

Ergonomics At The Workplace



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Introduction

Ergonomics is the science of fitting a work place to the user's needs.

Ergo =work

Nomos =law

It aims to increase efficiency and productivity and reduce discomfort.



Introduction

- Ergonomics is used at a workplace to help prevent repetitive and cumulative injuries.
- Workers are different in shape, strength and ability, hence calls for different designs in equipment, tools and station.



Facts

- The average person working at a keyboard can perform 50 to 200 thousand keystrokes a day.
- Overexertion and falls are the most common cause of workplace injuries.
- An average of 125,000 back injuries are due to improper lifting each year.

Distribution of injuries and illnesses by event or exposure, all ownerships, 2014

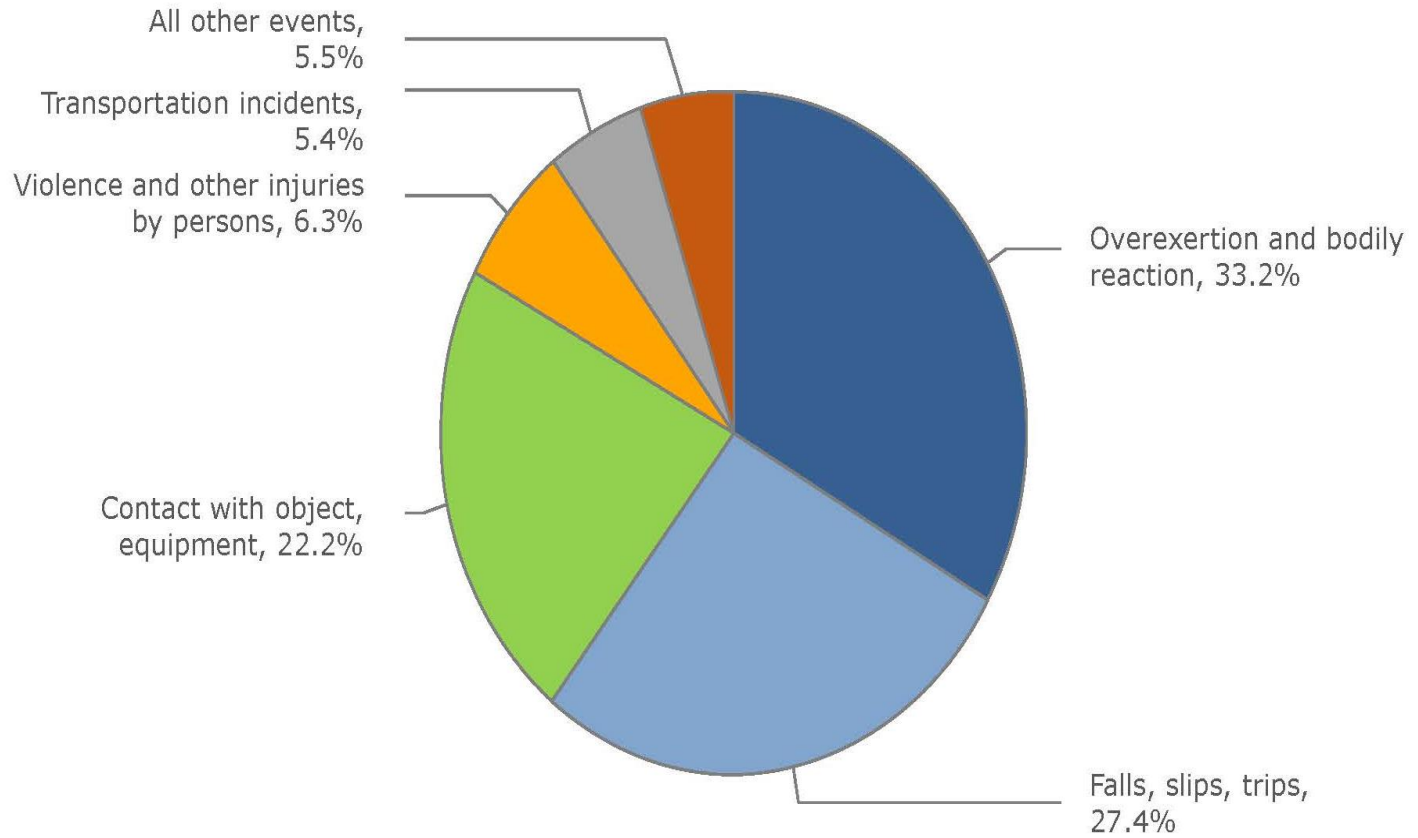
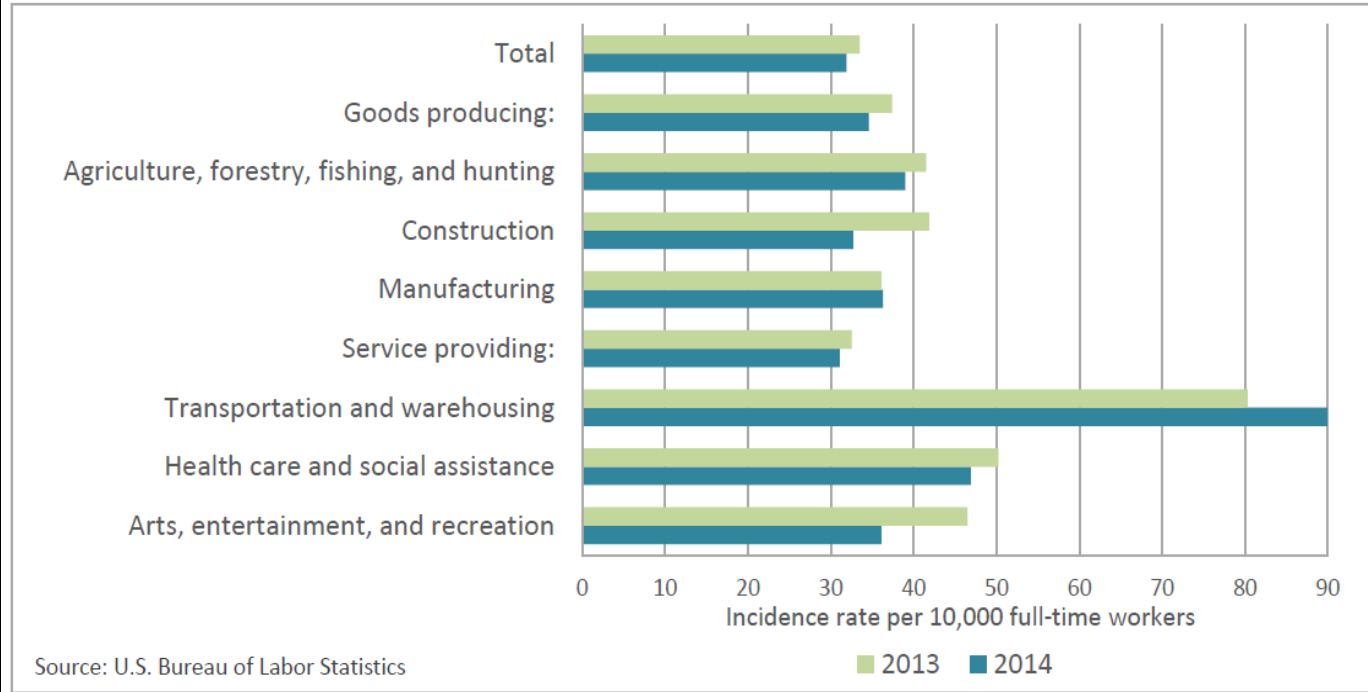


