

## Health Risk Factors and Chronic Illnesses among Construction Workers

Cigarette smoking, obesity, diabetes, hypertension (high blood pressure), and high cholesterol are major health risk factors.<sup>1</sup> Cigarette smoking is associated with a 12- to 13-fold increase in the risk of dying from chronic obstructive pulmonary disease (COPD) and accounts for nearly one of every five deaths in the United States.<sup>2</sup>

Although people are aware that smoking is harmful, cigarette or tobacco use is still widespread, particularly among *production* (blue-collar, *see* Glossary) workers. In 2010, more than 30% of workers in construction trades were current smokers, compared to just 20% of workers in all industries (chart 54a). The risk of chronic lung disease and cancer is magnified among construction workers due to the combined effects of smoking and other hazardous respiratory exposures, including welding dust, silica, and asbestos (*see* pages 35 and 50).

Obesity has been linked to stroke, diabetes, and several other chronic conditions. The prevalence of obesity among adults, measured by *body mass index* (BMI, *see* Glossary), has increased significantly since the 1980s.<sup>3</sup> In 2010, 71% of construction workers were either overweight or obese, compared to 63% for all industries combined. In the 35-54 age group, 76% were either overweight or obese (chart 54b). Reaching a healthy weight is accomplished through nutritious diet and healthy lifestyle. Even modest weight loss is likely to produce health benefits, such as improvements in blood pressure, cholesterol, and blood sugar.<sup>4</sup>

Diabetes greatly increases the likelihood of developing disabling health problems and is the seventh leading cause of death in the United States.<sup>5</sup> In 2010, diabetes affected 25.8 million people in the U.S., of which an estimated 7 million people

were undiagnosed.<sup>6</sup> Among construction workers, 8% have been diagnosed with diabetes, and the percentage was much higher (18%) in those aged 55 years and older (chart 54c).

Hypertension is closely associated with heart disease;<sup>7</sup> in 2010, 30% of construction workers had been diagnosed with hypertension (chart 54d). Among former construction workers aged 55 and over, 56% had hypertension and 15% had heart disease. The prevalence of heart disease in construction (5.5%) is slightly higher than for all industries (4.6%), even though workers in construction are younger on average (*see* page 14) and the high physical demands of construction work (*see* pages 33-35) could cause many workers with heart disease to leave the industry (known as the healthy worker effect).

The prevalence of chronic conditions increases with age. Among former older construction workers examined by the Health and Retirement Study (a large longitudinal survey on older U.S. residents), the prevalence of arthritis grew by 55% over the decade, from 43% in 1998 to 66% in 2008 (chart 54e).

The health and well-being of workers are greatly influenced by exposures to occupational hazards, the organizational context, and risks associated with individual health behaviors. The National Institute for Occupational Safety and Health (NIOSH) has integrated worksite health promotions and occupational safety and health interventions through the Total Worker Health™ program (formerly the WorkLife Initiative). NIOSH has also collaborated with other agencies to prevent chronic disease in the workplace and promote healthy and safe behaviors and a work-life balance.<sup>8</sup>

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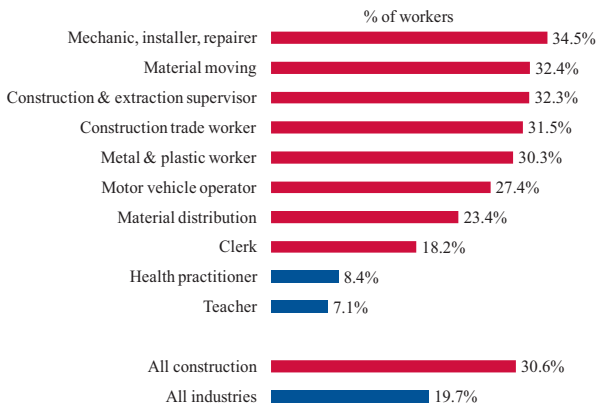
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6. Centers for Disease Control and Prevention. 2011. National Diabetes Fact Sheet: National Estimates and General Information on Diabetes and Prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. [http://www.cdc.gov/diabetes/pubs/pdf/ndfs\\_2011.pdf](http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf) (Accessed July 2012).

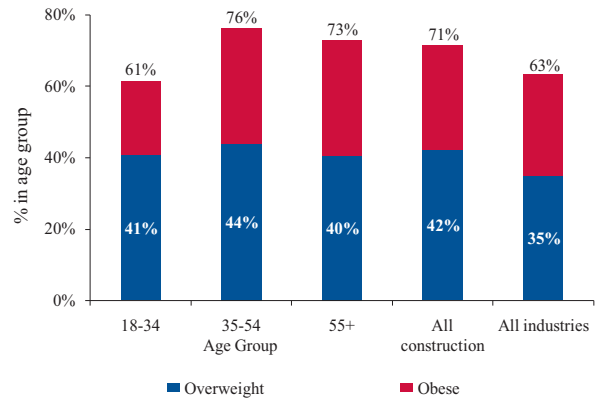
7. Centers for Disease Control and Prevention. 2012. Heart Disease Facts. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. <http://www.cdc.gov/heartdisease/facts.htm> (Accessed August 2012).

