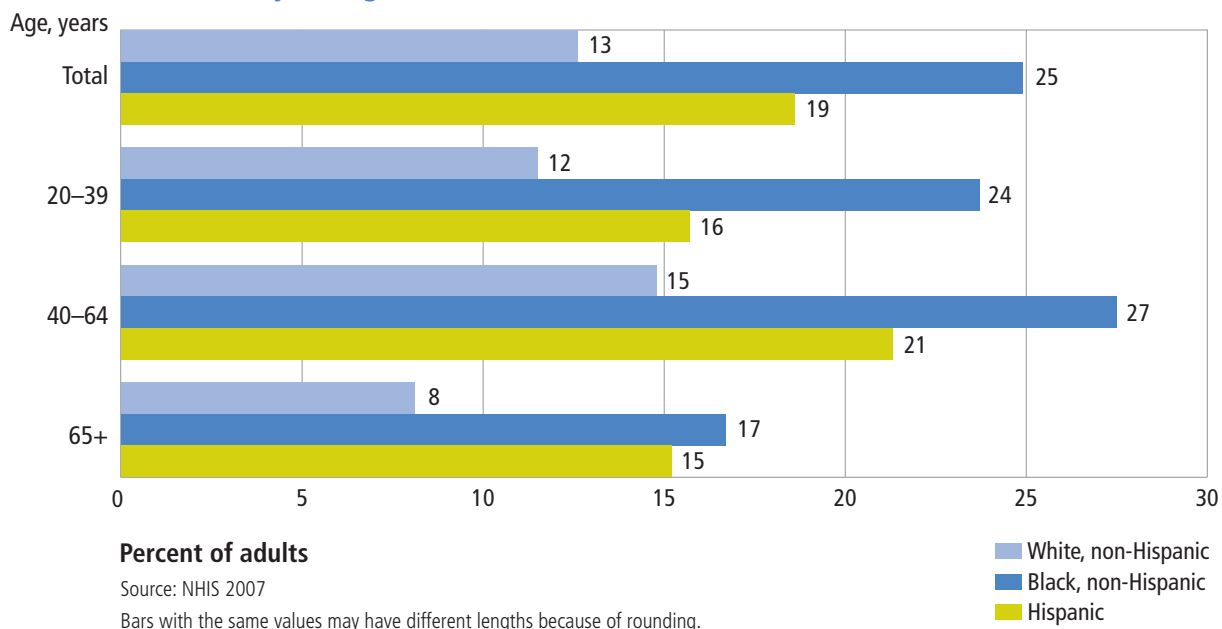
The burden of pain among adults in the United States

Reduced daily sleep hours are reported by 1 in 4 black, non-Hispanic adults with neck pain, 1 in 5 Hispanic adults, and 1 in 8 white, non-Hispanic adults with neck pain.

Percent of adults with neck pain who report less than 6 usual hours of sleep, by gender and age



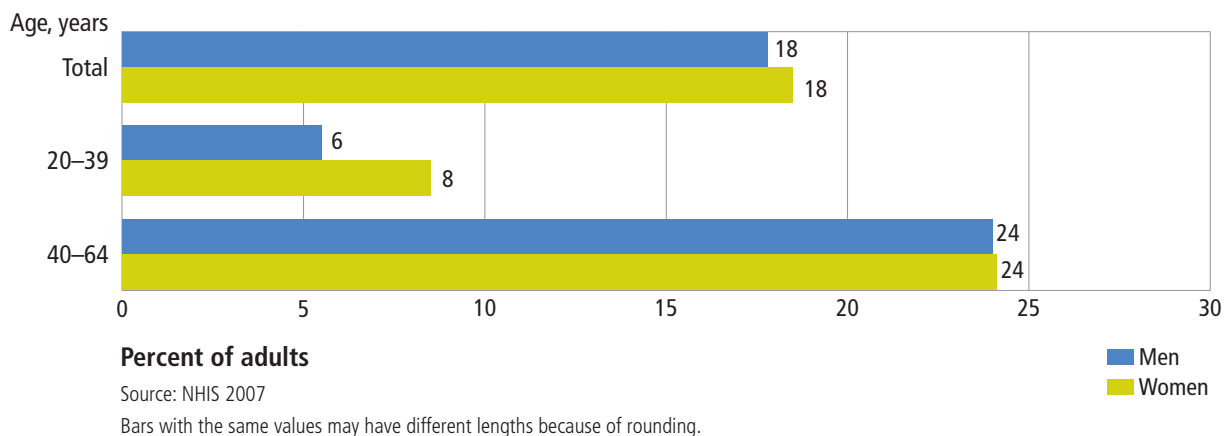
Percent of adults with neck pain who report less than 6 usual hours of sleep, by race/ethnicity and age



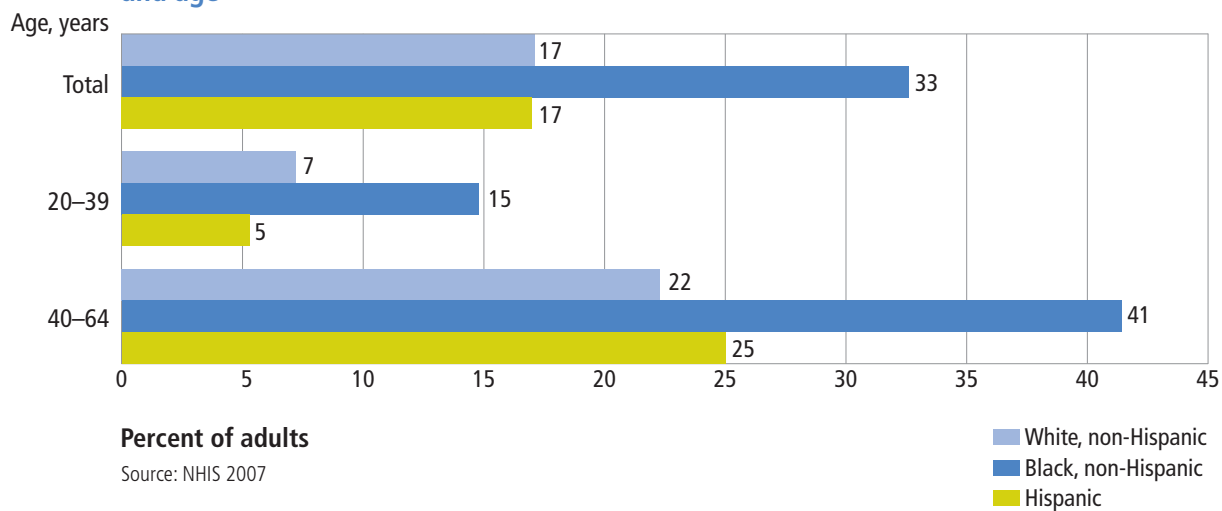
The burden of pain among adults in the United States

Nearly one-quarter of adults aged 40–64 years with neck pain and one-third of black, non-Hispanic adults with neck pain report being unable to work.

Percent of adults with neck pain who report being unable to work, by gender and age



Percent of adults with neck pain who report being unable to work, by race/ethnicity and age

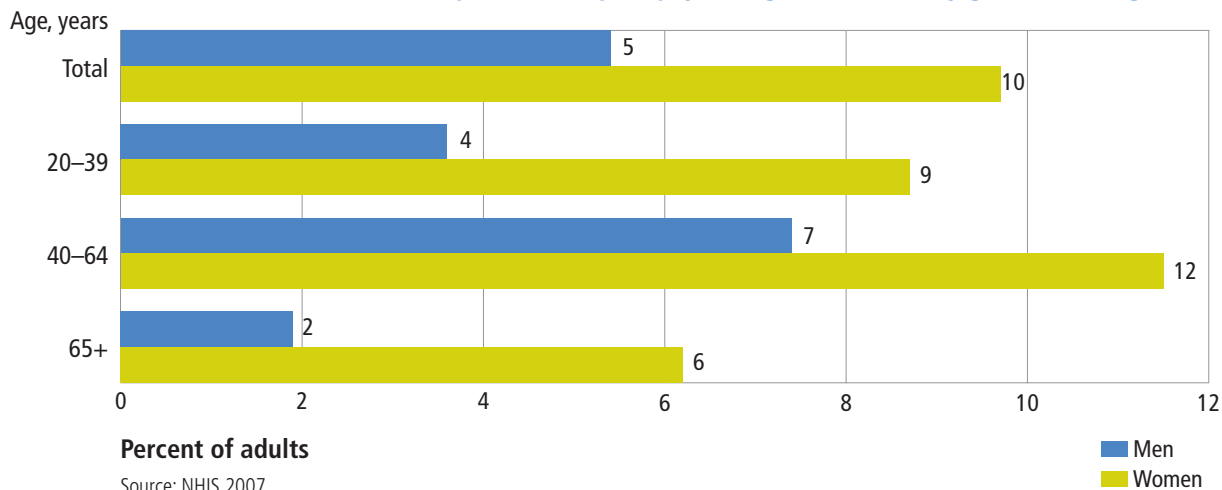


The burden of pain among adults in the United States

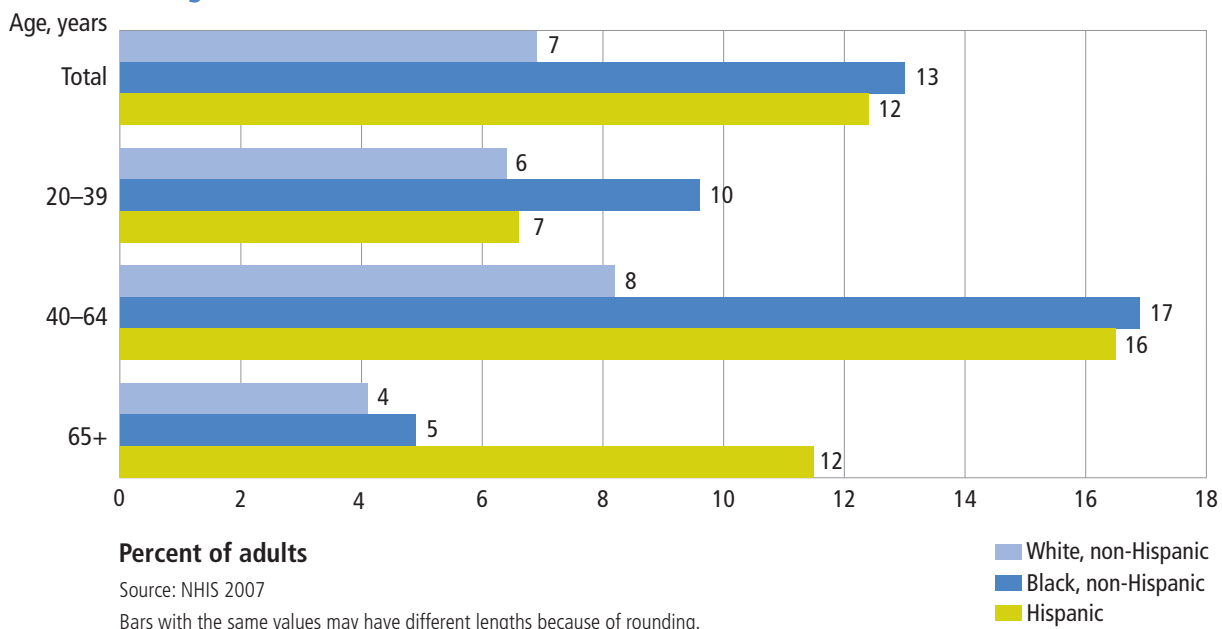
More women with neck pain report psychological distress than men (10% vs. 5%, respectively).

More black, non-Hispanic adults (13%) and Hispanic adults (12%) with neck pain report psychological distress than white, non-Hispanic adults (7%).

Percent of adults with neck pain who report psychological distress, by gender and age



Percent of adults with neck pain who report psychological distress, by race/ethnicity and age

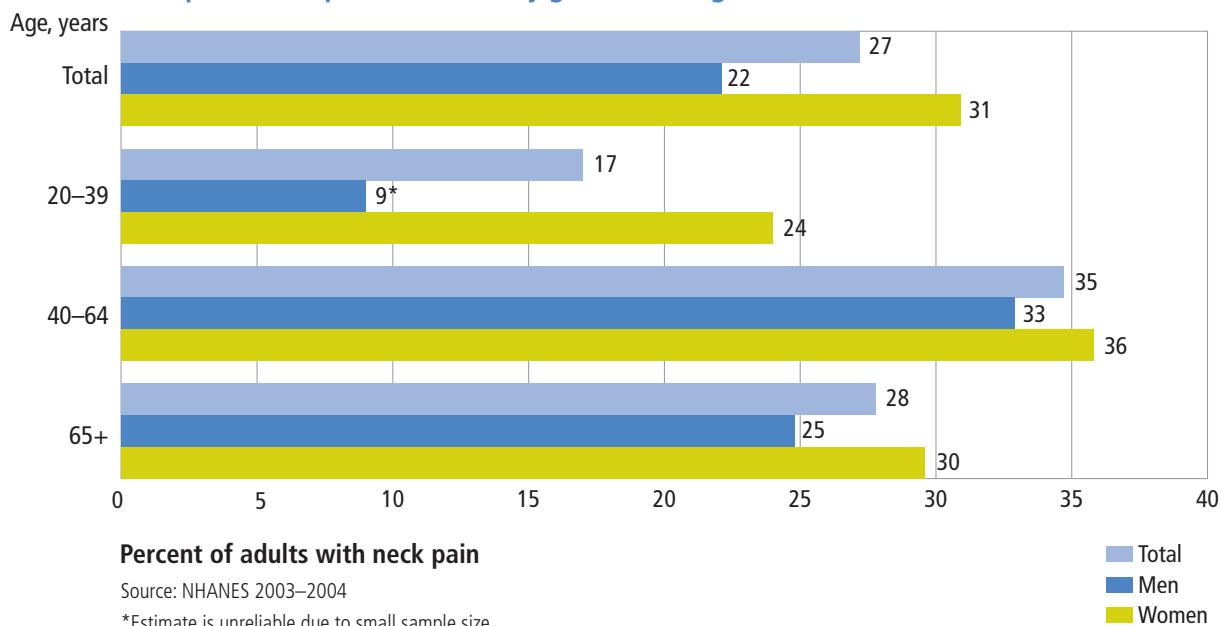


Neck pain and analgesic drug use

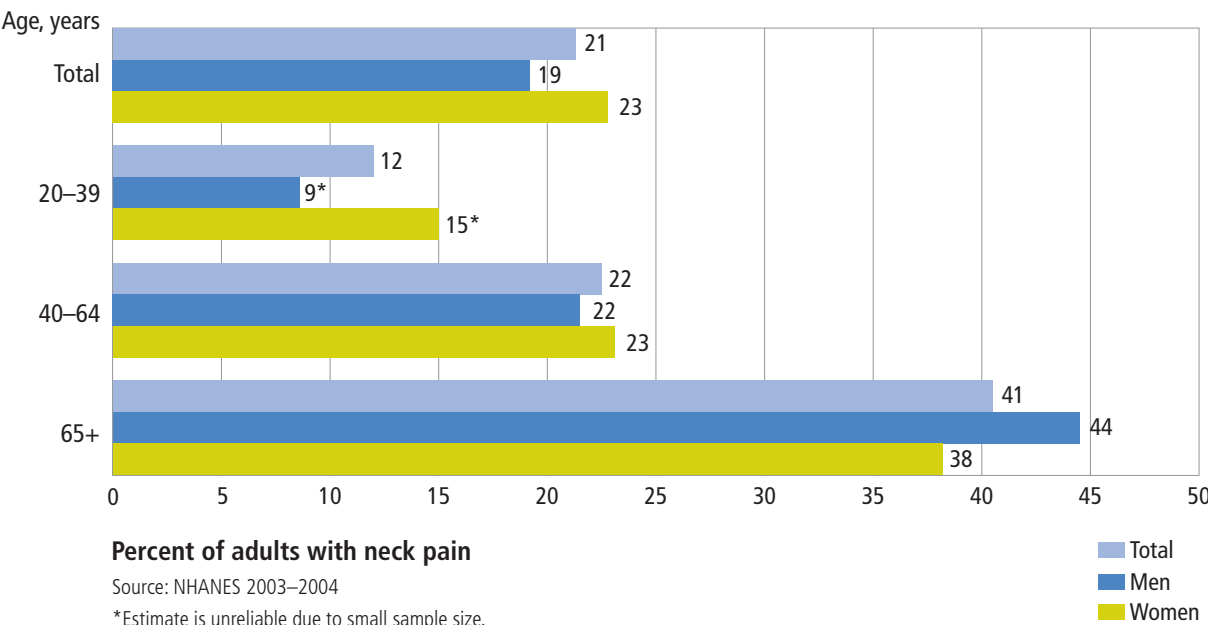
27% of adults with neck pain report prescription analgesic drug use in the past month.

21% of adults with neck pain report using a non-prescription analgesic or certain non-narcotic prescription analgesics nearly every day for a month or longer.

Prevalence of prescription analgesic drug use in the past month among adults with neck pain in the past 3 months, by gender and age



Prevalence of frequent monthly use of nonprescription and select prescription analgesics among adults with neck pain in the past 3 months, by gender and age



Percent of adults with neck pain

Source: NHANES 2003–2004

*Estimate is unreliable due to small sample size.

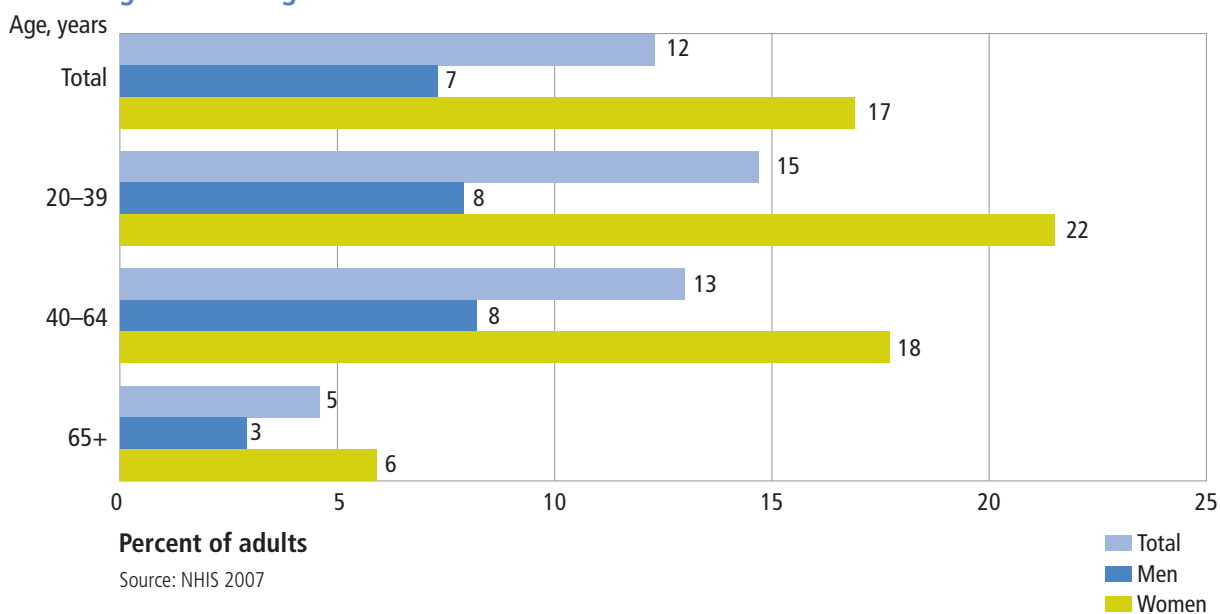
Bars with the same values may have different lengths because of rounding.



