

Running the Numbers

*A Periodic Feature to Inform North Carolina Health Care Professionals
About Current Topics in Health Statistics*

*From the State Center for Health Statistics, NC Department of Health and Human Services
<http://www.schs.state.nc.us/SCHS>*

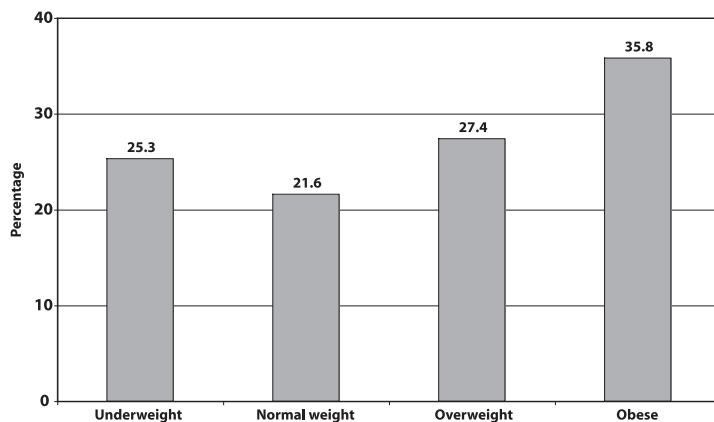
Arthritis Prevalence and Risk Factors in North Carolina

Arthritis is one of the most common chronic diseases and is the leading cause of disability in the United States.¹ Arthritis refers to more than 100 different conditions affecting the joints, surrounding tissues, and other connective tissues. Several common forms of arthritis are gout, osteoarthritis, rheumatoid arthritis, and juvenile arthritis. People with these diseases experience pain, stiffness, and/or limitation of motion. The cause of most types of arthritis is unknown.

The number of adults in North Carolina in 2005 with doctor-diagnosed arthritis (diagnosed by a physician or other health professional) is estimated at 1 754 000; this number is projected to increase to 2 761 000 in 2030.² In 2005, there were an estimated 681 000 adults in North Carolina with arthritis-attributable activity limitation.² While arthritis is not a leading cause of death in North Carolina, it is an important cause of hospitalization. In 2005 in North Carolina, there were 23 921 hospital discharges with a principal diagnosis of arthropathies (joint diseases) and related disorders (ICD-9-CM codes 710-719). The average length of stay for these hospitalizations was 4.1 days and the associated hospital charges were \$675 748 000. Approximately 90% of these charges resulted from hospitalizations with a principal diagnosis of osteoarthritis (degenerative joint disease).

The Behavioral Risk Factor Surveillance System (BRFSS) is a random telephone survey of adults (aged 18 years and older) that collects information on health conditions, health risk factors, and use of health services. It is conducted in all US states and the data are self-reported. In the 2005 North Carolina BRFSS, a number of questions related to arthritis were asked of more than 17 000 adult respondents. According to the 2005 BRFSS, 38.4% of adults in North Carolina had symptoms of pain, aching, or stiffness in or around a joint in the past 30 days. Of these adults whose joint symptoms began more than 3 months earlier, 74.4% had ever seen a doctor or other health professional for their joint symptoms. And 33.0% were limited in any of their usual activities because of their joint symptoms.

Figure 1.
Percentage of Adults With Doctor-Diagnosed Arthritis by Weight
Categories, 2005 North Carolina BRFSS



In 2005, 27.3% of adults in North Carolina had doctor-diagnosed arthritis, an increase from 24.8% in 2000. North Carolina's rate was slightly above the 2005 US average of 26.9%. Table 1 shows the 2005 prevalence of self-reported doctor-diagnosed arthritis in North Carolina by selected respondent characteristics. Prevalence is higher among females, American Indians, non-Hispanics, older adults, adults with lower education and income, adults who report a disability, veterans, and adults who report having diabetes or asthma. Figures 1 and 2 show the association of doctor-diagnosed arthritis prevalence with body mass

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index and level of physical activity. Obese adults have a higher rate of arthritis as do adults with lower levels of physical activity.

Figure 3 indicates that adults with doctor-diagnosed arthritis are much more likely than adults without arthritis to report their health as fair or poor and much less likely to report their health as very good or excellent. This association may be partly because adults with arthritis are older and thus have a higher rate of other health problems, too.