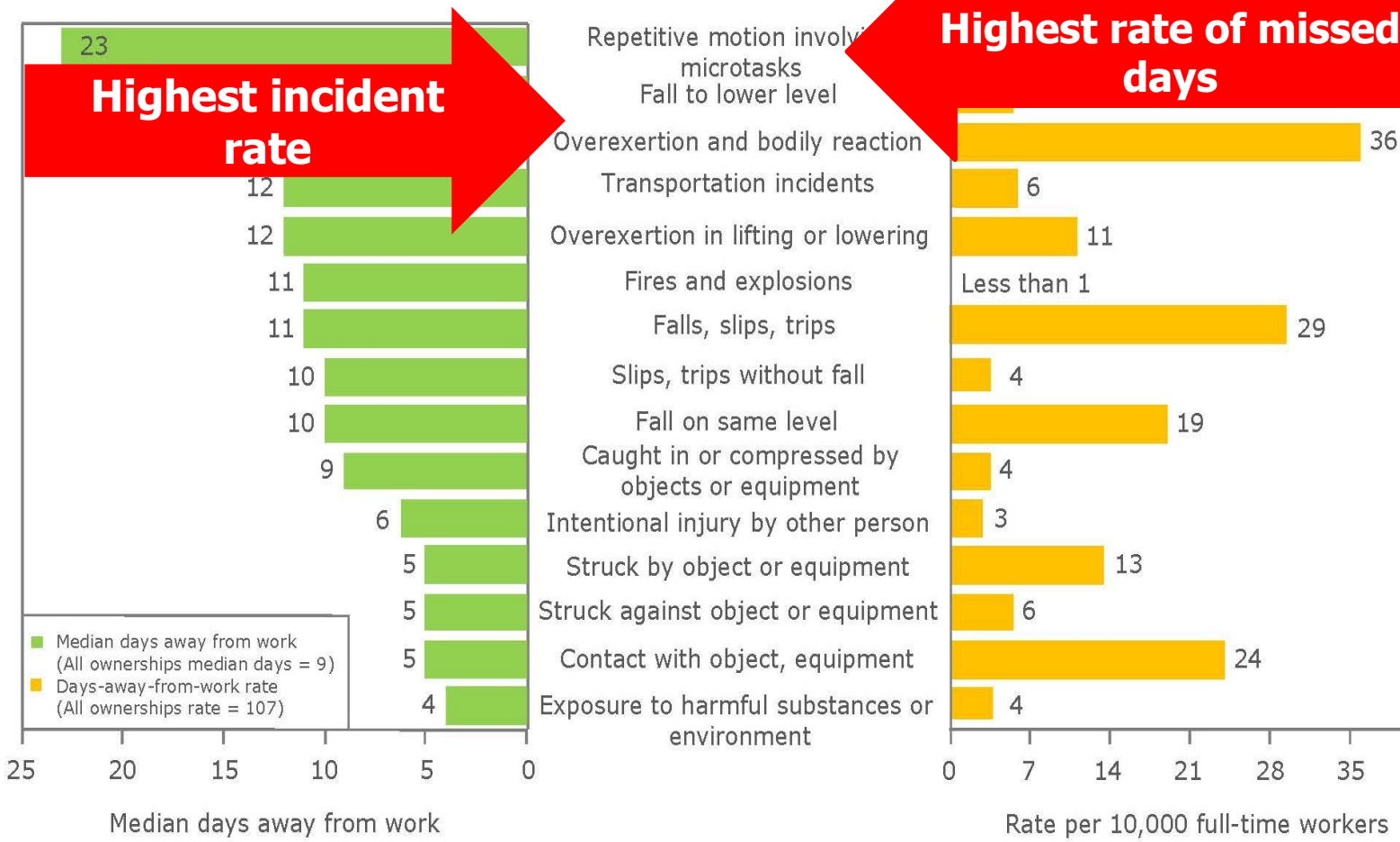


Chart D. Musculoskeletal disorder incidence rates for selected private sector industries, 2013-14



This chart shows the incident rates of musculoskeletal disorders for selected private sector industries. Source: Bureau of Labor Statistics

Median days away from work and incidence rate due to injuries and illnesses by event or exposure, all ownerships, 2014



Highest incident rate

Highest rate of missed days



Common work related musculoskeletal disorders(MSDs)

- Carpal tunnel syndrome
- Reynaud's syndrome
- Backs strain,sciatica
- Tendinitis etc