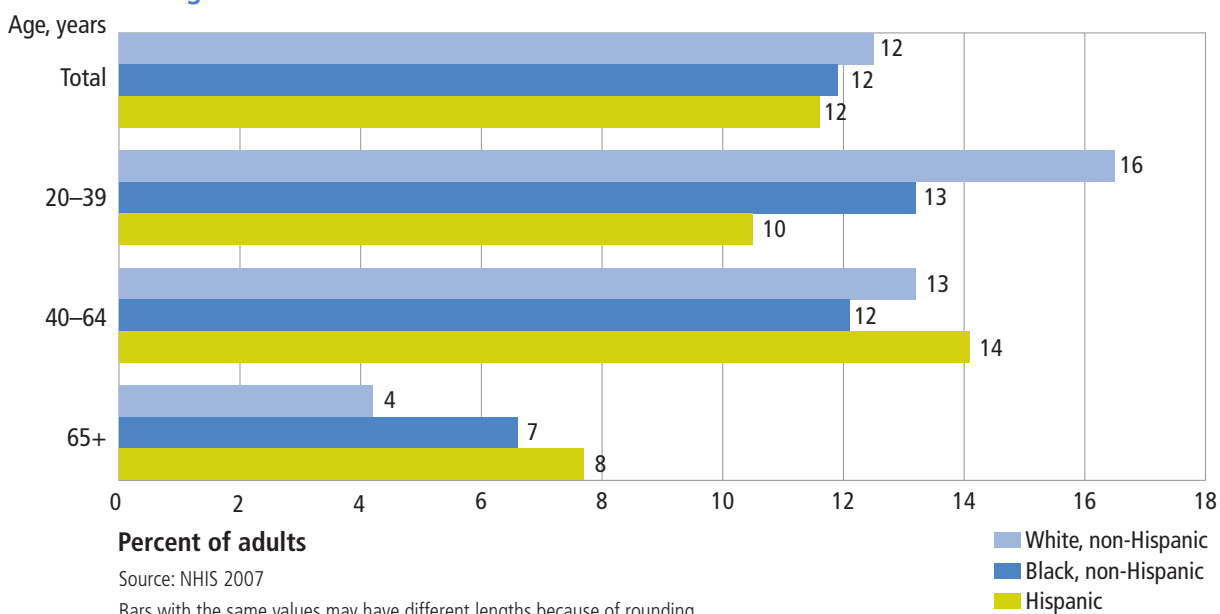
Severe headaches or migraines

One in 8 adults report severe headaches or migraines in the past 3 months. Women are more than twice as likely as men to report severe headaches or migraines (17% vs. 7%, respectively). Older adults are less likely to report severe headaches or migraines (5%) than adults aged 20–39 (15%) and 40–64 (13%) years.

Prevalence of severe headaches or migraines in the past 3 months among adults, by gender and age



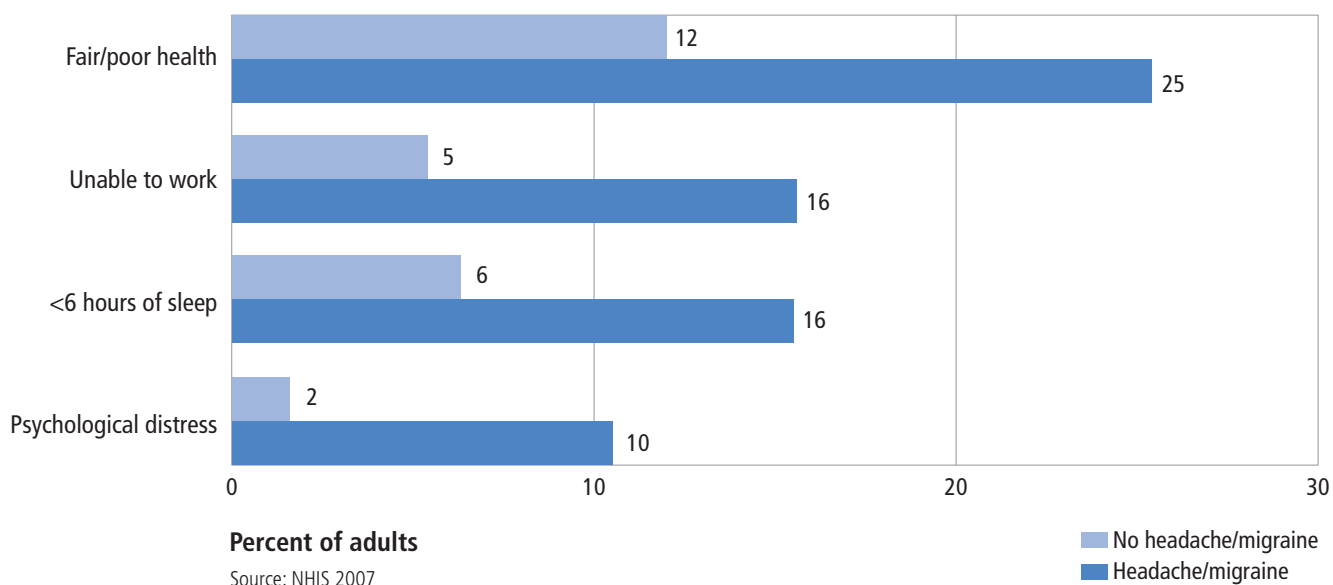
Prevalence of severe headaches or migraines in the past 3 months, by race/ethnicity and age



Severe headaches or migraines and health status

Adults with severe headaches or migraines are more than twice as likely to report fair or poor health than those without headaches or migraines (25% vs. 12%, respectively), more than 3 times as likely to be unable to work, about 3 times as likely to report reduced sleep (<6 hours per day), and 5 times as likely to report psychological distress.

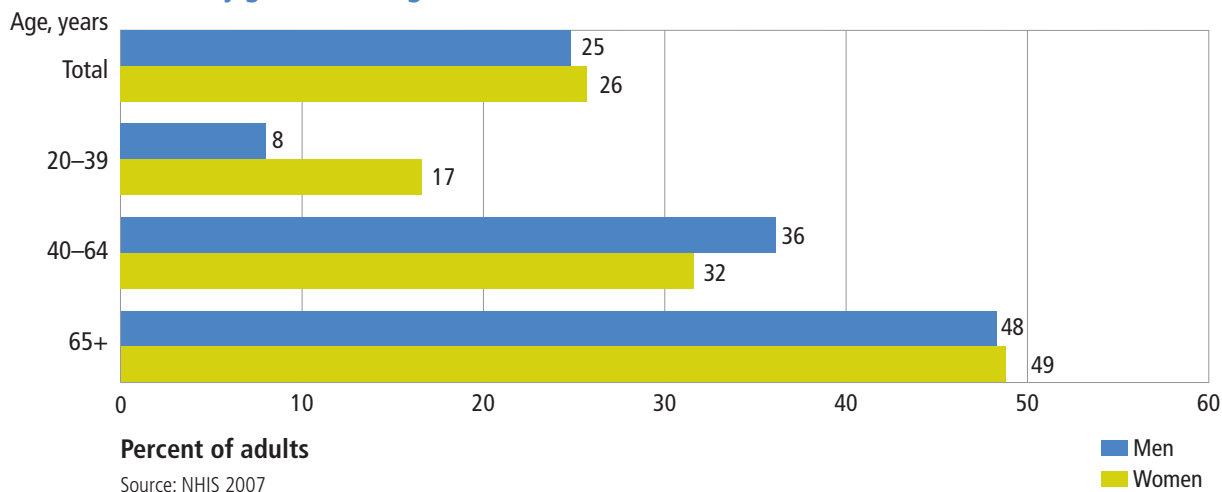
Percent of selected health status indicators among adults with or without severe headaches or migraines



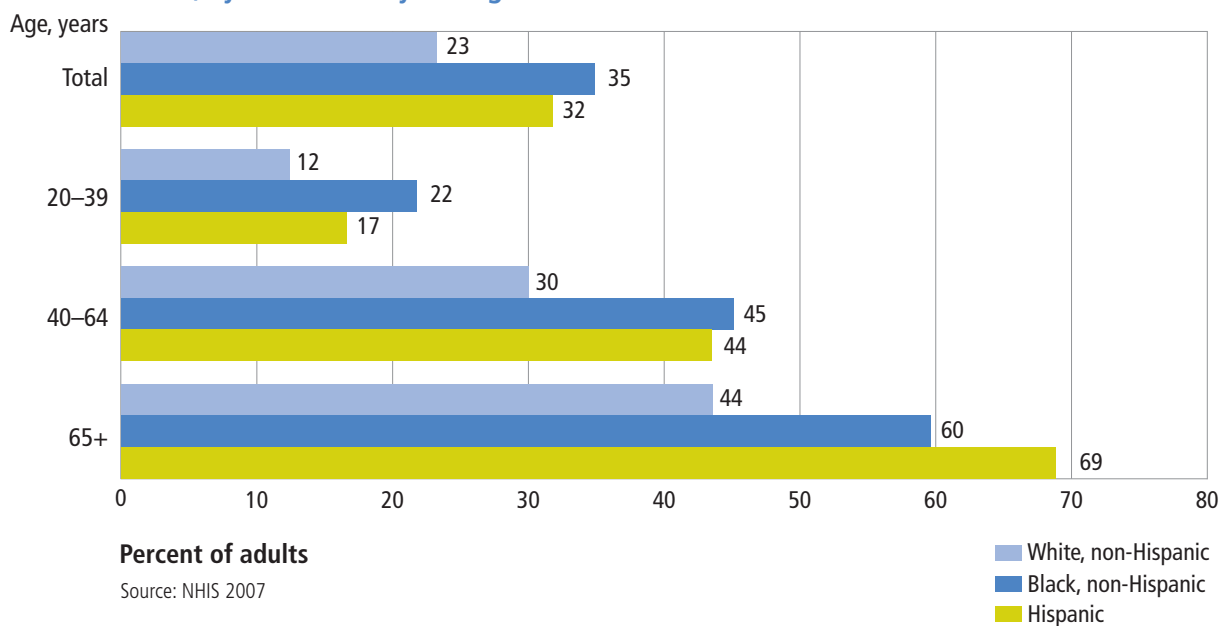
The burden of pain among adults in the United States

Self-rated fair or poor health is reported by one-third of adults aged 40–64 years and 49% of older adults with severe headaches or migraines. 60% of older black, non-Hispanic adults and 69% of older Hispanic adults with severe headaches or migraines report fair or poor health status.

Percent of adults with severe headaches or migraines who report fair or poor health status, by gender and age



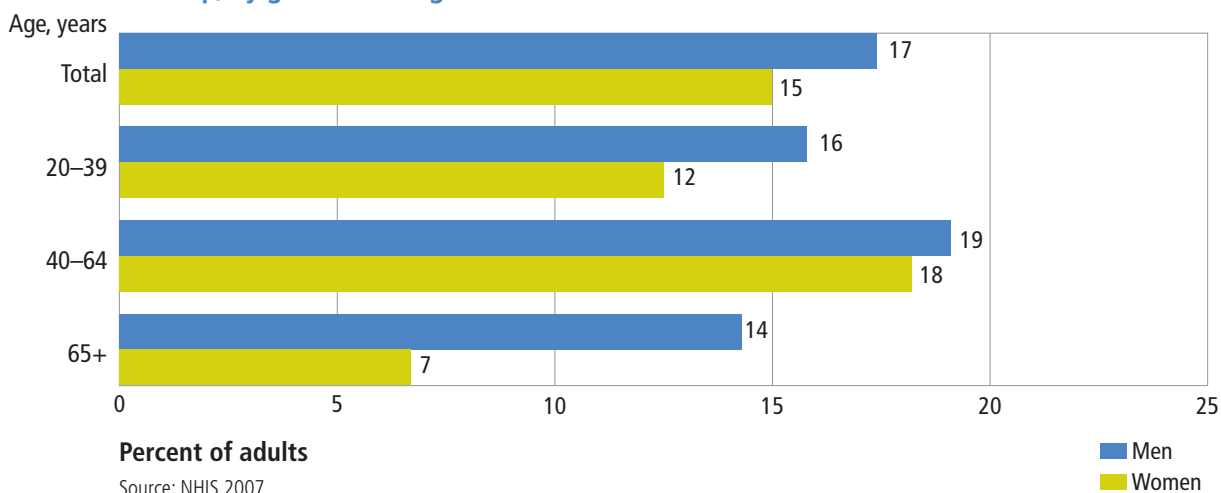
Percent of adults with severe headaches or migraines who report fair or poor health status, by race/ethnicity and age



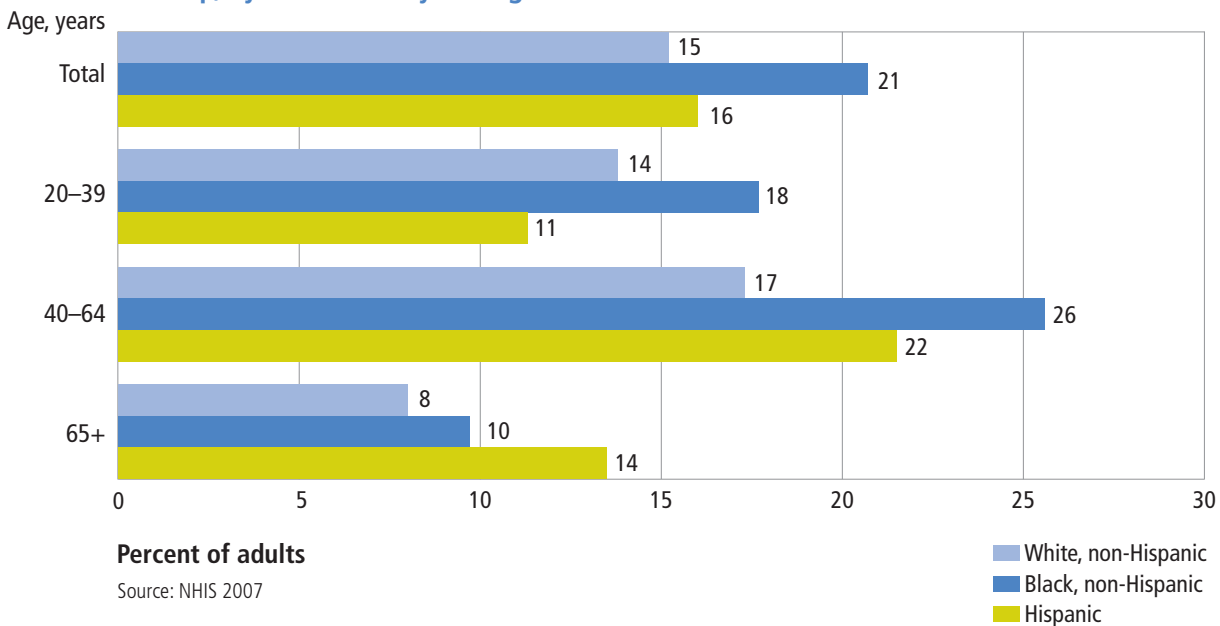
The burden of pain among adults in the United States

Men aged 65 years and older with severe headaches or migraines are twice as likely to report reduced daily sleep hours than women aged 65 years and older (14% vs. 7%, respectively).

Percent of adults with severe headaches or migraines who report less than 6 usual hours of sleep, by gender and age



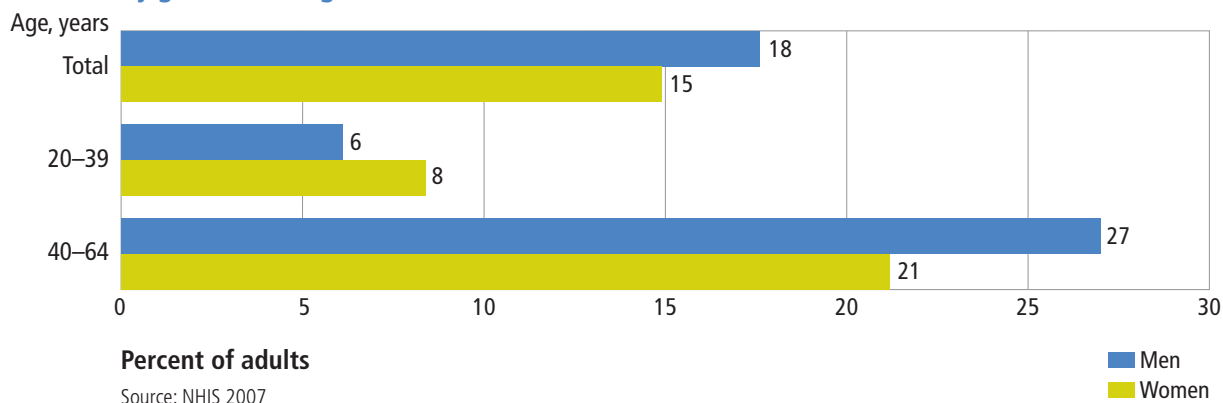
Percent of adults with severe headaches or migraines who report less than 6 usual hours of sleep, by race/ethnicity and age



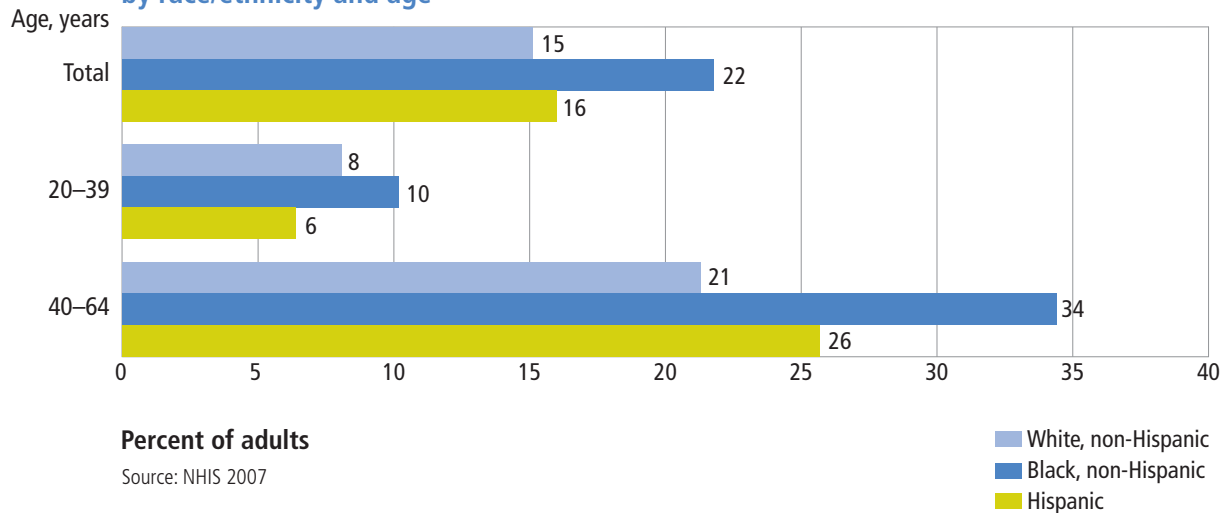
The burden of pain among adults in the United States

One in 3 black, non-Hispanic adults aged 40–64 years with severe headaches or migraines report being unable to work.

