



For release 10:00 a.m. (EST) Thursday, December 1, 2016

USDL-16-2231

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**(NOTE: This release was reissued on May 11, 2017, correcting data shown in chart 3 for the minimum level of education required. For additional information about this correction, see [www.bls.gov/bls/errata/ors-errata-05112017.htm](http://www.bls.gov/bls/errata/ors-errata-05112017.htm).)**

## OCCUPATIONAL REQUIREMENTS IN THE UNITED STATES – 2016

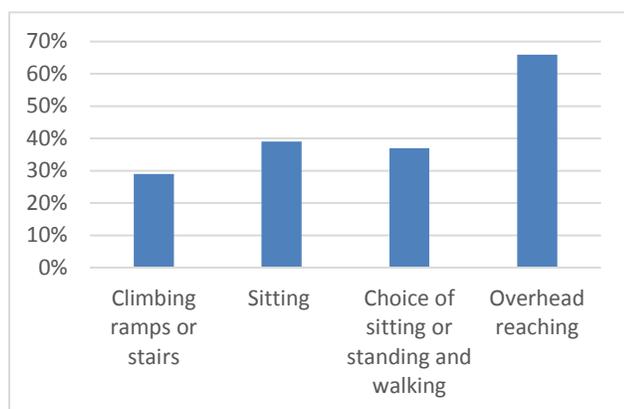
Workers spent 61.0 percent of the workday standing or walking in jobs surveyed in 2016, the U.S. Bureau of Labor Statistics reported today. This is the first release of the Occupational Requirements Survey (ORS) which is an establishment-based survey and provides information about the physical demands, mental requirements, education and training, and environmental conditions of jobs in the U.S. economy.

### Physical demands

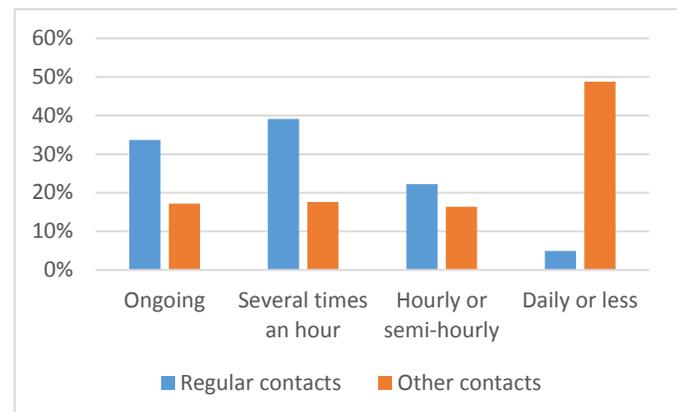
Physical demands refer to the effort generally required to successfully perform work-related tasks, and include activities such as standing, lifting, pushing and pulling, and hearing and vision requirements. The average maximum weight lifted or carried as required in all civilian (private industry and state and local government) jobs was about 36 pounds.

Thirty-seven percent of jobs allowed workers the flexibility to choose alternating between sitting and standing or walking. Overhead reaching was required for 65.9 percent of jobs, while climbing ramps or stairs was required for 29.0 percent of jobs. (See chart 1.)

**Chart 1. Selected physical requirements, 2016**



**Chart 2. Frequency of work-related interactions with people, 2016**



Time spent on the job performing physical activities is published in hours and as a percentage of the day. The latter is standardized to account for the work schedule. Workers, on average, spent about 3 hours (or 39.0 percent of the workday) sitting and spent almost four and a half hours (or 61.0 percent of the workday) standing or walking per workday.

## Mental requirements

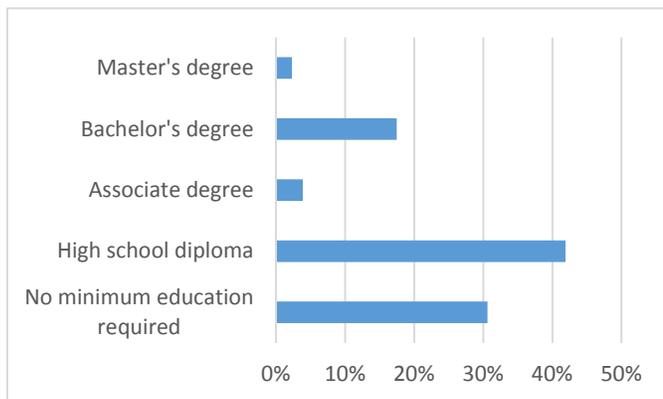
Mental requirements are related to a worker's need to use judgment, make decisions, and adapt to changes on the job, and include the typical type of work review, pace of the work performed, and frequency, type, and structure of work interactions.