8. The National Institute for Occupational Safety and Health. 2012. Research Compendium: The NIOSH Total Worker Health™ Program, Seminal Research Papers 2012. Washington, DC: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 2012-146.

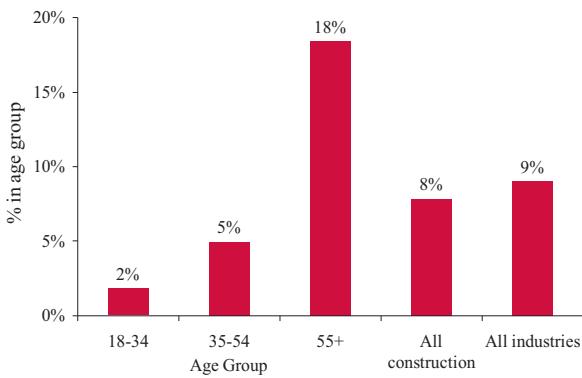
**54a. Percentage of workers who smoke, selected occupations, 2010**



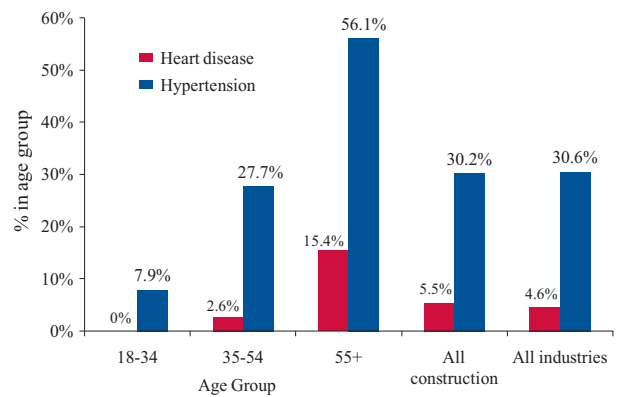
**54b. Overweight and obesity among construction workers, by age group, 2010**



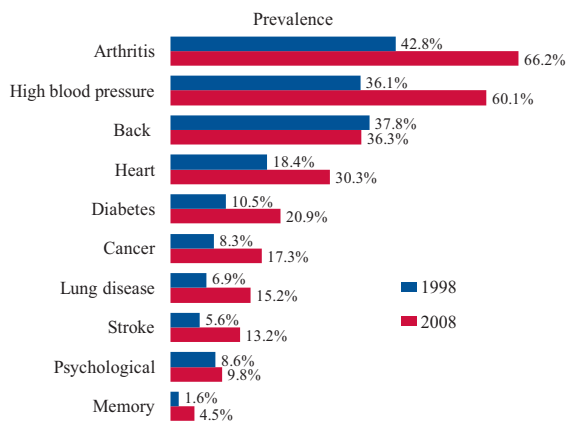
**54c. Prevalence of diagnosed diabetes among construction workers, by age group, 2010**



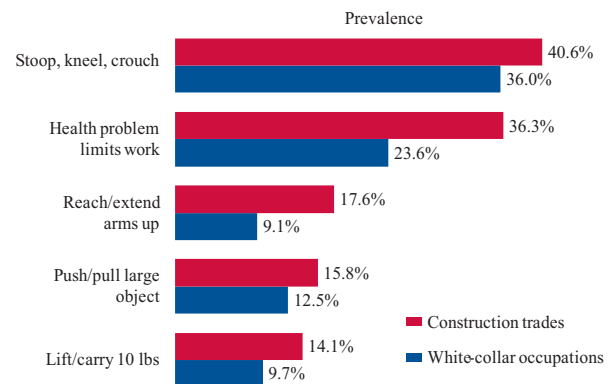
**54d. Prevalence of cardiovascular diseases among construction workers, by age group, 2010**



**54e. Chronic diseases among current and former construction workers in 10-year follow-up, 1998 vs. 2008**



**54f. Functional limitations among older workers, construction trades vs. white-collar occupations, 2008**



**Note:** All charts – Data cover all employment.  
 Chart 54b – Overweight is a body mass index (BMI) between 25 and 29.9. A person is considered obese with a BMI of 30 or higher. See Glossary for a full description of BMI or go to <http://www.nhlbhsupport.com/bmi/> for more information (Accessed July 2011).

**Source:** Charts 54a-54d – National Center for Health Statistics. 2010 National Health Interview Survey. Calculations by CPWR Data Center.  
 Charts 54e and 54f – Dong X, Wang X, & Daw C. 2011. Chronic diseases and functional limitations among older construction workers in the United States: A 10-year follow-up study. *Journal of Occupational and Environmental Medicine*, 53(4):372-380.