Percent of adults with severe headaches or migraines who report being unable to work, by gender and age



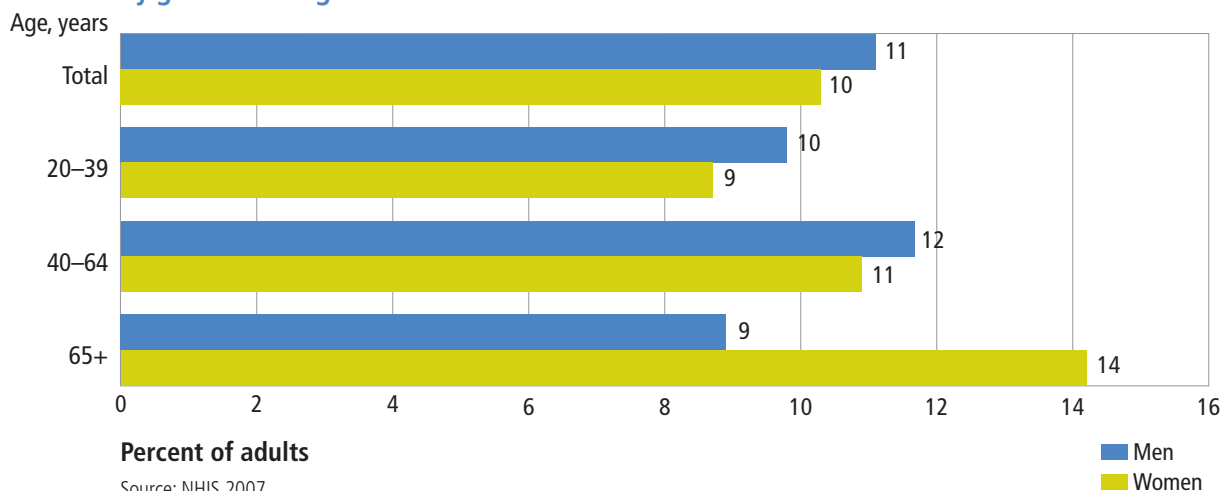
Percent of adults with severe headaches or migraines who report being unable to work, by race/ethnicity and age



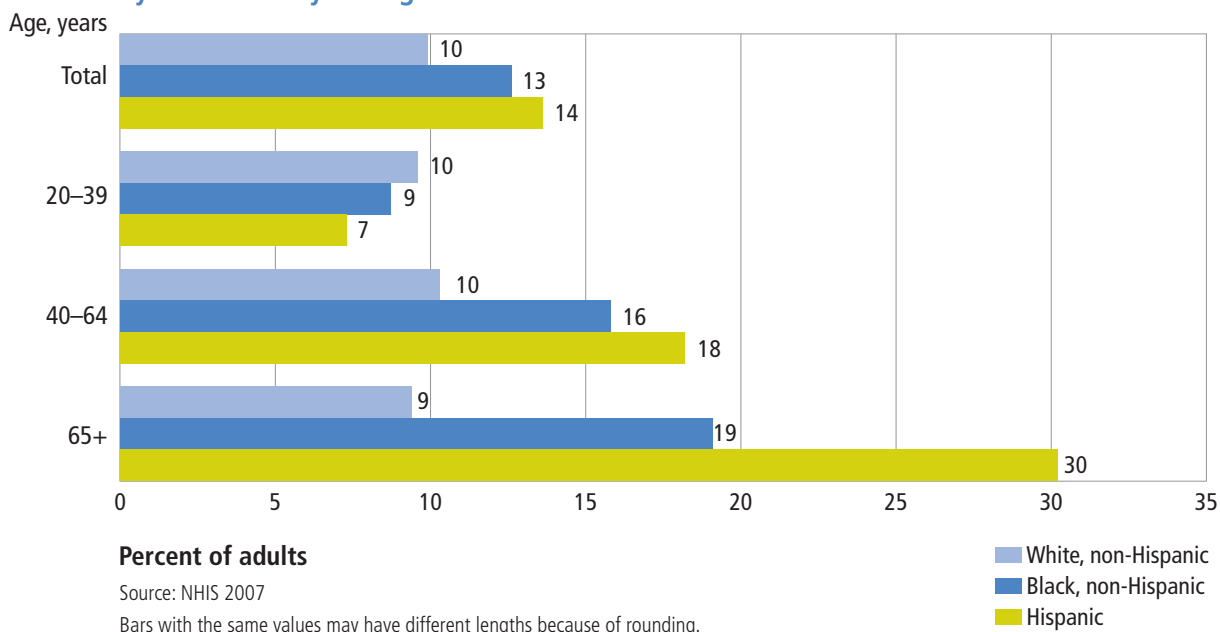
The burden of pain among adults in the United States

Older women with severe headaches or migraines are 55% more likely to report psychological distress (14%) than older men (9%). Nearly one-third of Hispanic older adults with severe headaches or migraines report psychological distress compared to 19% of older black, non-Hispanic adults and 9% of older white, non-Hispanic adults.

Percent of adults with severe headaches or migraines who report psychological distress, by gender and age



Percent of adults with severe headaches or migraines who report psychological distress, by race/ethnicity and age

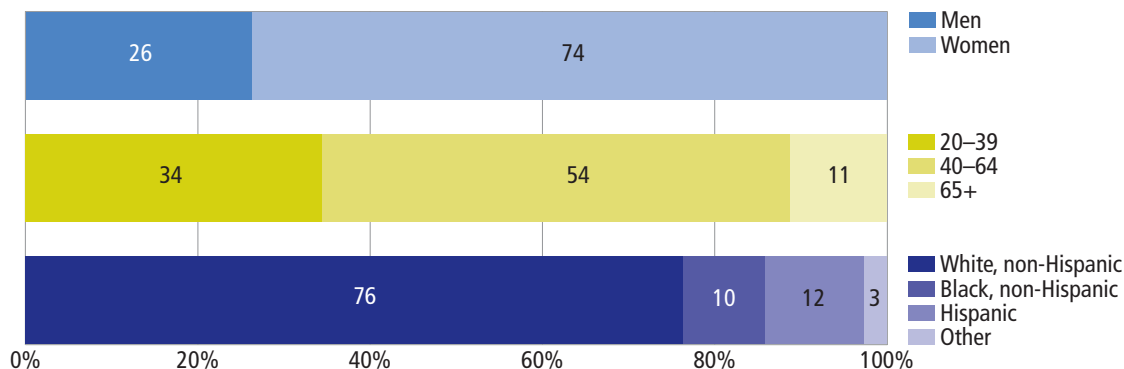


Severe headaches or migraines and health care utilization

In 2006, adults made nearly 11 million physician visits with a headache diagnosis, over 1 million outpatient hospital visits, 3.3 million emergency department visits, and 445 thousand inpatient hospitalizations.

The majority of health care visits for headaches were by women and white, non-Hispanic adults. Physician office visits and inpatient hospitalizations were mostly made by adults aged 40–64 years, whereas a larger proportion of outpatient hospital and emergency department visits were by those aged 20–39 years.

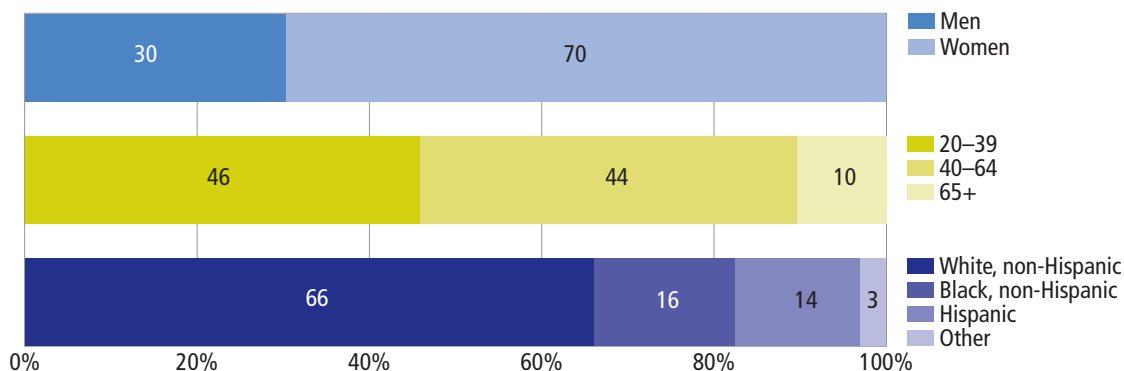
Percent of physician office visits among adults with a diagnosis of headache



Source: NAMCS 2006

Totals may not add to 100% because of rounding.

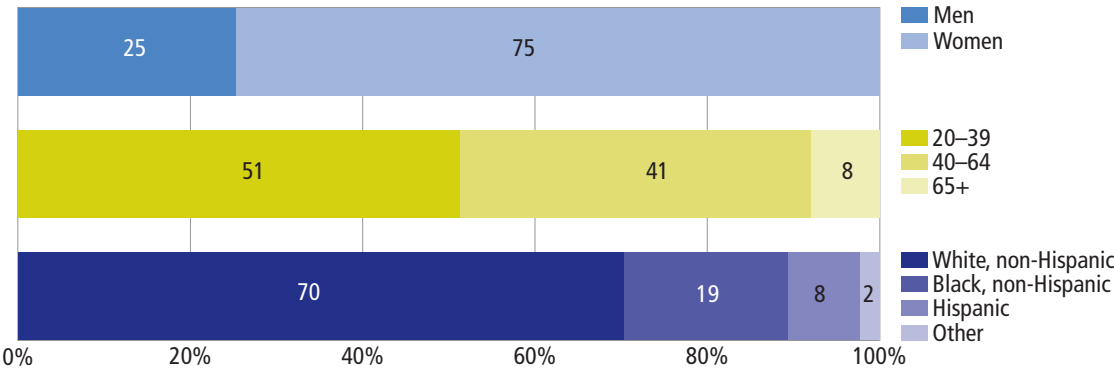
Percent of outpatient hospital visits among adults with a diagnosis of headache



Source: NHAMCS 2006

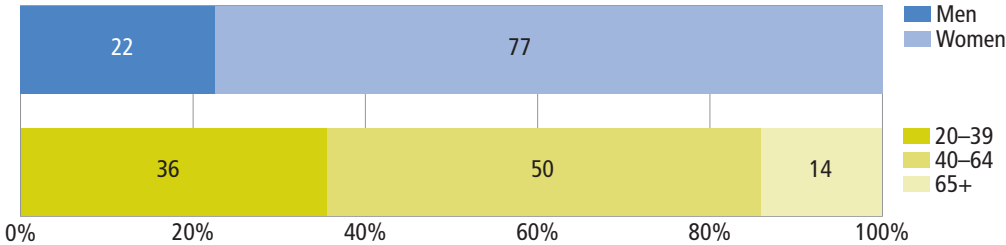
Totals may not add to 100% because of rounding.

Percent of emergency department visits among adults with a diagnosis of headache



Source: NHAMCS 2006
Totals may not add to 100% because of rounding.

Percent of inpatient hospitalizations among adults with a diagnosis of headache



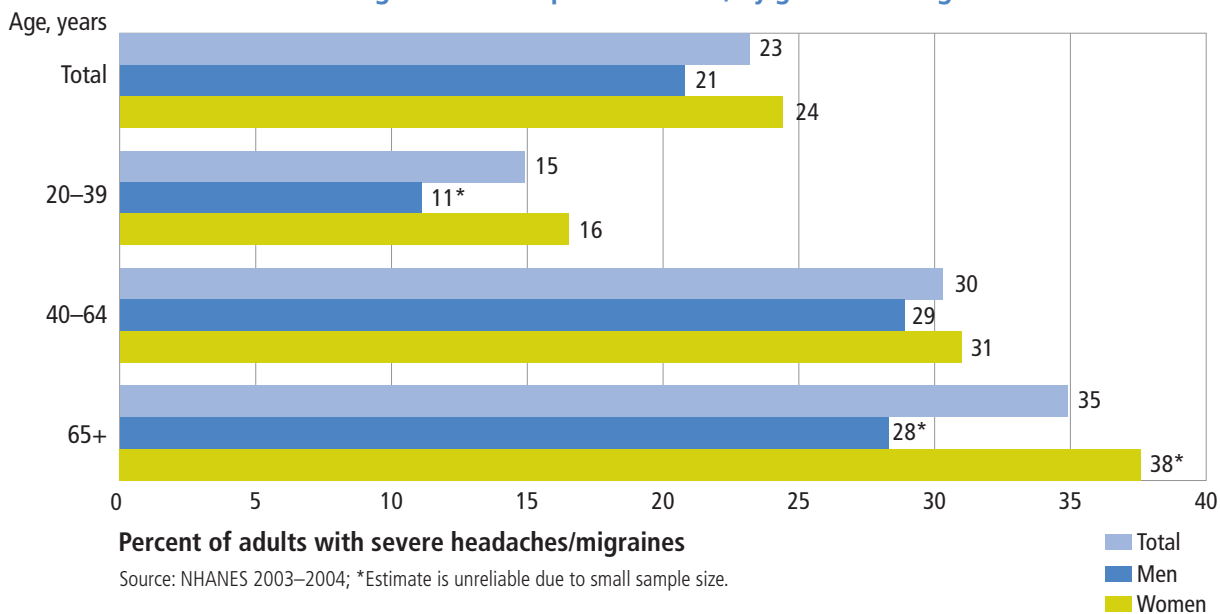
Source: NHDS 2006
Totals may not add to 100% because of rounding.

Severe headaches/migraines and analgesic drug use

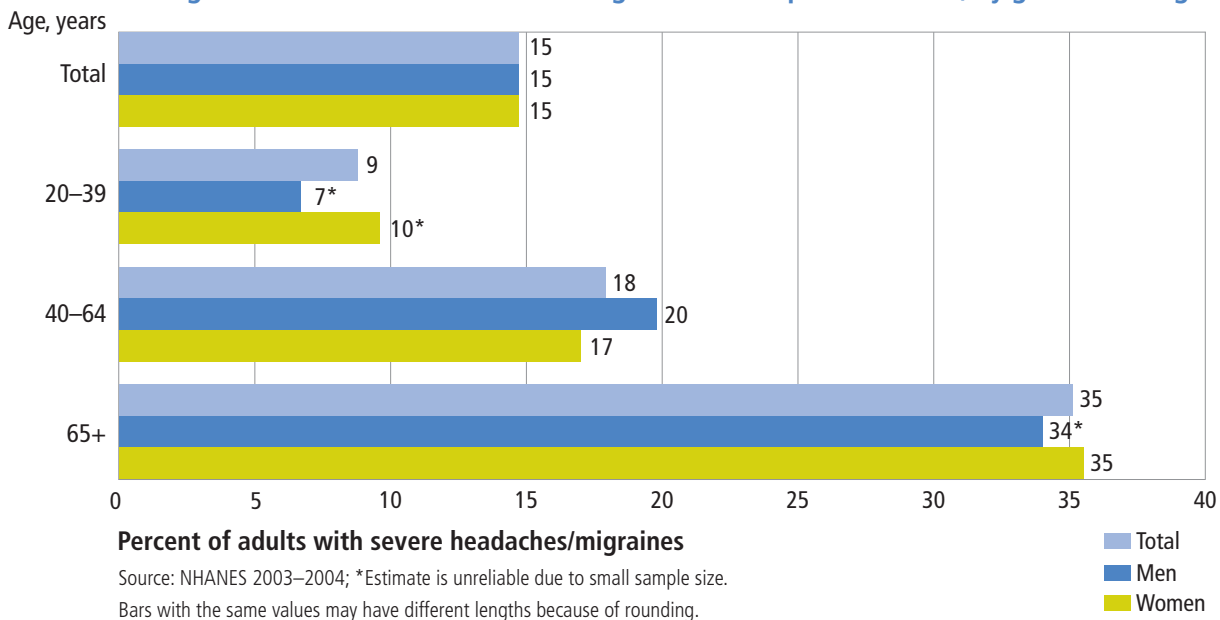
23% of adults with severe headaches/migraines report prescription analgesic drug use in the past month.

15% of adults with severe headaches/migraines report using a non-prescription analgesic or certain non-narcotic prescription analgesics nearly every day for a month or longer.

Prevalence of prescription analgesic drug use in the past month among adults with severe headaches/migraines in the past 3 months, by gender and age



Prevalence of frequent monthly use of nonprescription and select prescription analgesics among adults with severe headaches/migraines in the past 3 months, by gender and age

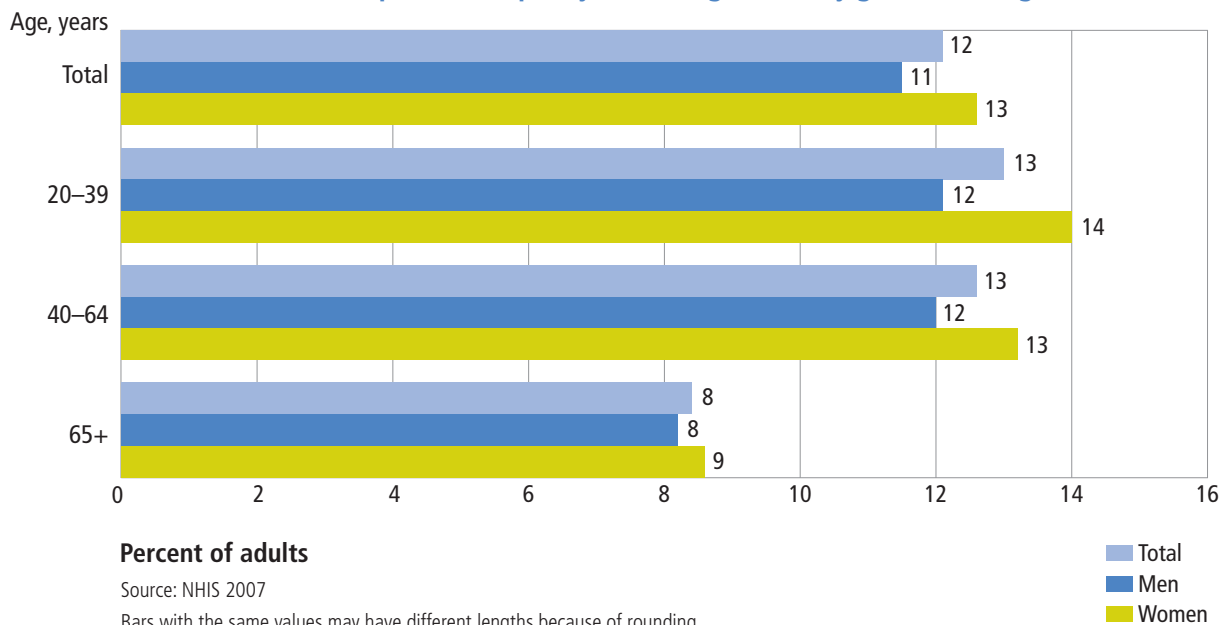




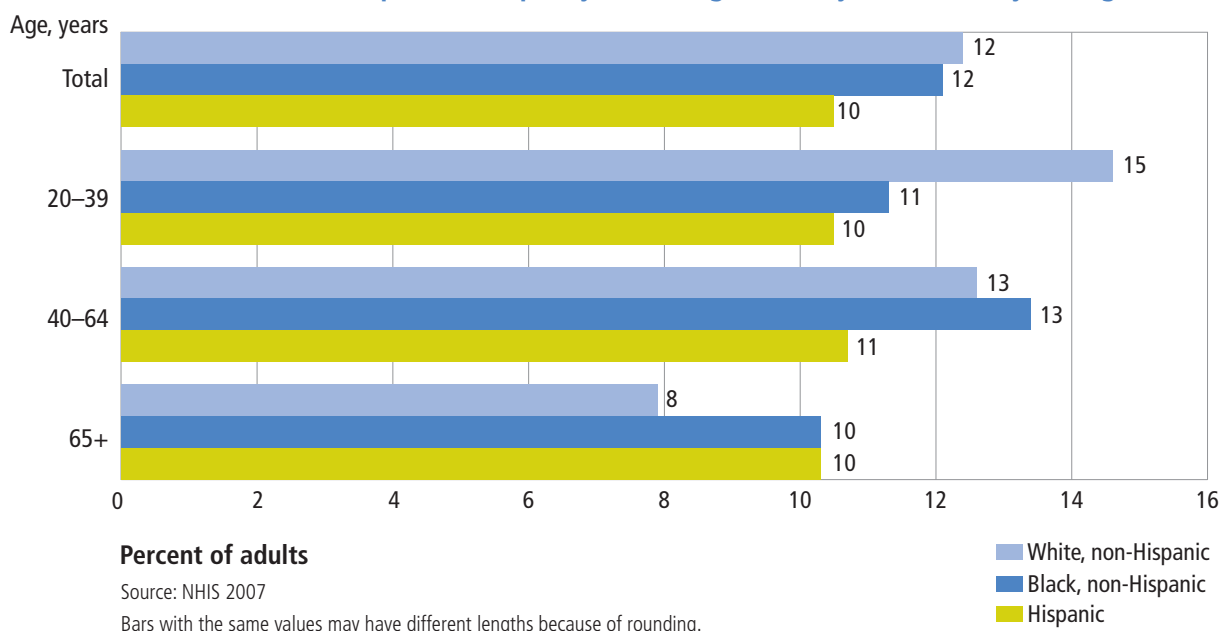
Dental pain

One in 8 adults experienced dental pain in the past year. Men and women have a similar prevalence of dental pain regardless of age.