SYMPTOMS

Pain,swelling,tingling,inflammation,numbness etc



Risk Factors

- Environmental Factors
- Noise
- Temperatures
- Lighting



Risk Factors

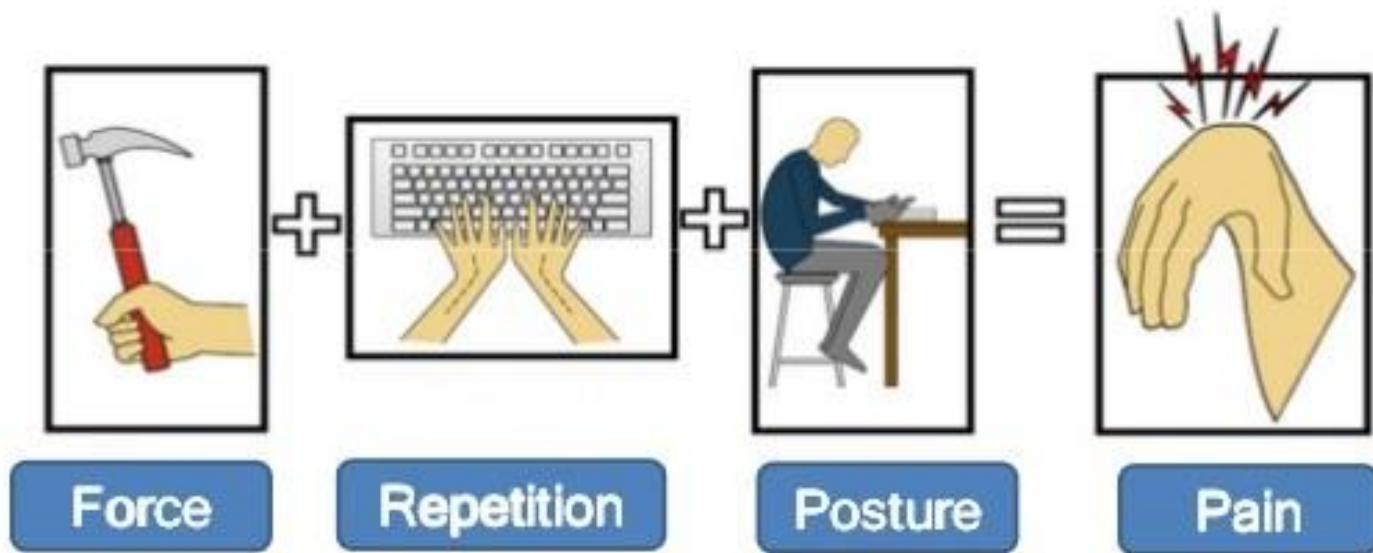
- **Physical factors**
- -posture
- -Force,pressure and exertion
- -Repetition
- -Physical size



Risk Factors

- **Others**
- -Physical size(clearance, reach, equipment size)
- -Manipulative
- -Cognitive(machine pacing, shift work, morale, psychosocial)
- -Strength and endurance
- Personal Protective equipment(PPE)

Risk Factors





Ergonomic Controls

- Establish ergonomics program(training and feedback from all levels)
- Conduct job hazard analysis
- Early recognition and reporting of potential MSDs.



Ergonomic control methods

- Engineering controls(design work station, tools and equipments)
- Proper working Practices(lifting, heavy/awkward loads, work rotation/variety, stretch, rest breaks)
- PPE(gripping, vibration and thermal gloves, knee pads, lifting straps and braces, etc)

CORRECT SITTING POSTURE



LIFTING DO'S & DON'TS

DO TURN WITH LEGS



Do move your legs and feet when turning or lowering the load. Avoid twisting at your waist.

DO USE YOUR LEGS

Do lift the load using your powerful leg and buttocks muscles. Your feet should be wide apart, head and back upright. Keep abdominal muscles tight and the load in close.



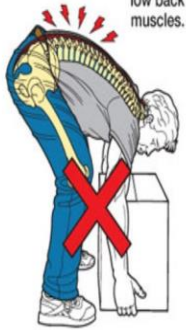
DON'T TWIST WHEN LIFTING



Don't twist when lifting, lowering, or carrying any load as this increases your risk of back injury.

DON'T USE YOUR BACK

Don't lift the load with your rear end high and your lead low. Use your leg muscles, not your weaker low back muscles.





Ergonomic Control Methods

- **Physical Ergonomic Solutions**
- -Close reach
- -Elevate work areas
- -Remove obstacles
- -Alternate postures
- -non pinch grip postures
- -Stretch pauses
- -Ergonomically designed tools(long handles,padded tools)



Employer/Employee Responsibility

- Analyse your workplace for hazards.
- Come up with solutions
- Work with solutions-comply with occupational health and safety standards.
- Take part in Training
- Take Responsibility for changing the way you do your job/tasks
- Be a part of successful implementation



Key Points

- Ergonomics is a part of health promotion at workplace.
- Risk factors can be reduced and WMSDs prevented.
- Reporting signs and symptoms, injuries is our responsibility and is important.
- You can be a part of ergonomic implementation at your workplace.



Thank you