Regular contacts are considered those people with whom a worker has an established working relationship. Other contacts include the public and those with whom the worker has no working relationship. Ongoing interaction with regular contacts was required for 33.7 percent of jobs, and an additional 39.1 percent required interacting with regular contacts several times an hour. For other contacts, 17.2 percent of jobs required ongoing interaction and 17.6 percent required interacting with other contacts several times per hour. (See chart 2.)

## Education and training

The education and training required includes the typical educational background, training, and work experience and is used to calculate the preparation time necessary for a typical worker to successfully perform a job. A minimum level of education was not required for 30.6 percent of jobs, although 74.7 percent of all jobs required on-the-job training. Prior work experience was required for 47.8 percent of all civilian jobs. Pre-employment training can often result in a certification or license, and 21.8 percent of jobs required workers to obtain a professional certification, license, or undertake other pre-employment training. (See charts 3 and 4.)

**Chart 3. Selected education requirements, 2016**

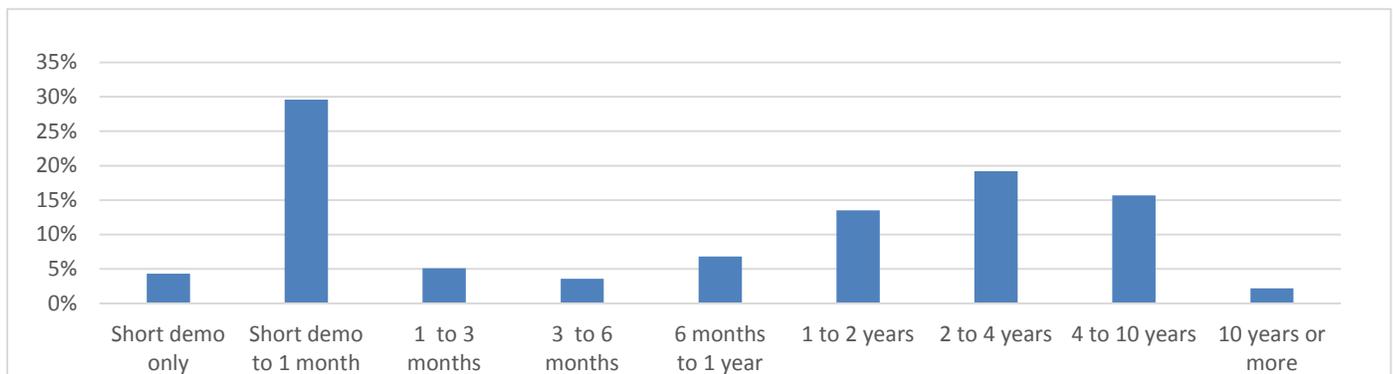


**Chart 4. Selected job requirements, 2016**



The ORS also captures and publishes information on the preparation time needed for a typical worker to attain the necessary education, experience, and training to successfully perform a job. Approximately 29.6 percent of jobs had a preparation time requirement that included more than a short demonstration to 1 month of training and 15.7 percent of jobs required 4 to 10 years of preparation time. (See chart 5.)

**Chart 5. Preparation time required, 2016**



## **Environmental conditions**

Environmental exposure is measured by the types of conditions encountered at work during the course of a typical day, and include extreme heat and cold, hazardous contaminants, and noise intensity. Forty-seven percent of jobs required outdoor work. About 20.3 percent of jobs exposed workers to moving mechanical parts throughout the workday. Personal protective equipment was used by 10.7 percent of workers to mitigate the risk of serious workplace injuries or illnesses associated with moving mechanical parts.

## **Requirements for selected occupations**

Requirements are available through [www.bls.gov/ors/#data](http://www.bls.gov/ors/#data). Highlights are shown below.

Physical demands:

- Workers in construction and extraction jobs stood or walked an average of nearly 7 hours per workday.
- The average maximum weight lifted or carried required by construction and extraction jobs was about 66 pounds.
- Nearly a quarter (24.6 percent) of food preparation and serving related jobs required climbing ramps or structure-related stairs.