Prevalence of dental pain in the past year among adults, by gender and age



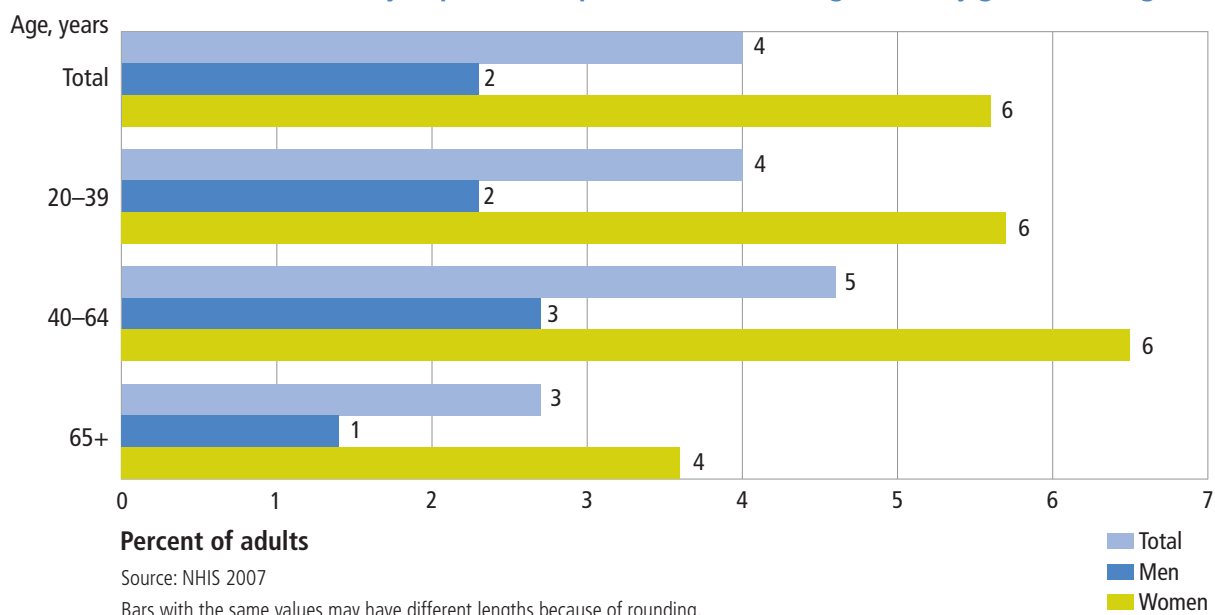
Prevalence of dental pain in the past year among adults, by race/ethnicity and age



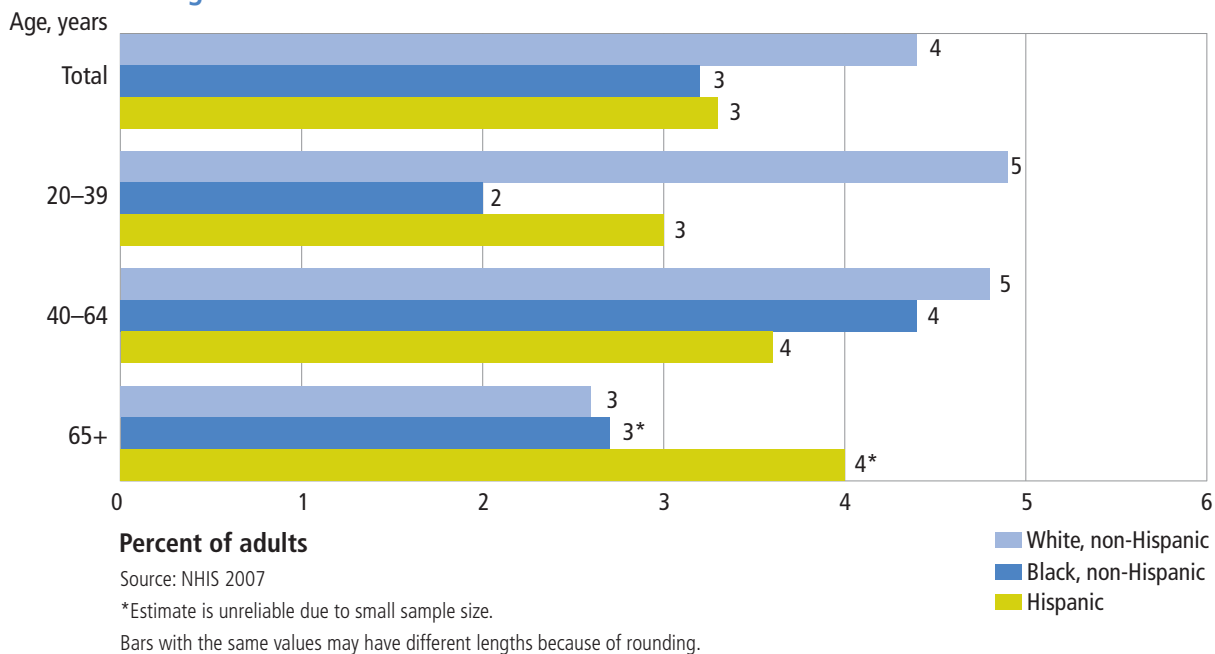
Face or jaw pain

4% of adults report facial ache or pain in the jaw muscles or the joint in front of the ear. Women are three times as likely as men to report this type of pain (6% vs. 2%, respectively).

Prevalence of face or jaw pain in the past 3 months among adults, by gender and age



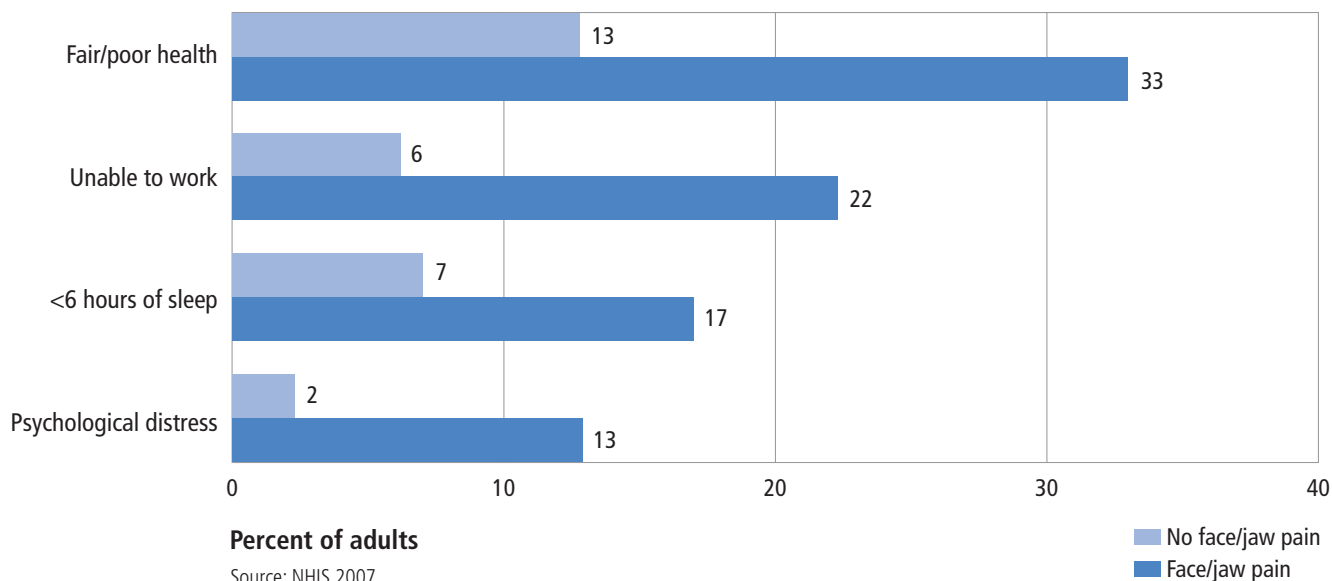
Prevalence of face or jaw pain in the past 3 months among adults, by race/ethnicity and age



The burden of pain among adults in the United States

Adults with face or jaw pain are 2.5 times more likely to report fair or poor health status than adults with no pain (33% vs. 13%, respectively), nearly 4 times as likely to be unable to work, more than twice as likely to have reduced sleep (<6 hours per day), and nearly 7 times as likely to report psychological distress.

Prevalence of selected health status indicators among adults with or without face or jaw pain





Pain and selected diseases or conditions

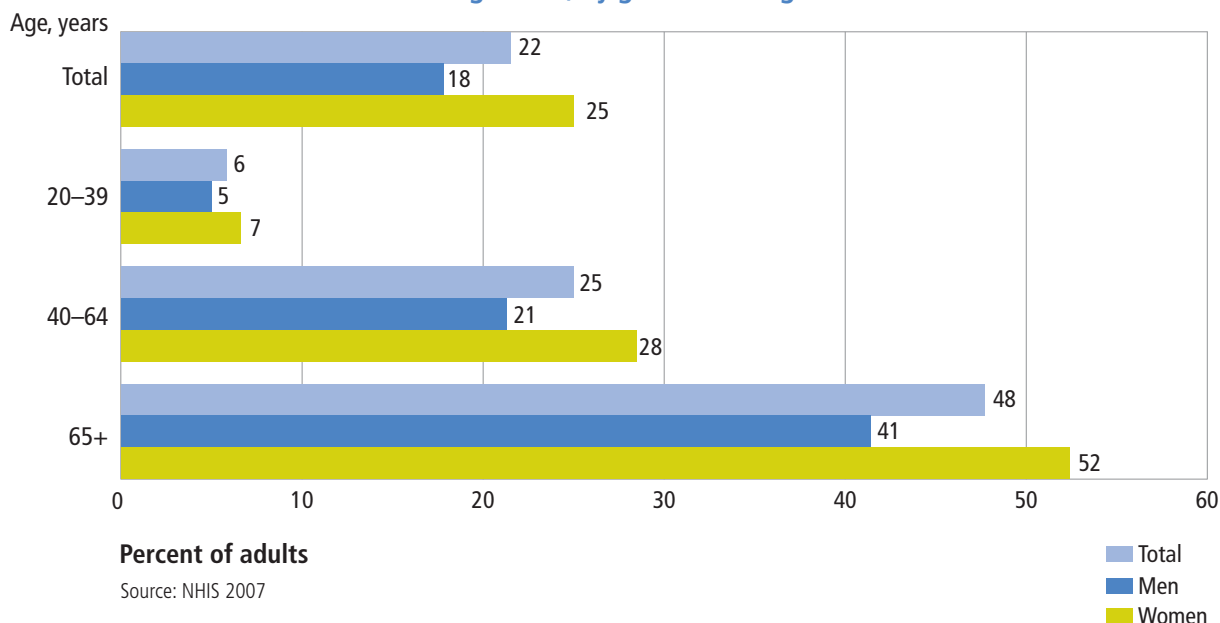
Arthritis

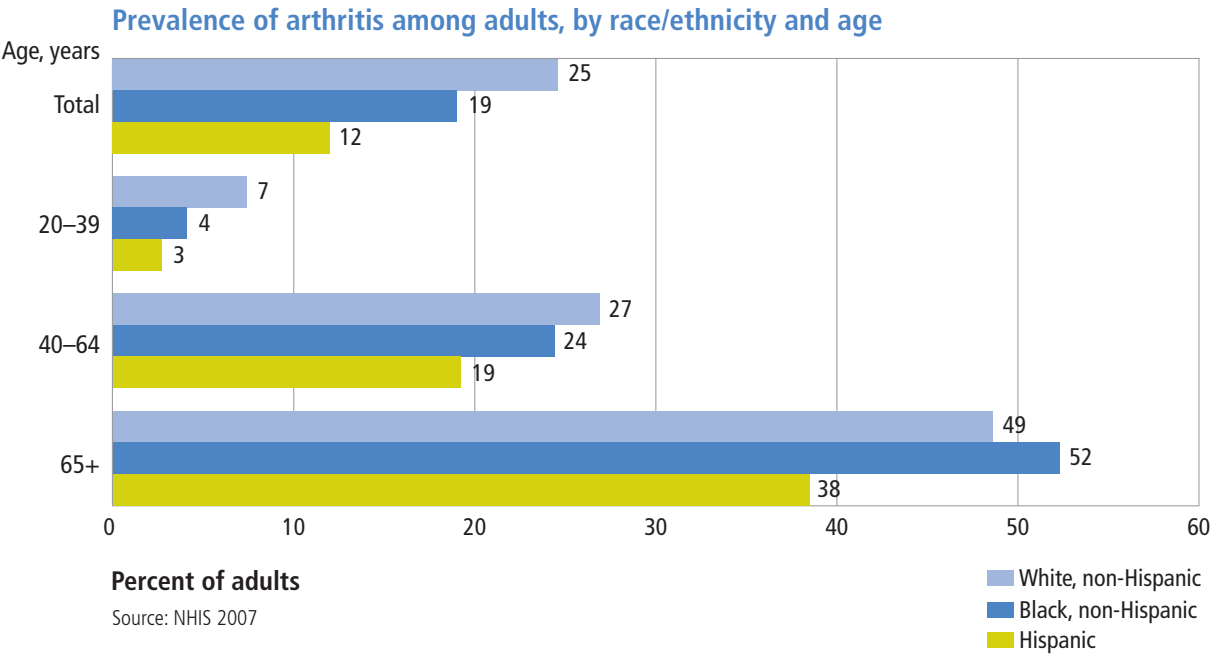
47.3 million adults have diagnosed arthritis (22%). Arthritic conditions such as osteoarthritis and rheumatoid arthritis are characterized by joint pain in the extremities.

The prevalence is higher among women (25%) than men (18%), older age groups (48%, 65 and older; 25%, 40–64 years) than younger age groups (6%, 20–39 years), and white, non-Hispanic adults (25%) than black, non-Hispanic (19%) and Hispanic (12%) adults.

Prevalence of arthritis is greater among adults who are obese (30%) or overweight (21%) than adults who are normal weight (16%).

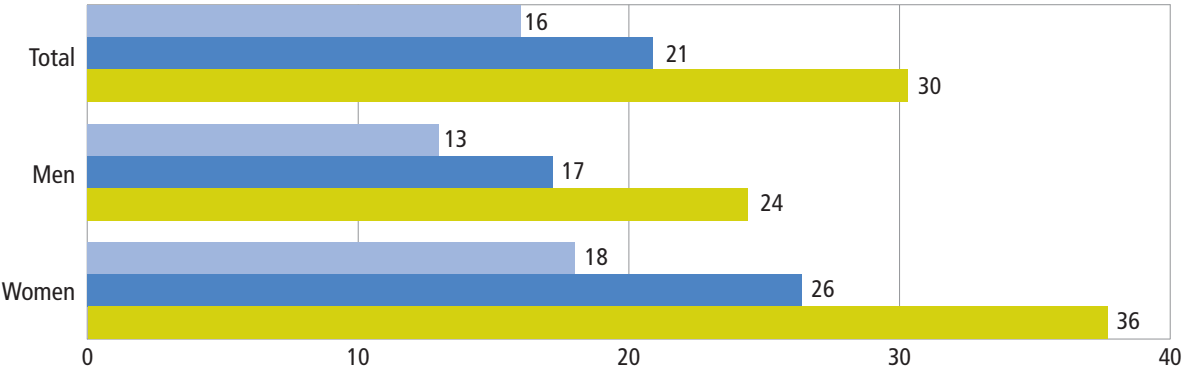
Prevalence of arthritis among adults, by gender and age





The burden of pain among adults in the United States

Prevalence of arthritis among adults, by body weight and gender

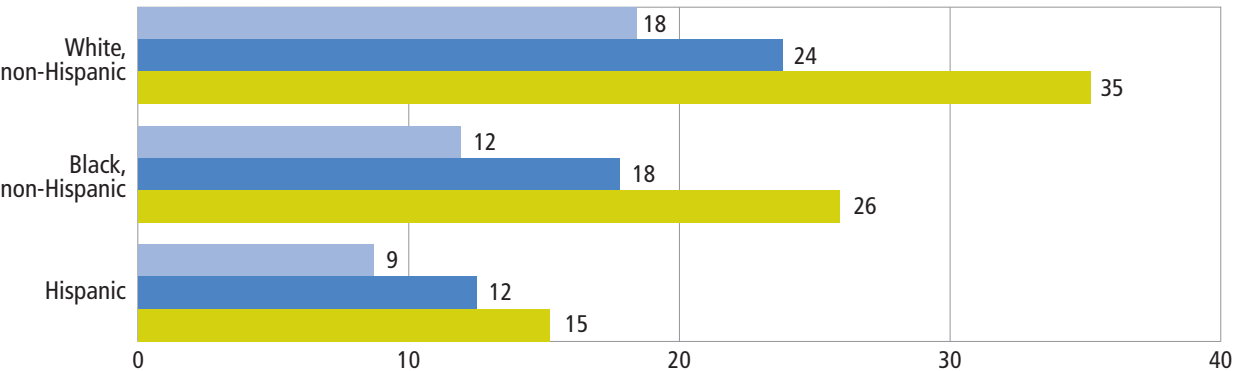


Percent of adults

Source: NHIS 2007

Normal
Overweight
Obese

Prevalence of arthritis among adults, by body weight and race/ethnicity



Percent of adults

Source: NHIS 2007

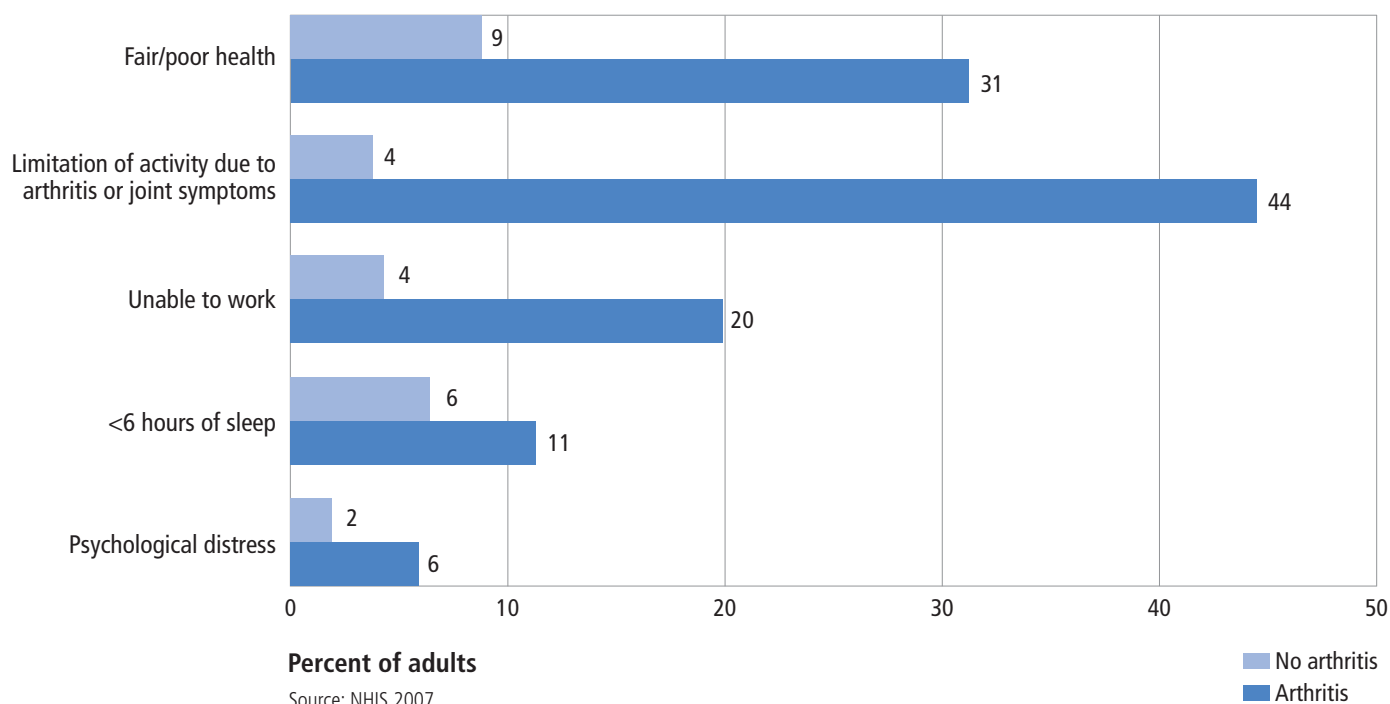
Bars with the same values may have different lengths because of rounding.