The associations shown here do not indicate cause and effect. For example, veterans may have a higher rate of arthritis in part because they are much older on average than other North Carolina adults. Hispanics in North Carolina who speak primarily Spanish are much younger than average and also much less likely than other population groups to have health insurance or a personal doctor, which reduces the chance for a diagnosis. Though physical activity can maintain joint health and reduce the risk of arthritis, the presence of arthritis may lead to lower levels of physical activity. The data shown in this report do indicate population subgroups that can be targeted by arthritis prevention and management programs.

Figure 2.
Percentage of Adults With Doctor-Diagnosed Arthritis by Level of Physical Activity, 2005 North Carolina BRFSS

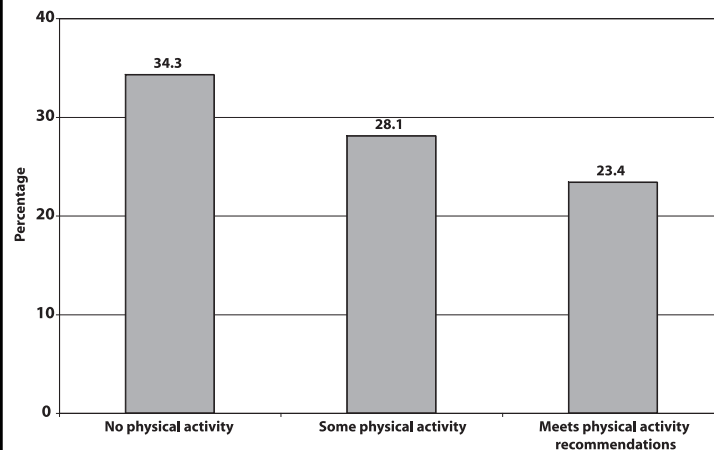
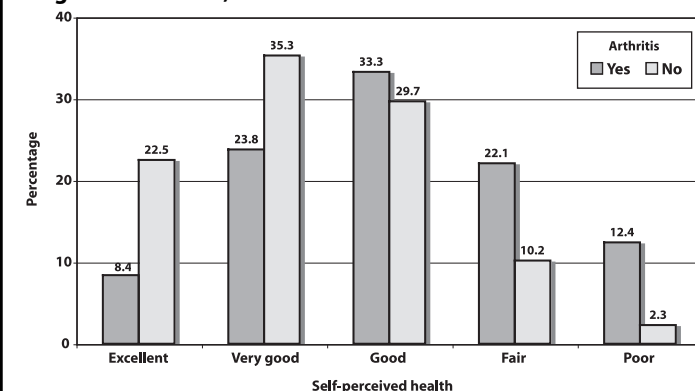


Figure 3.
Percentage of Adults Who Reported That Their Health Was Excellent, Very Good, Good, Fair, or Poor, by Presence/Absence of Doctor-Diagnosed Arthritis, 2005 North Carolina BRFSS



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Table 1.
Percentage of Adults Reporting Doctor-Diagnosed Arthritis by Selected Respondent Characteristics, 2005
North Carolina BRFSS

Characteristic	Percent	Characteristic	Percent
Total Population	27.3	Education	
Gender		Less than high school	31.8
Male	22.7	High school or GED	30.2
Female	31.7	Some post high school	27.6
Race		College graduate	21.4
White	29.2	Household Income	
African American	27.5	Less than \$15 000	38.7
Asian	9.9	\$15 000 - \$24 999	28.1
American Indian	40.3	\$25 000 - \$34 999	29.1
Other minorities	7.8	\$35 000 - \$49 999	25.5
Ethnicity		\$50 000 - \$74 999	23.5
English-speaking Hispanic	23.8	\$75 000+	20.9
Spanish-speaking Hispanic	3.8	Disability	
Non-Hispanic	29.2	Yes	52.8
Age (years)		No	18.0
18-24	5.5	Veteran	
25-34	9.7	Yes	36.3
35-44	16.2	No	26.0
45-54	33.0	Diabetes	
55-64	46.3	Yes	54.6
65-74	55.5	No	24.6
75+	59.0	Asthma	
		Yes	43.1
		No	26.2

REFERENCES

- 1 Yelin E, Callahan LF. The economic cost and social and psychological impact of musculoskeletal conditions. *Arthritis Rheum.* 1995;38(10):1351-1362.
- 2 Centers for Disease Control and Prevention. Projected state-specific increases in self-reported doctor-diagnosed arthritis and arthritis-attributable activity limitation—United States, 2005-2030 (errata). *MMWR.* 2007;56(17):608-610.

Contributed by Paul A. Buescher, PhD,
 State Center for Health Statistics, North Carolina Division of Public Health