Mental requirements:

- Ongoing interaction with regular contacts was required for 71.8 percent of education, training, and library jobs. Interaction several times per hour with regular contacts was required for 16.6 percent of these same jobs.
- Among office and administrative support occupations 20.8 percent required ongoing interaction with other contacts, and 24.6 percent required interaction several times per hour.
- The majority of customer service representatives required ongoing interaction with other contacts, 53.1 percent, and 23.4 percent required interaction several times per hour with other contacts.

Education and training:

- A bachelor's degree was required for 59.6 percent of management jobs and 68.6 percent of treasurers and controllers jobs.
- For architecture and engineering jobs, 78.5 percent required prior work experience with an average length of just over 4.5 years (about 1,700 days).
- The majority (57.1 percent) of transportation and material moving jobs do not have a minimum education requirement.
- Most (60.3 percent) bus driver jobs required a high school diploma.

Environmental requirements:

- More than 3 in 4 (77.0 percent) building and grounds maintenance jobs required working outdoors at some point during the workday.
- All landscaping and groundskeeping jobs required working outdoors at some point during the workday, and 88.3 percent of jobs required working outdoors constantly. Constantly is defined as 67 percent or more of the workday.
- Most installation, maintenance, and repair jobs (69.5 percent) exposed workers to moving mechanical parts. For 35.7 percent of workers, personal protective equipment was used to mitigate risks associated with this exposure.
- Almost all (96.4 percent) industrial machinery mechanics are exposed to moving mechanical parts and 55.1 percent of workers used personal protective equipment.

More information can be obtained by calling (202) 691-6199, sending email to [orsinfo@bls.gov](mailto:orsinfo@bls.gov), or by visiting [www.bls.gov/ors](http://www.bls.gov/ors).

Information in this release will be made available to sensory impaired individuals upon request—  
Telephone: (202) 691-5200; Federal Relay Service: (800) 877-8339.

## Technical Note

Data in this release are from the Occupational Requirements Survey (ORS), conducted by the U.S. Department of Labor, Bureau of Labor Statistics (BLS). The ORS provides job-related information about the physical demands, environmental conditions, education and training, and mental requirements of jobs in the U.S. economy. This release contains 2016 estimates on occupational requirements for jobs within the U.S. economy for all civilian workers. Excluded are the federal government, the military, agricultural workers, private household workers, and the self-employed.

Additional estimates by occupational group and industry are available at [www.bls.gov/ors/#data](http://www.bls.gov/ors/#data).

### Sample size

The annual estimates displayed herein are from a single sample of data collected from the Occupational Requirements Survey. The ORS is an establishment-based survey and uses a national sample design. To maximize the amount of publishable information, the BLS is combining data across three annual ORS samples. The number of publishable occupations and the level of occupational detail is expected to increase with the addition of each subsequent year's sample until the full ORS sample size of up to 30,000 sampled establishments is reached.

Data for the 2016 reference period were collected from 5,800 private industry and 600 state and local government establishments. The ORS estimates represent 136,700,000 civilian workers in the United States.

### Measures of reliability

To assist users in ascertaining the reliability of ORS estimates, standard errors are made available shortly after publication of the news release. Standard errors provide users a measure of the precision of an estimate to ensure that it is within an acceptable range for their intended purpose. Collected and imputed data are included in the standard error calculation. BLS will continue refining estimation processes including evaluating the impact of sampling and nonsampling errors on the ORS estimates. For further information see: [www.bls.gov/ors/se.htm](http://www.bls.gov/ors/se.htm).

### Occupational classification

BLS uses the Standard Occupational Classification (SOC) system, [www.bls.gov/soc](http://www.bls.gov/soc). The ORS classifies occupations by eight-digit codes used by O\*NET's detailed occupational taxonomy referred to as "O\*NET-SOC 2010 Occupations," see [www.onetcenter.org/taxonomy.html](http://www.onetcenter.org/taxonomy.html) for more information regarding O\*Net occupation classification. Military specific occupations (55-0000.00) are out of scope for the ORS.

### Definitions of major terms

For definitions of major terms used in the ORS, see the glossary beginning on page 108 of the ORS collection manual, [www.bls.gov/ncs/ors/occupational\\_requirements\\_survey\\_collection\\_manual\\_092015.pdf](http://www.bls.gov/ncs/ors/occupational_requirements_survey_collection_manual_092015.pdf).

### Obtaining information

For research papers on the ORS and testing activities please see information listed at [www.bls.gov/ors](http://www.bls.gov/ors).