Normal
Overweight
Obese

Arthritis and health status

Arthritis is a leading cause of disability and is associated with substantial activity limitation, work disability and reduced quality of life. Adults with arthritis are more than 3 times as likely to report fair or poor health than those without arthritis (31% vs. 9%, respectively), 11 times more likely to report arthritis-attributable activity limitations, 5 times more likely to report being unable to work, nearly twice as likely to report reduced hours of sleep (<6 hours per day), and 3 times as likely to report psychological distress.

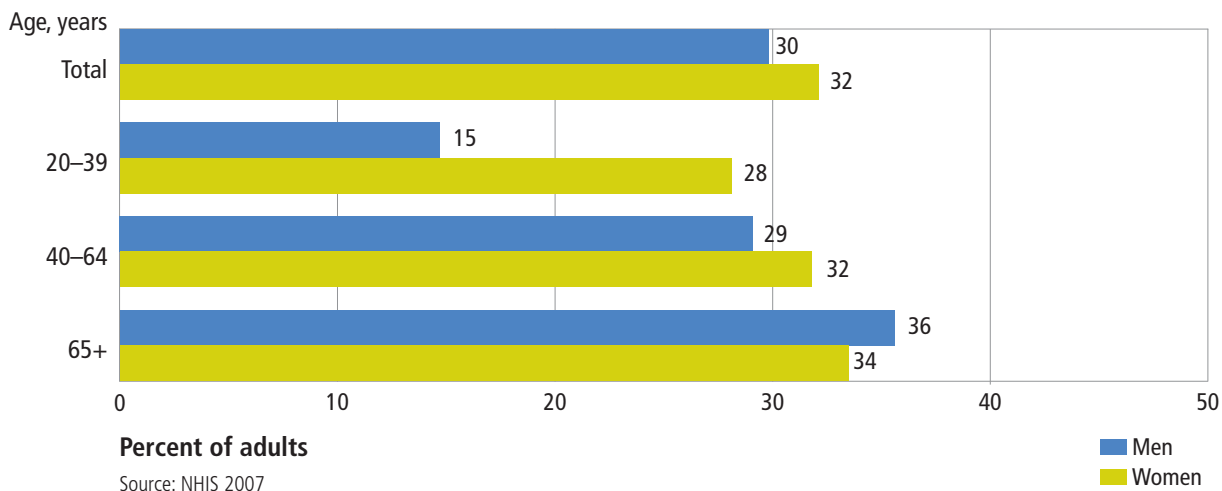
Prevalence of selected health status indicators among adults with or without arthritis



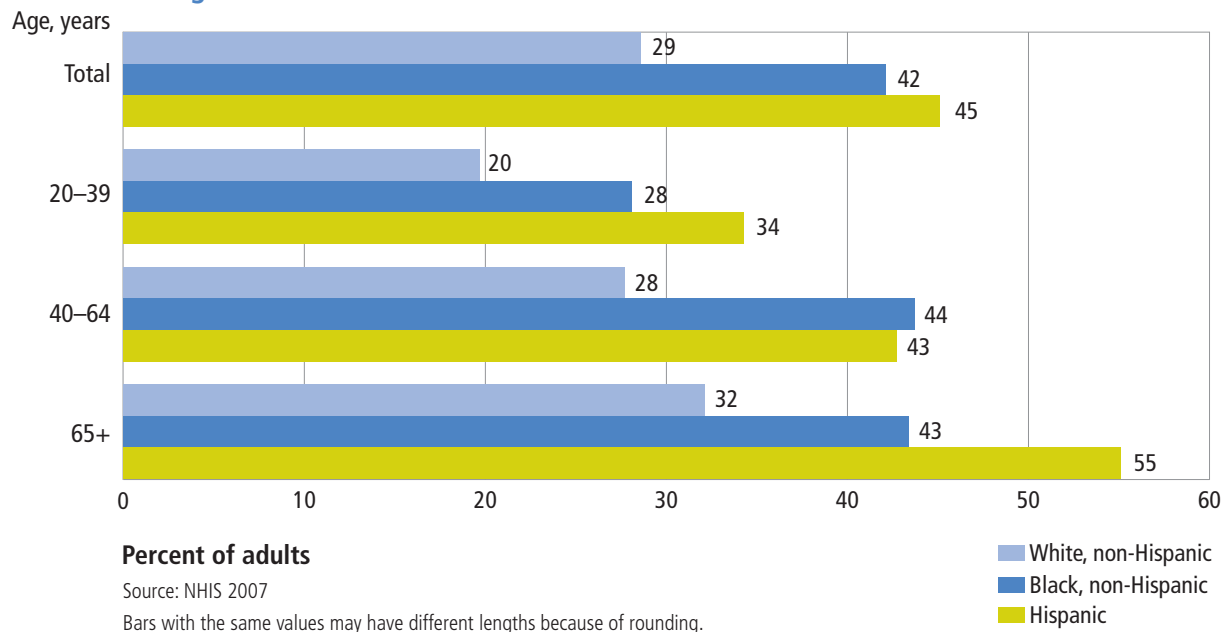
The burden of pain among adults in the United States

Self-rated fair or poor health is reported by about 1 in 3 adults with arthritis. The prevalence generally increases with age regardless of gender or race/ethnicity.

Percent of adults with arthritis who report fair/poor health status, by gender and age



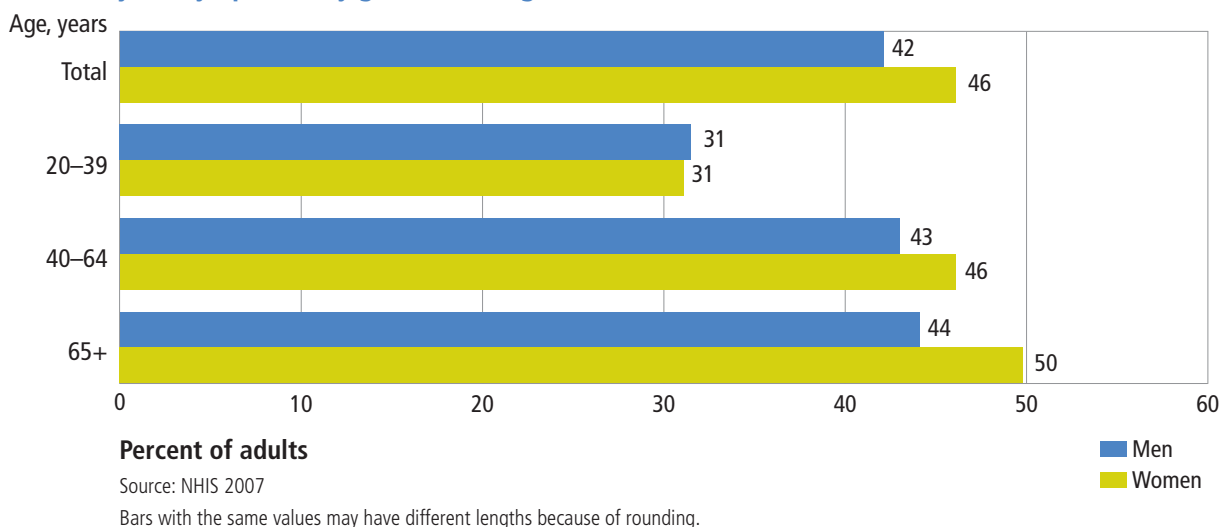
Percent of adults with arthritis who report fair/poor health status, by race/ethnicity and age



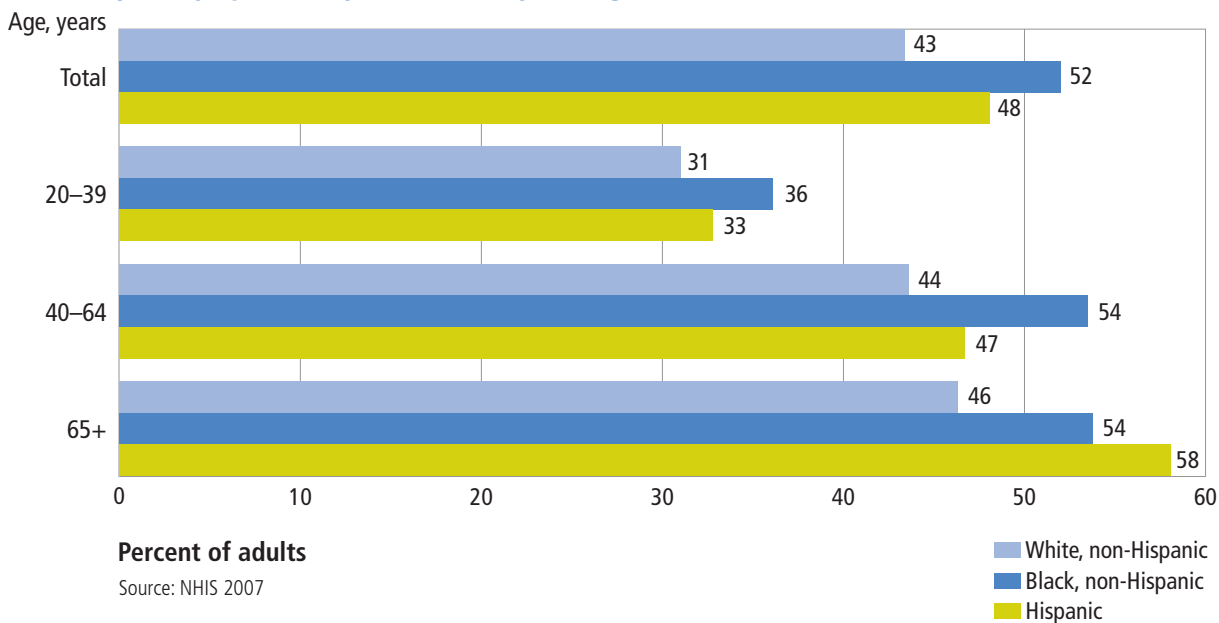
The burden of pain among adults in the United States

42% of men and 46% of women with arthritis report arthritis-related activity limitations. 52% of black, non-Hispanic adults with arthritis and 48% of Hispanic adults with arthritis report being limited in their usual daily activities.

Percent of adults with arthritis who report activity limitations because of arthritis or joint symptoms, by gender and age



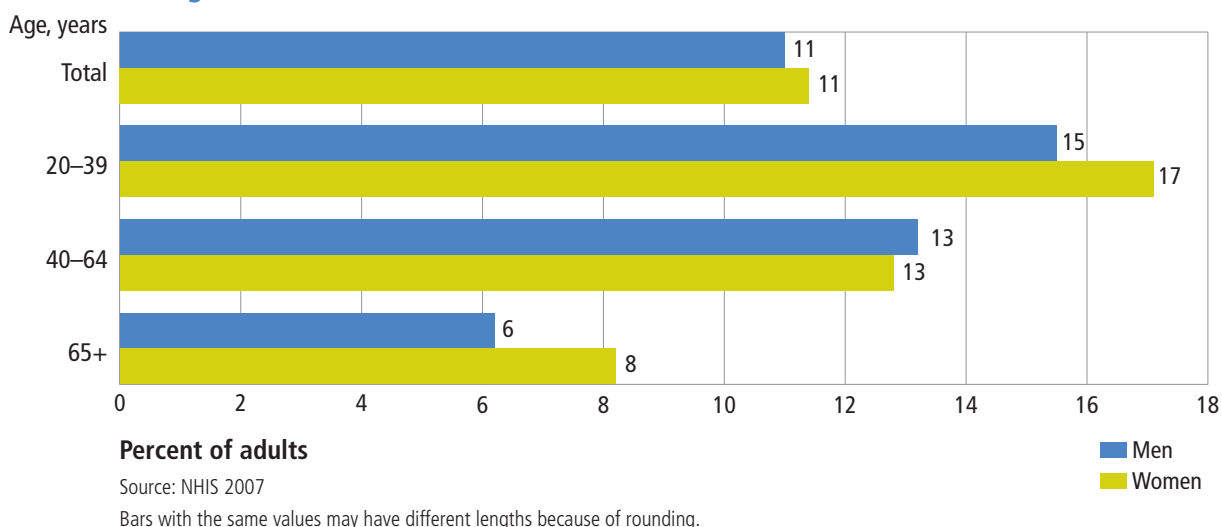
Percent of adults with arthritis who report activity limitations because of arthritis or joint symptoms, by race/ethnicity and age



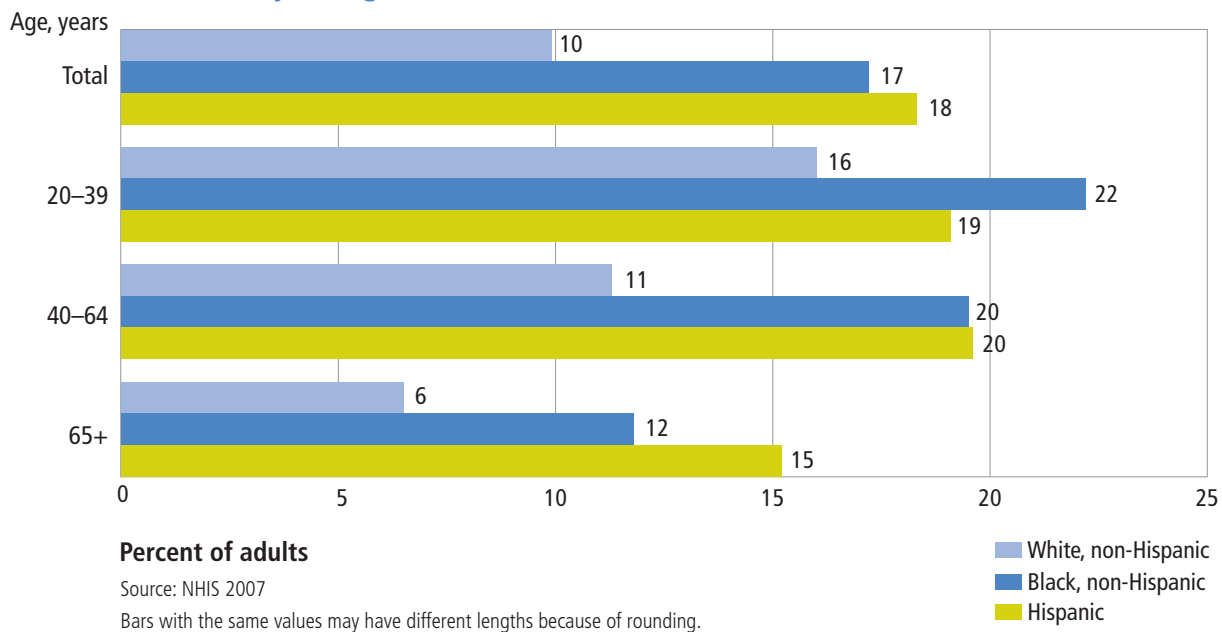
The burden of pain among adults in the United States

More young adults with arthritis report reduced daily sleep hours (16%) than adults aged 40–64 years (13%) and adults aged 65 and older (7%) with arthritis.

Percent of adults with arthritis who report less than 6 usual hours of sleep, by gender and age



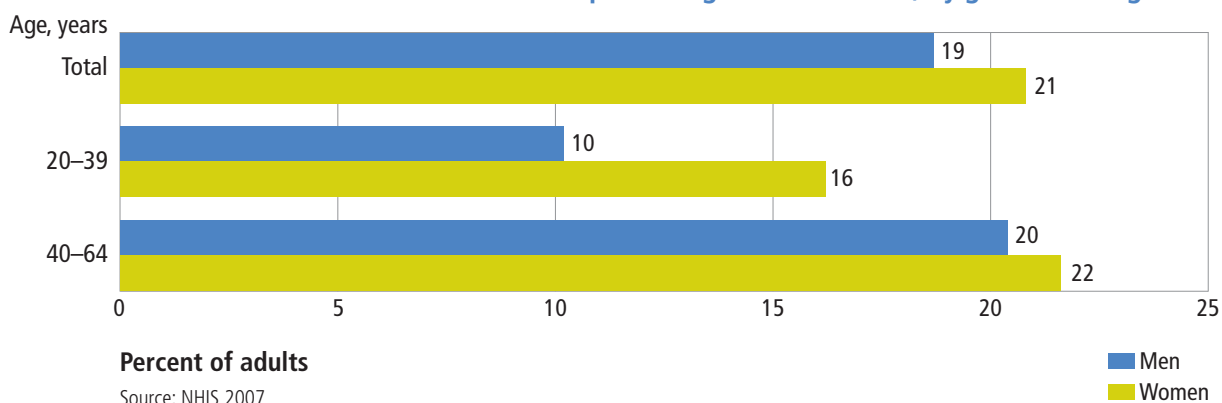
Percent of adults with arthritis who report less than 6 usual hours of sleep, by race/ethnicity and age



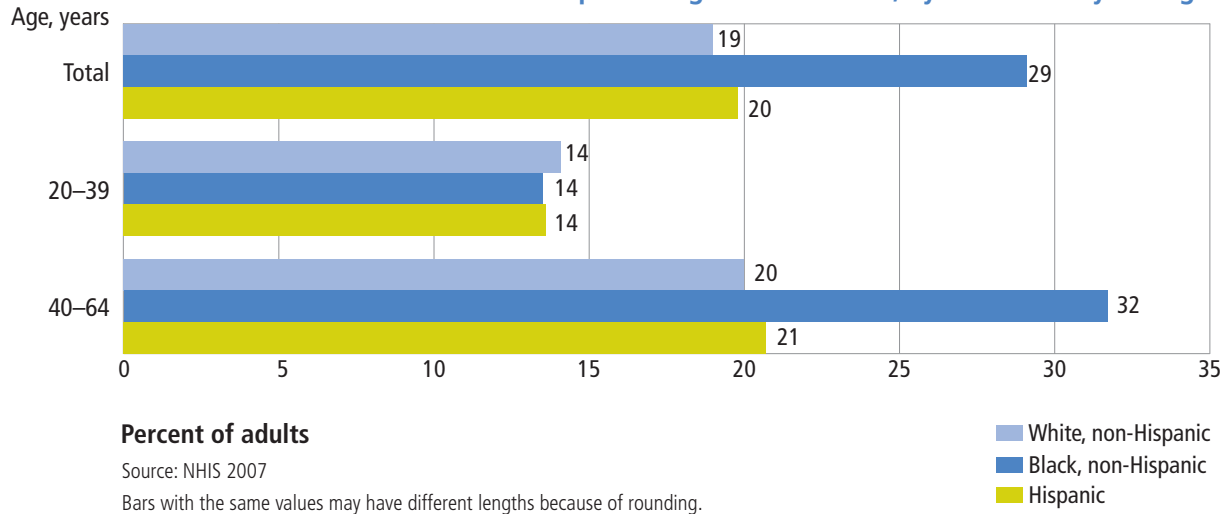
The burden of pain among adults in the United States

20% of adults with arthritis report being unable to work. Nearly one-third of black, non-Hispanic adults aged 40–64 years with arthritis report being unable to work (32%).

Percent of adults with arthritis who report being unable to work, by gender and age



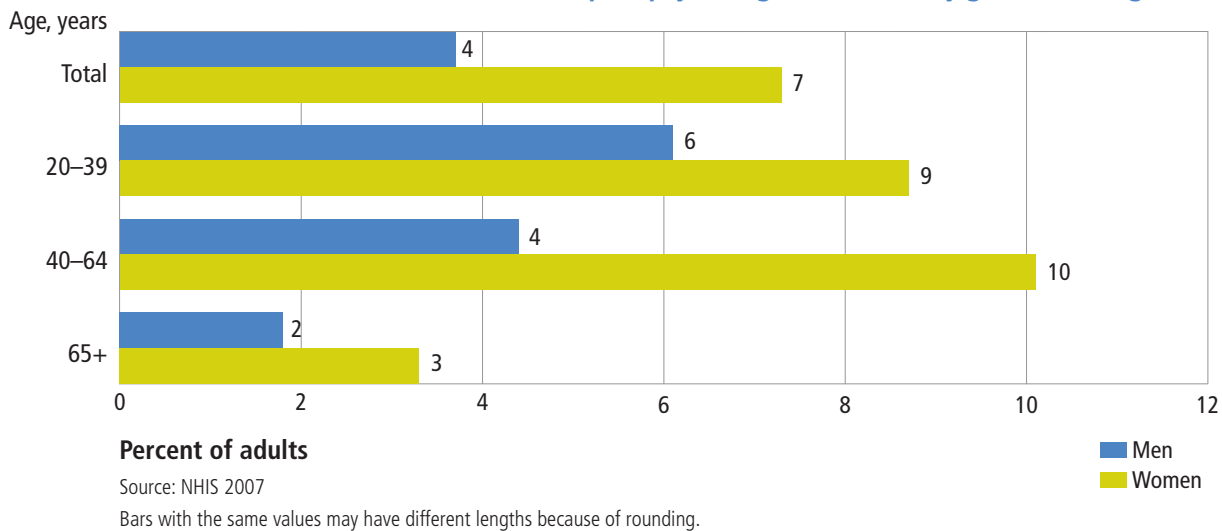
Percent of adults with arthritis who report being unable to work, by race/ethnicity and age



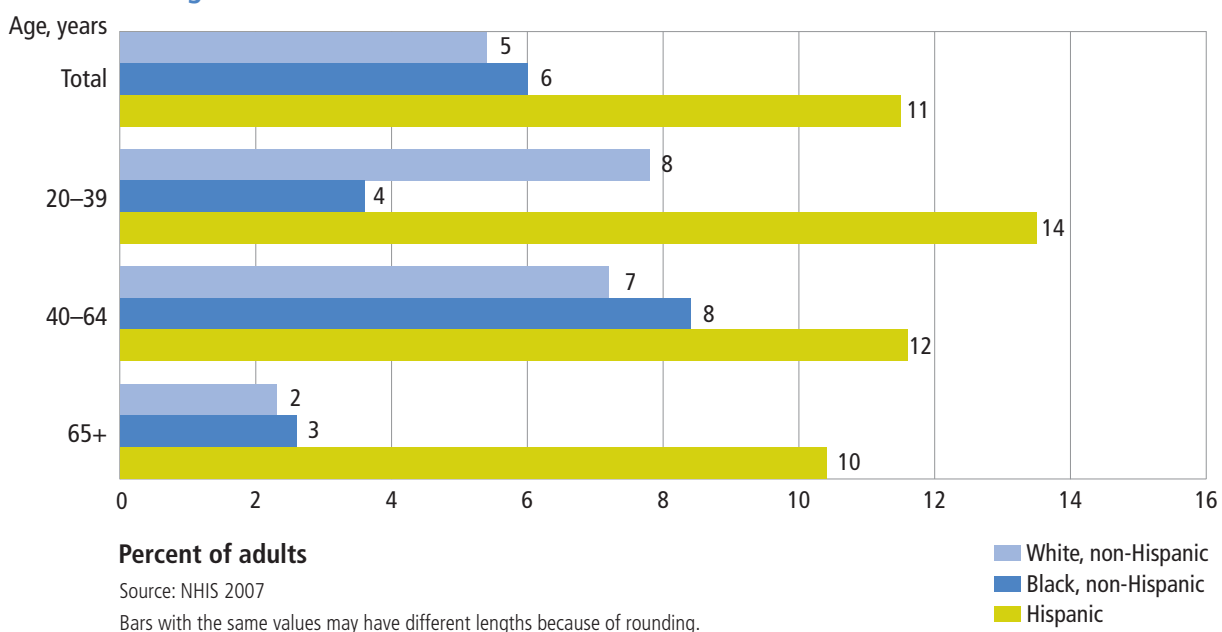
The burden of pain among adults in the United States

6% of adults with arthritis report psychological distress. Generally, the prevalence declines with age and is greatest among women (7%) and Hispanic adults (11%).

Percent of adults with arthritis who report psychological distress, by gender and age



Percent of adults with arthritis who report psychological distress, by race/ethnicity and age

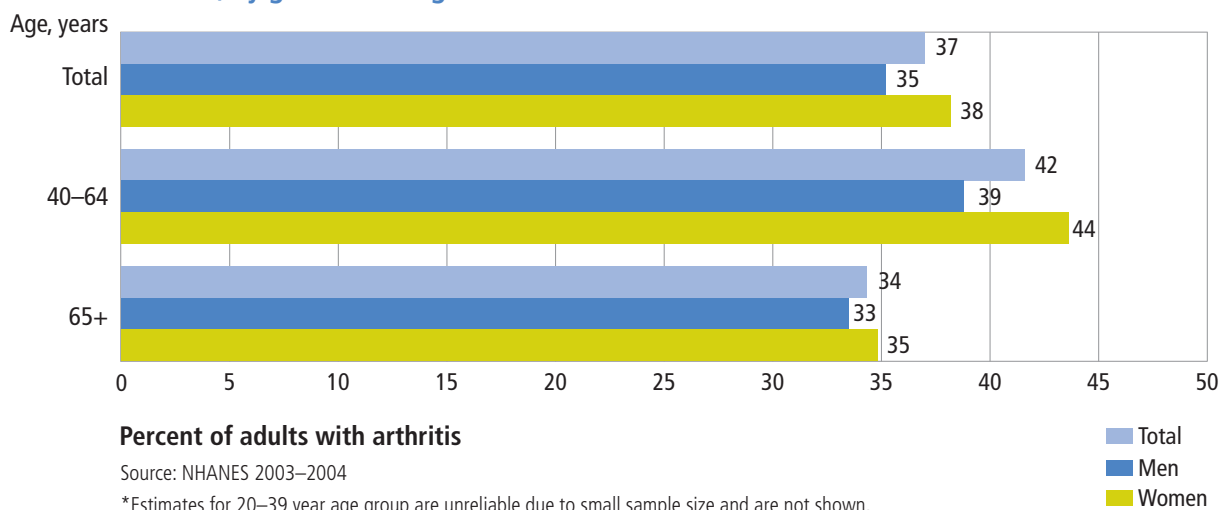


Arthritis and analgesic drug use

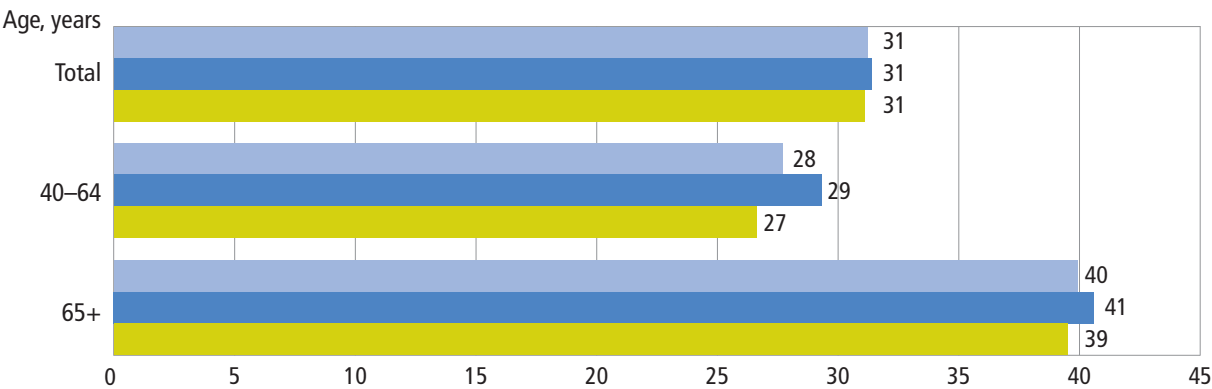
37% of adults with arthritis report prescription analgesic drug use.

31% of adults with arthritis report using a non-prescription or non-narcotic prescription analgesic nearly every day for a month or longer.

Prevalence of prescription analgesic drug use in the past month among adults with arthritis, by gender and age*



Prevalence of current frequent monthly use of nonprescription and select prescription non-narcotic analgesics among adults with arthritis, by gender and age*



Percent of adults with arthritis

Source: NHANES 2003–2004

*Estimates for 20–39 year age group are unreliable due to small sample size and are not shown.
Bars with the same values may have different lengths because of rounding.

Total
Men
Women



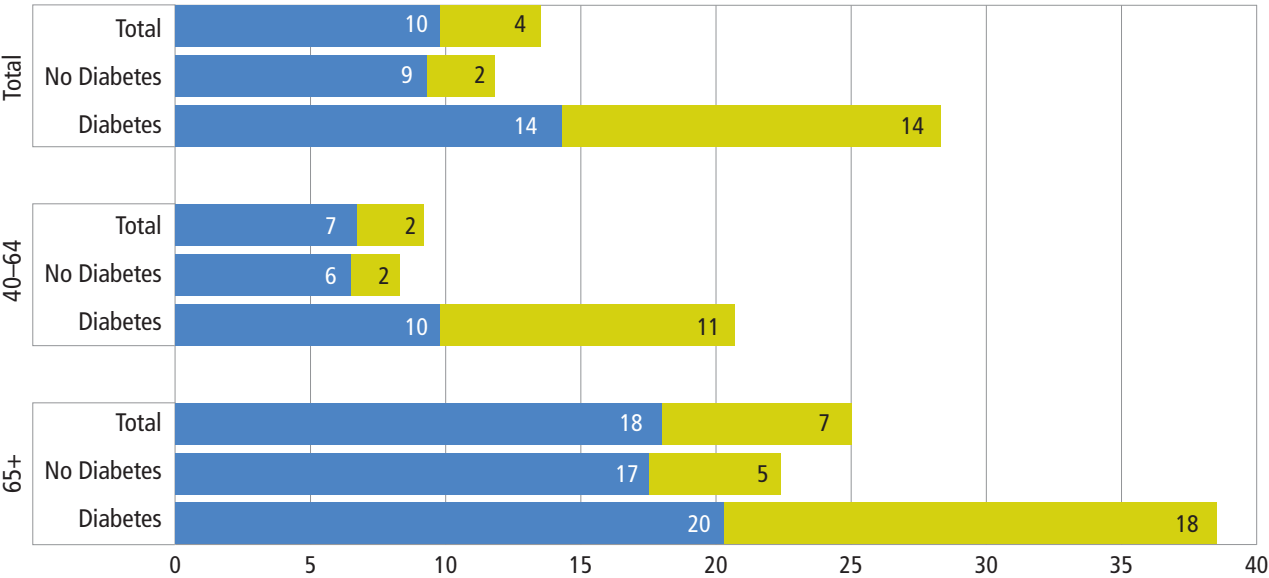
Peripheral neuropathy

14% of adults aged 40 years and older have peripheral neuropathy; about three fourths are asymptomatic.

Based on monofilament testing, 14% of adults have peripheral neuropathy, damage to nerves that carry information from the brain and spinal cord to other parts of the body. It is more than twice as prevalent among adults with diabetes as adults with no diabetes (28% vs. 11%, respectively).

50% of adults with diabetes who have peripheral neuropathy report having pain/tingling in their feet or numbness/loss of feeling in the prior 3 months (14% symptomatic; 14% asymptomatic).

Prevalence of peripheral neuropathy among adults aged 40 years and older by diabetes status and age



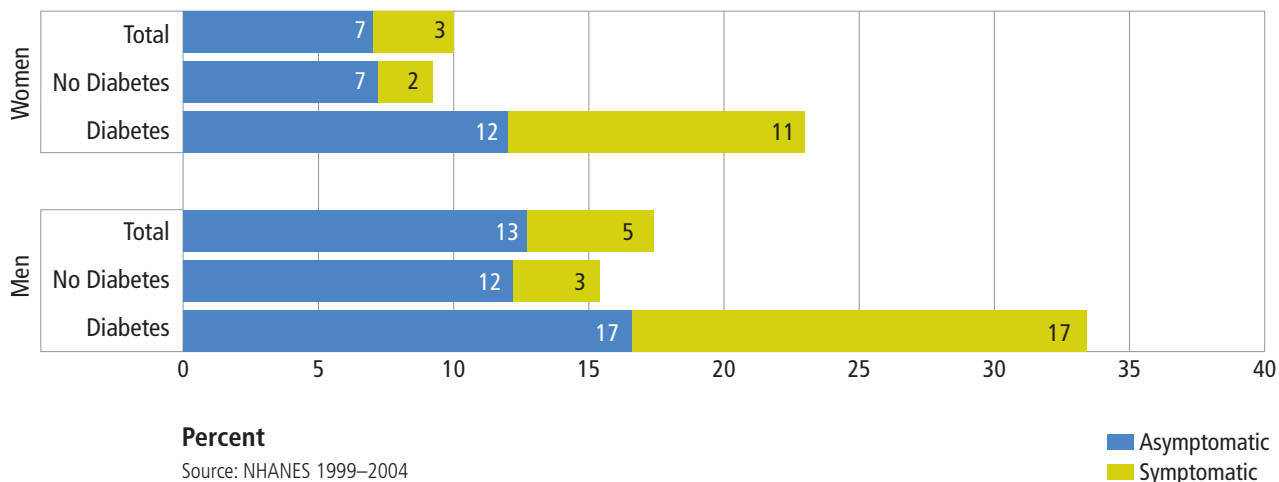
Percent

Source: NHANES 1999-2004; Symptomatic persons reported numbness/loss of feeling or painful sensations/tingling in feet during the preceding 3 months.

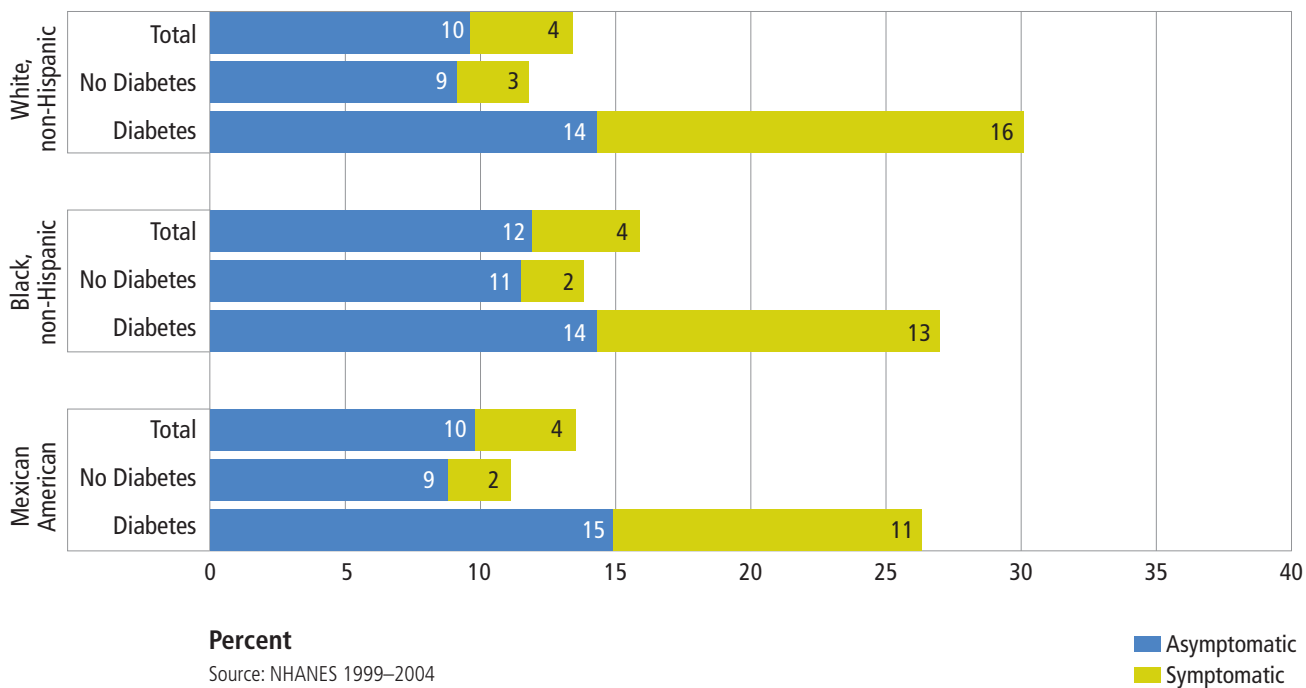
Asymptomatic
Symptomatic

The burden of pain among adults in the United States

Prevalence of peripheral neuropathy among adults aged 40 years and older by diabetes status and gender



Prevalence of peripheral neuropathy among adults aged 40 years and older by diabetes status and race/ethnicity



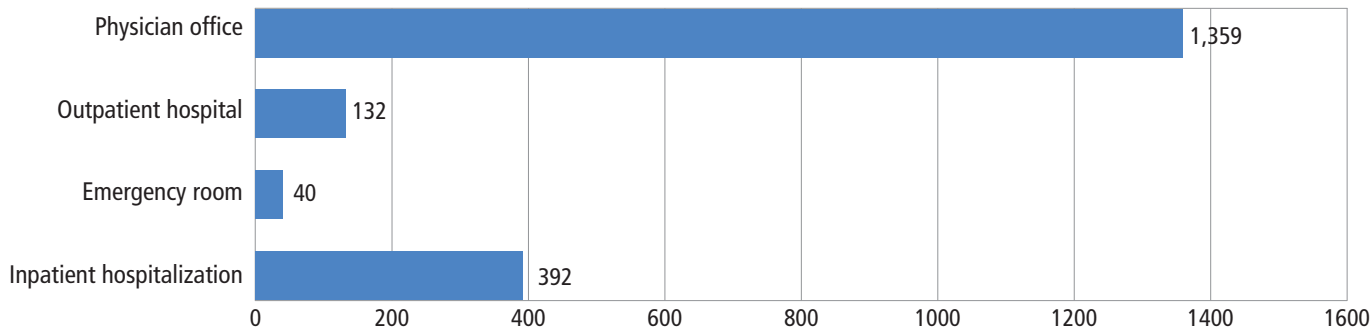
Diabetic neuropathy

Annually, there are 1.4 million physician office visits by adults aged 20 years and older with a diagnosis of diabetic neuropathy. Diabetic neuropathy is damage to the peripheral nerves that occurs secondary to vascular problems that occur with diabetes. Additionally, there are an average of 132 thousand outpatient hospital visits, 40 thousand emergency department visits, and 392 thousand inpatient hospitalizations with a diagnosis of diabetic neuropathy.

The majority of ambulatory and inpatient visits for diabetic neuropathy are by women (46–65%), adults aged 40–64 years (46–57%), and white, non-Hispanic adults (54–70%).

37% of physician office visits with a primary diagnosis of diabetic neuropathy have an analgesic drug mention, that is, an analgesic drug was prescribed, administered, or continued.

Annual number of medical visits by adults aged 20 years and older with a diagnosis of diabetic neuropathy by type of visit

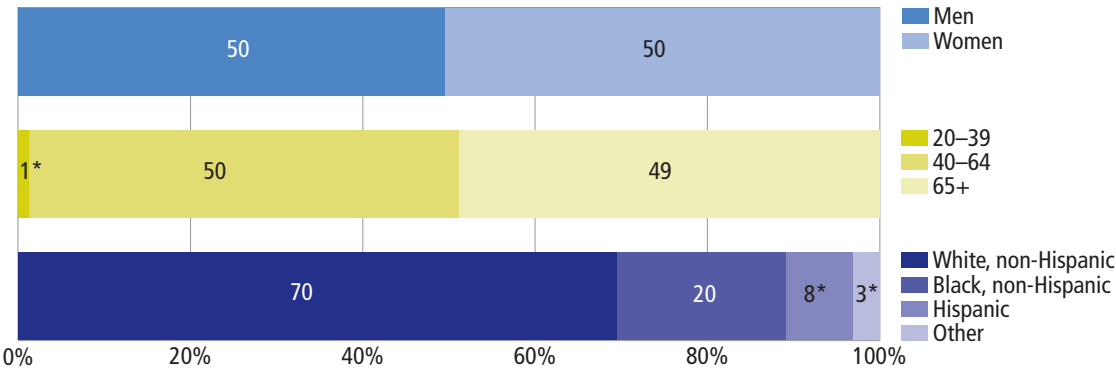


Number of visits, in thousands

Source: 2002–2006: NAMCS, NHAMCS, NHDS

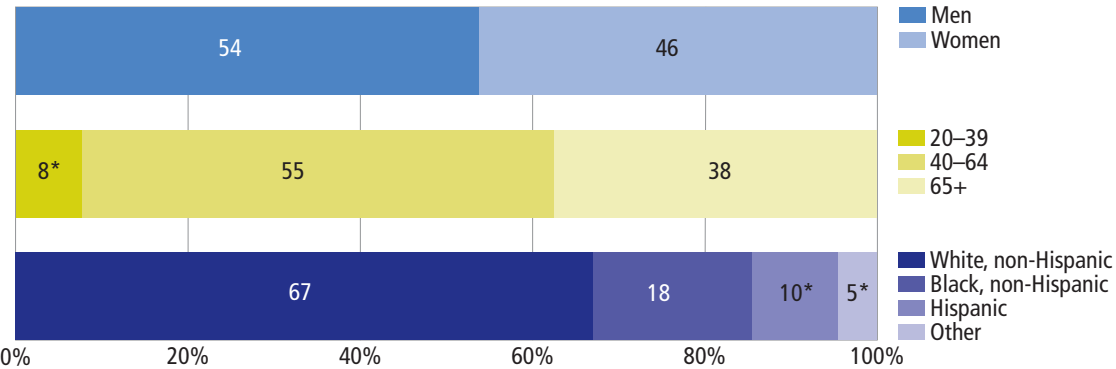
The burden of pain among adults in the United States

Percent of physician office visits among adults with a diagnosis of diabetic neuropathy



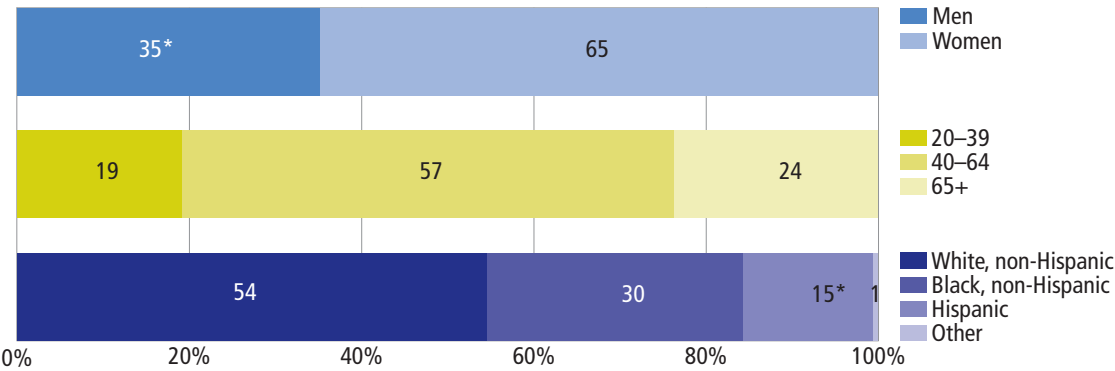
Source: NAMCS 2002–2006
*Estimate is unreliable because of small sample size.
Totals may not add to 100% because of rounding.

Percent of outpatient hospital visits among adults with a diagnosis of diabetic neuropathy



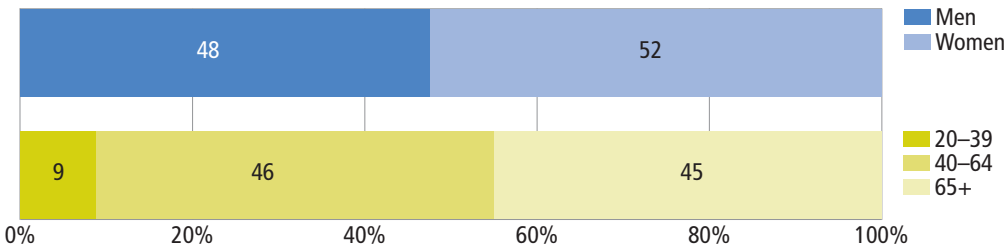
Source: NHAMCS 2002–2006
*Estimate is unreliable because of small sample size.
Totals may not add to 100% because of rounding.

Percent of emergency department visits among adults with a diagnosis of diabetic neuropathy



Source: NHAMCS 2002–2006
*Estimate is unreliable because of small sample size.
Totals may not add to 100% because of rounding.

Percent of inpatient hospitalizations among adults with a diagnosis of diabetic neuropathy



Source: NHDS 2002–2006



Fibromyalgia

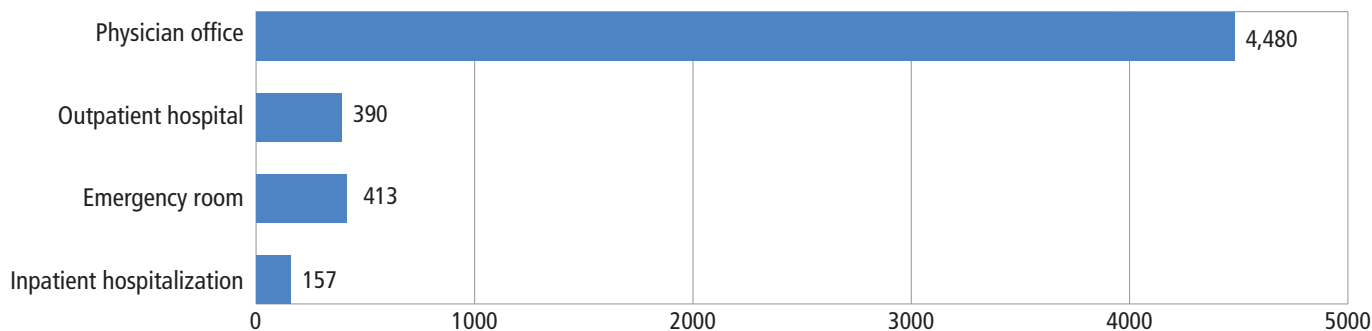
More than six million adults have fibromyalgia, a disorder characterized by fatigue, stiffness, joint tenderness, and widespread muscle pain.

Annually, there are 4.5 million physician office visits by adults aged 20 years and older, 390 thousand outpatient hospital visits, 413 thousand emergency department visits, and 157 thousand inpatient hospitalizations with a diagnosis of fibromyalgia.

71% of physician office visits with a primary diagnosis of fibromyalgia had an analgesic drug mention, that is, an analgesic drug was prescribed, administered, or continued; 29% had an antidepressant mention and 14% had an anxiolytic, sedative, or hypnotic drug mention.

The majority of visits with a fibromyalgia diagnosis are made by women (76–87%), adults aged 40–64 years (60–62%), and white, non-Hispanic adults (73–82%). The exception is emergency department visits which have relatively more men, adults aged 20–39 years, and black, non-Hispanic adults, when compared with other types of visits.

Number of medical visits by adults aged 20 years and older with a diagnosis of fibromyalgia by type of visit

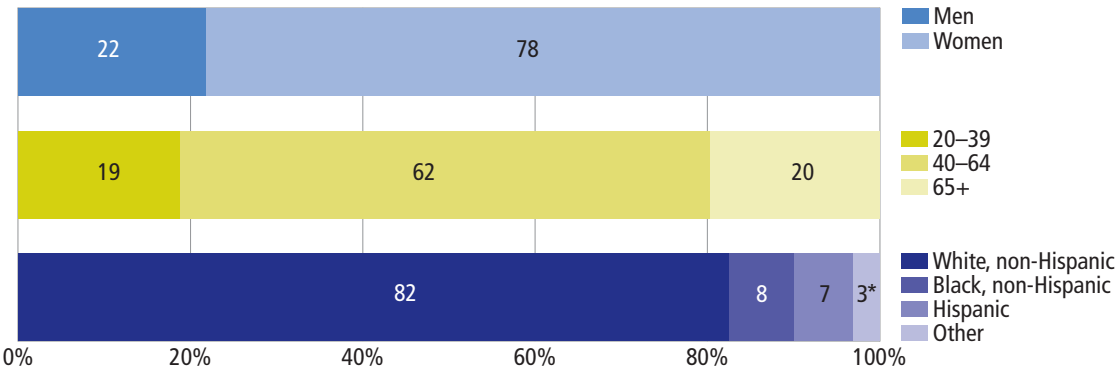


Number of visits, in thousands

Source: 2002–2006: NAMCS, NHAMCS, NHDS.

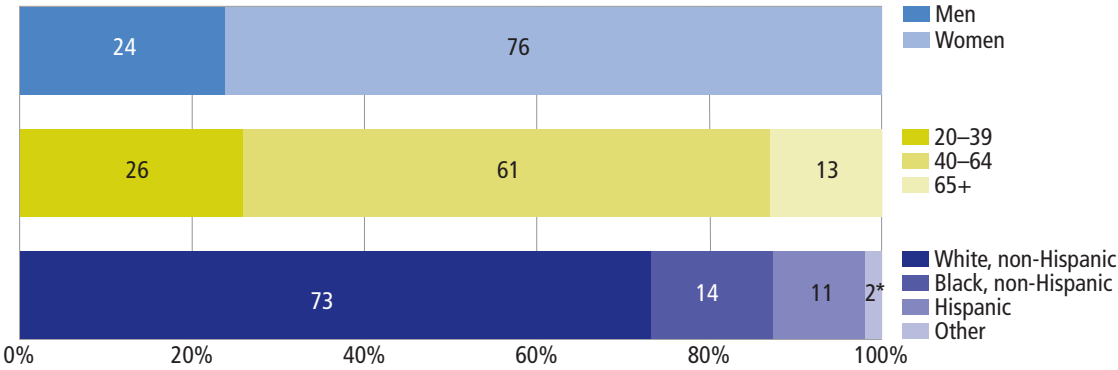
The burden of pain among adults in the United States

Percent of physician office visits among adults with a diagnosis of fibromyalgia



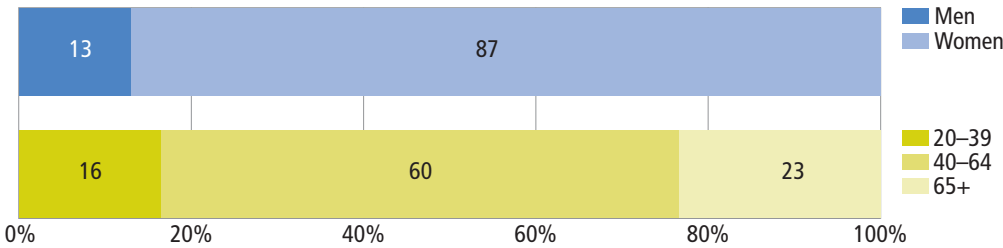
Source: NAMCS 2002–2006
*Estimate is unreliable because of small sample size.
Totals may not add to 100% because of rounding.

Percent of outpatient hospital visits among adults with a diagnosis of fibromyalgia



Source: NHAMCS 2002–2006
*Estimate is unreliable because of small sample size.

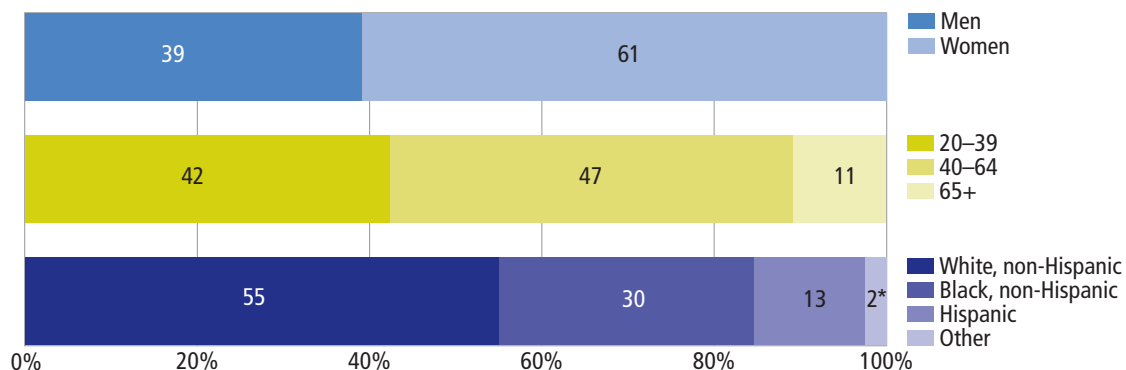
Percent of inpatient hospitalizations among adults with a diagnosis of fibromyalgia



Source: NHDS 2002–2006
Totals may not add to 100% because of rounding.

The burden of pain among adults in the United States

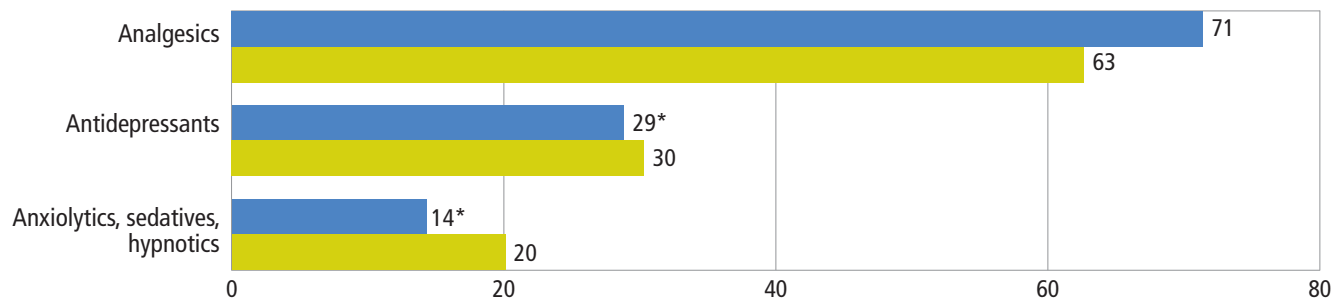
Percent of emergency department visits among adults with a diagnosis of fibromyalgia



Source: NHAMCS 2002–2006

*Estimate is unreliable because of small sample size.

Percent of fibromyalgia office visits with a drug mention for analgesics, antidepressants, or anxiolytics/sedatives/hypnotics



Percent of fibromyalgia-related office visits

Source: NAMCS 2006

*Estimate is unreliable because of small sample size.

■ Primary diagnosis
■ Any diagnosis



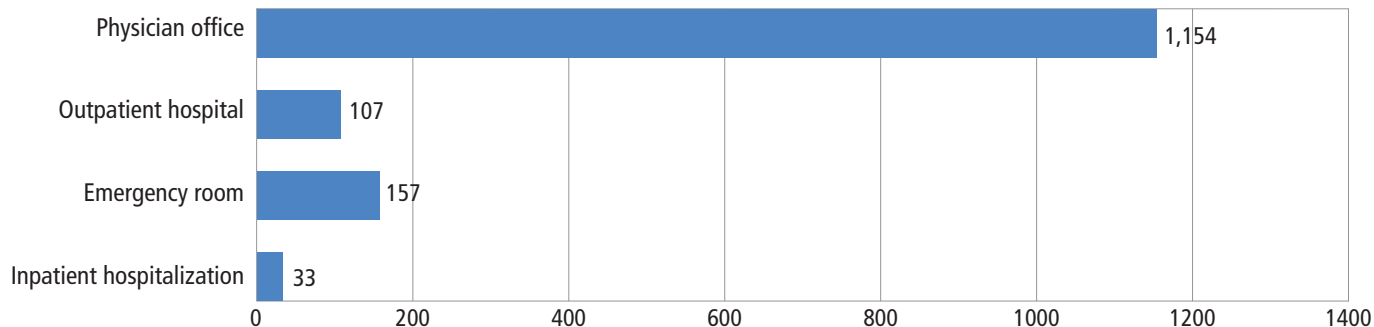
Shingles

Annually, there are 1.2 million physician office visits by adults aged 20 years and older with a diagnosis of shingles, a viral disease characterized by a painful skin rash. Annually, there are an additional 107 thousand outpatient hospital visits, 157 thousand emergency department visits, and 33 thousand inpatient hospitalizations with a diagnosis of shingles.

58% of physician office visits with a primary diagnosis of shingles had an analgesic drug mention, that is, an analgesic drug was prescribed, administered, or continued.

The majority of visits for shingles are by women (54–65%), adults aged 40–64 years (32–44%), and white, non-Hispanic adults (62–85%). The exception is with inpatient hospitalizations, where over two-thirds of the hospitalizations with a shingles diagnosis are by adults aged 65 and older.

Annual number of medical visits by adults aged 20 years and older with a diagnosis of shingles, by type of visit

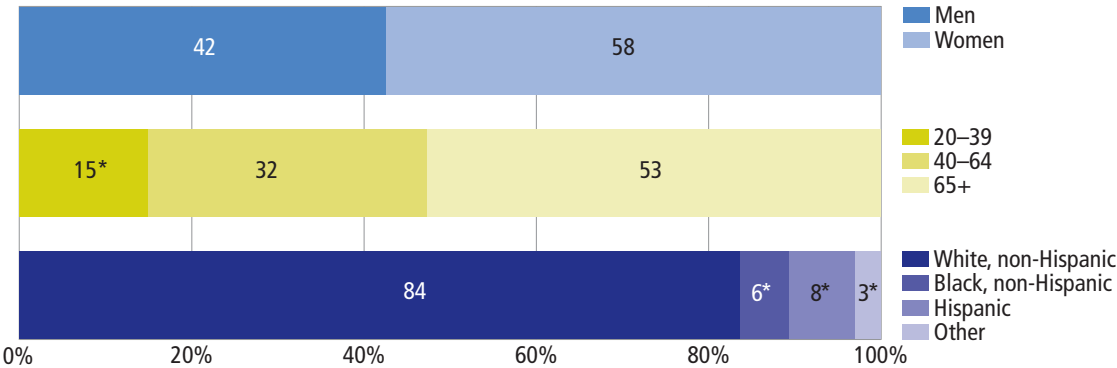


Number of visits, in thousands

Source: 2002–2006: NAMCS, NHAMCS, NHDS.

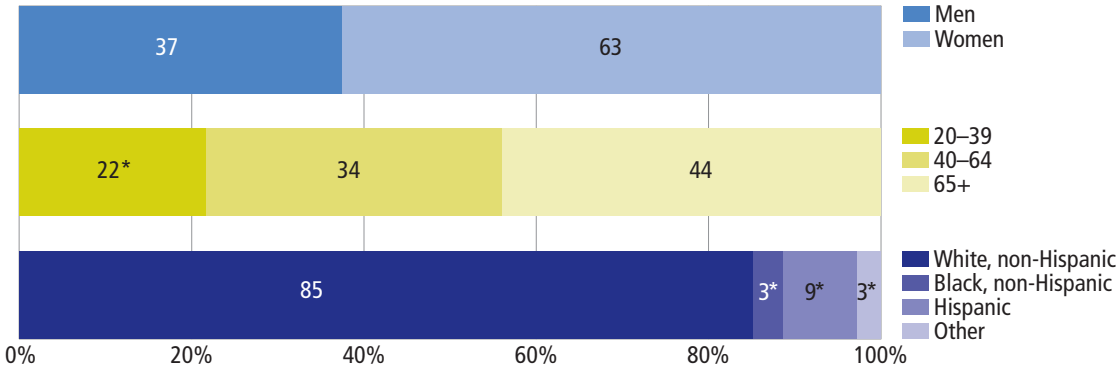
The burden of pain among adults in the United States

Percent of physician office visits among adults with a diagnosis of shingles



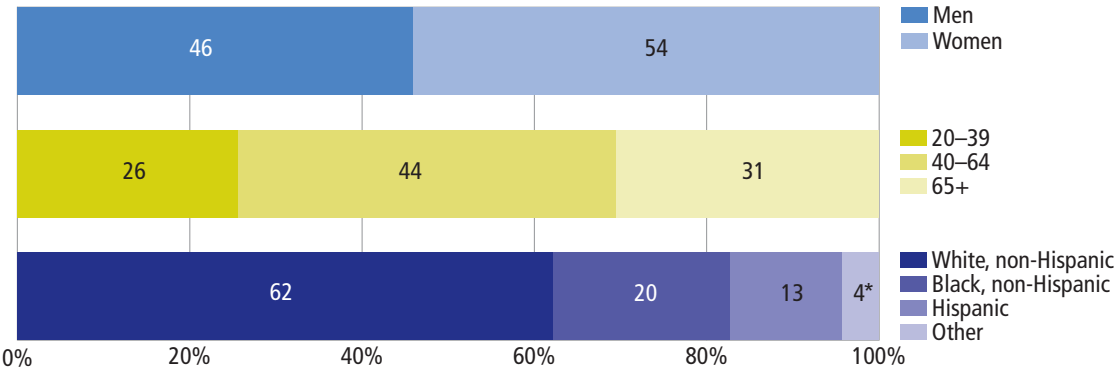
Source: NAMCS 2002–2006
*Estimate is unreliable because of small sample size.
Totals may not add to 100% because of rounding.

Percent of outpatient hospital visits among adults with a diagnosis of shingles



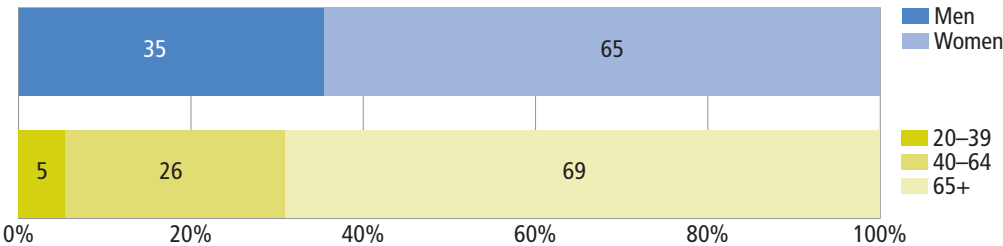
Source: NHAMCS 2002–2006
*Estimate is unreliable because of small sample size.

Percent of emergency department visits among adults with a diagnosis of shingles



Source: NHAMCS 2002–2006
*Estimate is unreliable because of small sample size.
Totals may not add to 100% because of rounding.

Percent of inpatient hospitalizations among adults with a diagnosis of shingles



Source: NHDS 2002–2006

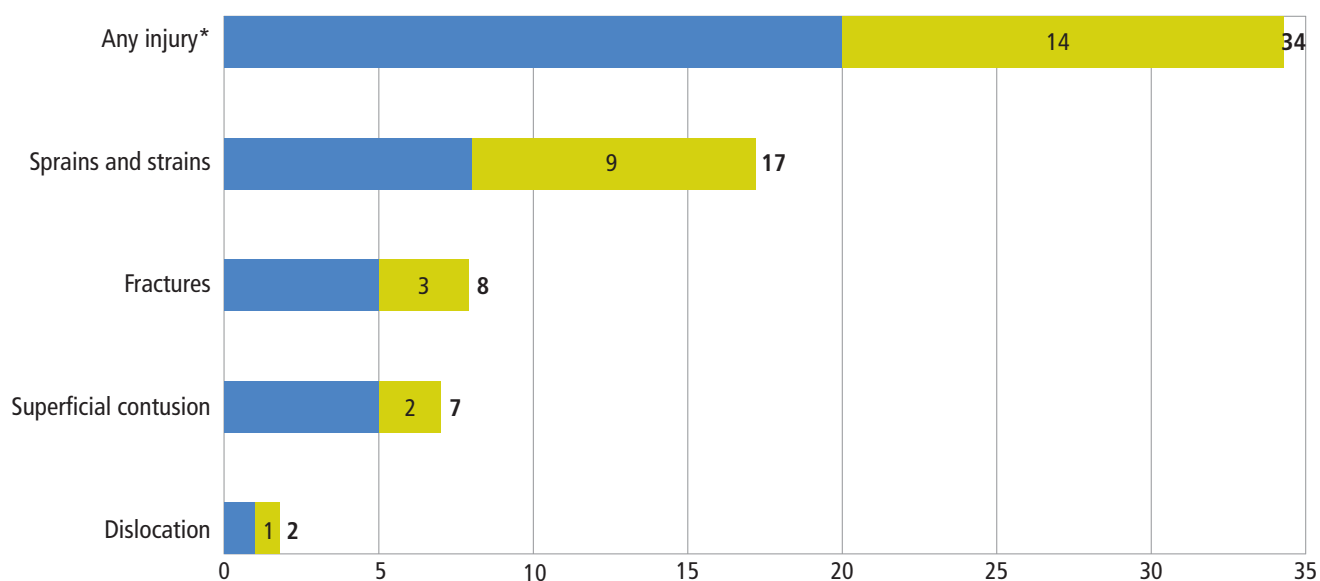


Injury

In 2006, there were nearly 34 million physician office visits for a bodily injury, which includes sprains or strains, fractures, contusions, dislocations, crushes, or burns. Sprains and strains are the most common type of injury, with nearly 17 million office visits. This was followed by 8 million visits with a fracture diagnosis and 7 million for a contusion.

14 million or 43% of all injury-related office visits had an analgesic drug mention, that is, an analgesic drug was prescribed, administered, or continued during the office visit. 53% of sprain/strain visits had an analgesic drug mention.

Number of physician office visits by adults aged 20 years and older with an injury-related diagnosis and analgesic drug mention



Physician office visits, in millions

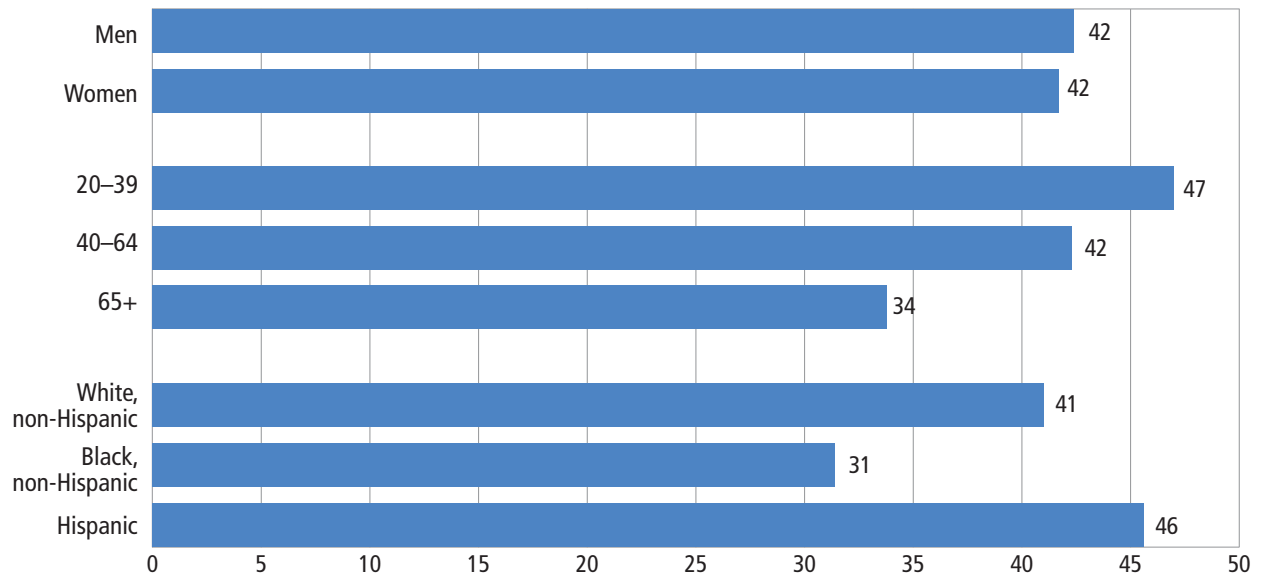
Source: NAMCS 2006

*Includes all injuries shown and bodily crushes and burns.

■ Total # of office visits
■ Visits with analgesic drug mention

The burden of pain among adults in the United States

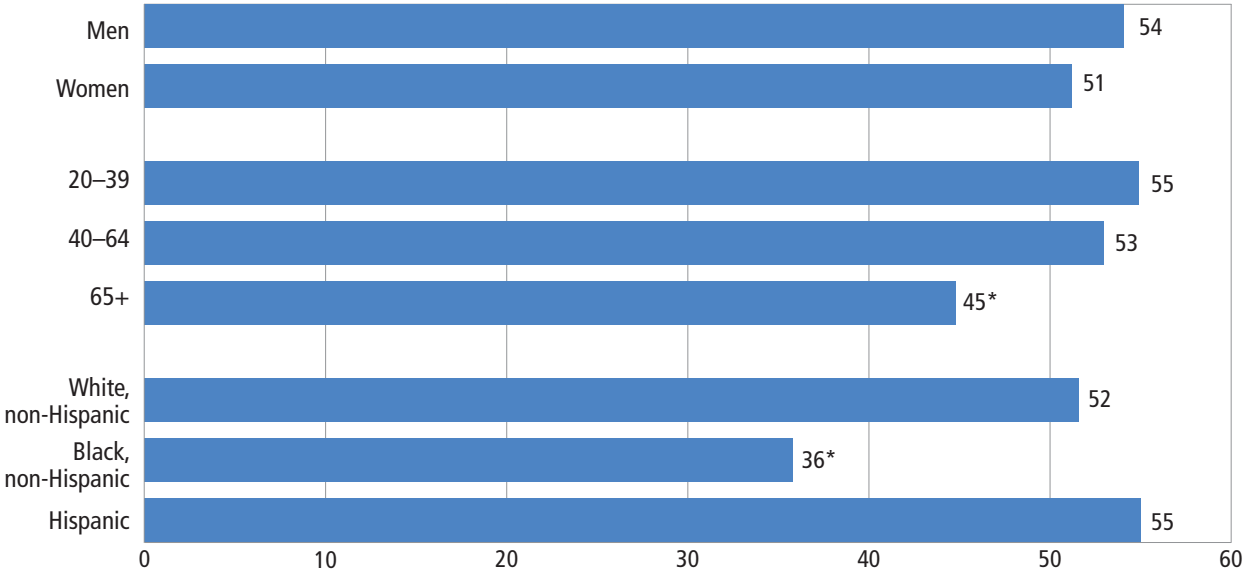
Percent of analgesic drug mentions among office visits with any primary injury-related diagnosis



Percent

Source: NAMCS 2006

Percent of analgesic drug mentions among office visits with a primary injury-related diagnosis of strains and sprains



Percent

Source: NAMCS 2006

*Estimate is unreliable due to small sample size.



Appendix

Data sources

National Health and Nutrition Examination Survey (NHANES), 1999–2004

US Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Health Statistics

The NHANES is a sample survey designed to obtain nationally representative information on the health and nutrition of the civilian, non-institutionalized population of the United States. It is conducted by the National Center for Health Statistics (NCHS), a part of the Centers for Disease Control and Prevention (CDC). Survey participants receive a face-to-face interview in their homes to obtain information on health history, health behaviors, and risk factors. Participants subsequently undergo a physical examination in a mobile examination center. The survey is conducted in 2-year cycles. The 1999–2004 survey is an aggregation of the three most recent releases of NHANES (1999–2000, 2001–2002, and 2003–2004). The total population of adults aged 20 years and older sampled during the 2003–2004 cycle is 5041, including 1494 persons aged 65 and older. The total population of adults aged 40 years and older sampled during the 1999–2004 cycle is 9970.

National Health Care Surveys:

US Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Health Statistics

National Ambulatory Medical Care Survey (NAMCS), 2002–2006

The NAMCS is a national survey of physicians designed to meet the need for objective, reliable information about the provision and use of ambulatory medical care services in the United States. It is conducted by the National Center for Health Statistics (NCHS), a part of the Centers for Disease Control and Prevention (CDC). Findings are based on a sample of visits to non-federally employed office-based physicians who are primarily engaged in direct patient care. Physicians in the specialties of anesthesiology, pathology, and radiology are excluded from the survey. The survey was conducted annually from 1973 to 1981, in 1985, and annually since 1989. The sample size for adults aged 20 years and older for 2006 is 23,819 visits and for 2002–2006 is 109,041 visits.

National Hospital Ambulatory Medical Care Survey (NHAMCS), 2002–2006

The NHAMCS, begun in 1992, is the longest continuously running nationally representative survey of visits to the emergency and outpatient departments of noninstitutional general and short-stay hospitals, exclusive of Federal, military, and Veterans Administration hospitals in the 50 States and the District of Columbia. An outpatient department is a hospital facility where nonurgent ambulatory medical care is provided under the supervision of a physician. The following are examples of the types of clinics included in NHAMCS: general medicine, surgery, pediatrics, obstetrics and gynecology, substance abuse (excluding methadone maintenance), and others (e.g., psychiatry and neurology). Clinics excluded from NHAMCS include ambulatory surgery centers, chemotherapy, employee health service, renal dialysis, methadone maintenance, and radiology. Data are released as two separate files, the emergency department data file and the outpatient department data file. The sample size for emergency department visits for adults aged 20 years and older for 2006 is 25,465 and 2002–2006 is 133,074. The sample size for outpatient department visits for adults aged 20 years and older for 2006 is 24,630 and 2002–2006 is 121,643.

National Hospital Discharge Survey (NHDS), 2002–2006

The NHDS, which has been conducted annually since 1965, is a national probability survey of inpatients discharged from non-Federal short-stay hospitals in the United States. The NHDS collects data from a sample of more than 300,000 inpatient records acquired from a national sample of about 500 hospitals. Data are available on patient characteristics including age, race, and sex; administrative information including patient disposition, expected sources of payment, and source of admission; and medical information including diagnoses and procedures. Sample size for adults aged 20 and older for 2006 is 301,075 records and for 2002–2006 is 1,398,311 records.

National Health Interview Survey (NHIS), 2007

US Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Health Statistics

The NHIS is a nationally representative interview survey based on a sample of the non-institutionalized US population. Surveys in the series have been conducted annually since 1957, with the last major restructuring occurring in 1997. The survey consists of personal interviews in a population-based national sample. The 2007 sample consists of 22,814 adults aged 20 and older, with 8,285 between the ages of 20 to 39, and 4,583 aged 65 and older.

Definitions

Pain sites

Dental pain: Persons were classified as having dental pain if they responded positively to the NHIS question, “During the past 12 months, have you had dental pain?”

Face or jaw pain: Persons were classified as having face or jaw pain if they responded positively to the NHIS question, “During the past 3 months, did you have facial ache or pain in the jaw muscles or the joint in front of the ear?” Respondents were instructed to report pain that had lasted a whole day or more, and not to report fleeting or minor aches or pains

Joint pain: Persons were classified as having joint pain if they responded positively to the NHIS question, “During the past 30 days, have you had any symptoms of pain, aching, stiffness in or around a joint?” Respondents were instructed to report the affected joints but not to include the back or neck. On the NHANES, the question asked about joint pain during the past 12 months.

Severe joint pain was defined based on the NHIS 2006 follow-up question, “During the past 30 days, how bad was your joint pain on average?” Respondents were instructed to answer on a scale of 0–10 where 0 was no pain or aching and 10 was pain or aching as bad as it can be. Severe pain was defined as a response of 7–10.

Low back pain: Persons were classified as having low back pain if they responded positively to the NHIS or NHANES question, “During the past 3 months, did you have low back pain?” Respondents were instructed to report pain that had lasted a whole day or more, and not to report fleeting or minor aches or pains.

Neck pain: Persons were classified as having neck pain if they responded positively to the NHIS or NHANES question, “During the past 3 months, did you have neck pain?” Respondents were instructed to report pain that had lasted a whole day or more, and not to report fleeting or minor aches or pains.

Severe headaches or migraines: Persons were classified as having severe headache or migraine if they responded positively to the NHIS or NHANES question, “During the past 3 months, did you have a severe headache or migraine?” Respondents were instructed to report pain that had lasted a whole day or more, and not to report fleeting or minor aches or pains.

Pain-related diseases and conditions

Arthritis: Persons were classified as having arthritis if they responded positively to the NHIS question, “Have you ever been told by a doctor or other health professional that you had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia?” On the NHANES, the question asked only about arthritis.

Peripheral neuropathy (PN): For the 1999–2000, 2001–2002, and 2003–2004 NHANES surveys, participants aged 40 years and older received monofilament testing of foot sensation at three sites (plantar, first metatarsal head; plantar, fifth metatarsal head; and plantar, hallux) on the bottom of each foot (total of six sites). PN was defined as 1 or more insensate areas.

Symptomatic PN: Persons with PN were classified as symptomatic if they responded positively to either question, “During the past 3 months, have you had a painful sensation or tingling in your hands or feet? Exclude normal foot aches from standing or walking for long periods” or “During the past 3 months, have you had numbness or loss of feeling in your feet, other than from your feet falling asleep?”

Diagnostic classification used in health care visit charts

Clinical classification codes from the International Classification of Diseases (ICD), 9th Revision, Clinical Modification (ICD-9-CM)

Condition	ICD-9-CM Code
Diabetic neuropathy	250.6
Fibromyalgia	729.1
Injury	
Fracture	800-829
Dislocation	830-839
Sprains and strains	840-848
Contusion/superficial	910-924
Crush	925-929
Burns	940-949
Joint pain	719.4
Low back pain	724.2
Shingles	53.9
Severe headache or migraines	346, 784.0, 307.81

Health status indicators

General health status: Persons rated their health in response to the NHIS question, “Would you say your health in general was excellent, very good, good, fair, or poor?”

Activity limitations: Persons were classified as having activity limitations if they responded positively to the NHIS question, “Are you now limited in any way in any of your usual activities because of arthritis or joint symptoms?”

Unable to work: Persons were classified as being unable to work if they responded positively to the NHIS questions, “Does a physical, mental, or emotional problem NOW keep you from working at a job or business?”

Psychological distress: Psychological distress was ascertained on the NHIS with the K6 instrument which asked persons to report, “During the past 30 days, how often did you feel...so sad that nothing could cheer you up? Nervous? Restless or fidgety? Hopeless? That everything was an effort? And worthless?” Possible answers are: all of the time (4 points), most of the time (3 points), some of the time (2 points), a little of the time (1 point), and none of the time (0 points) for a possible total of 0 to 24 points. 13 or more is used to define serious psychological distress.

Reduced sleep: Persons were classified as having reduced daily sleep if they reported sleeping less than 6 hours in answer to the NHIS question, “On average, how many hours of sleep do you get in a 24-hour period?”

Other definitions

Diabetes: Persons were classified as having diabetes if they self-reported in the NHANES interview having been told by a physician that they have diabetes.

Body mass index (BMI): BMI was calculated as weight in kilograms divided by the square of height in meters, based on the NHIS sample adult's responses to survey questions regarding height and weight.

- Normal weight: A person was classified as normal weight if his/her BMI was greater than or equal to 18.5 and less than 25.0.
- Overweight: A person was classified as overweight if his/her BMI was greater than or equal to 25.0 and less than 30.0.
- Obese: A person was classified as obese if his/her BMI was greater than or equal to 30.0.

Drug data

Prescription drug use data: NHANES participants were asked if they had taken a prescription drug in the past month. Those who answered “yes” were asked to show the interviewer the medication containers of all prescription drugs. For each drug reported, the interviewer recorded the product's complete name from the container. Prescription drugs were classified based on the therapeutic classification scheme of Cerner Multum's Lexicon. Analgesic drugs were identified with a code of 58.

Non-prescription and select non-narcotic prescription analgesic use: NHANES participants were shown a hand card with a list of non-prescription and prescription non-narcotic analgesics and asked, “Have you ever taken any of these prescription or over-the-counter pain reliever medications nearly every day for as long as a month?” If a participant answered affirmatively, they were asked to identify each product taken and whether they were currently taking the product daily or nearly every day. Frequent monthly analgesic users were defined as adults who currently used a pain reliever from the hand card daily or nearly every day.

Drug mentions at office-based physician visits: For the NAMCS, physicians or their staffs were instructed to record all new or continued medications ordered, supplied, or administered at the visit. This included prescription and nonprescription preparations, immunizations, desensitizing agents, and anesthetics. In this survey, recorded medications are referred to as drug mentions. Visits with one or more drug mentions are termed “drug visits.” Drugs for the 2006 survey are classified based on the therapeutic classification scheme of Cerner Multum's Lexicon: analgesic drugs = 58, antidepressants = 249, and anxiolytics, hypnotics, and sedatives = 67.





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