Fitting the Job to the Worker

Before

After

ECI Workplace Ergonomics
True Cost of an Injury

- Work-related musculoskeletal disorders in the U.S. account for more than 600,000 injuries (34 percent of lost workdays).¹

- Employers spend as much as $20 billion a year on musculoskeletal work related injuries and five times that for indirect costs (hiring, training replacements).¹

- Every $1 of direct cost spent, there is $4 - $10 of indirect cost.²
Ergonomic Risk Factors

➢ Repetitive Motions
➢ Awkward Postures
➢ Forceful exertions
➢ Pressure points (contact stress)
➢ Vibration
Stressed Spine
How Heavy is Your Head?

12 lbs.  
32 lbs.  
42 lbs.

NORMAL POSTURE  
2 INCHES FORWARD  
3 INCHES FORWARD

42 POUND HEAD
Case Study – Wind Turbine Technician
Compressive Forces

**Pounds of Compressive Force on Lower Back**

- **Standing straight up:** 80 lbs.
- **Standing erect lifting 20 lbs.:** 170 lbs.
- **Standing erect lifting 20 lbs. 20” away from the lumbar spine:** 260 lbs.
- **Bending over lifting 20 lbs. 20” away from the lumbar spine:** 635 lbs.
- **Bending over lifting only 1 lb 20” away from the lower back:** 460 lbs.
- **Sitting bending forward and lifting only 1 lb.:** 220 lbs.

**Risk of Injury**

- **High**
- **Moderate**
- **Low**
Case Study – Eliminating Lifting
Case Study - Decreasing Recordable Injuries
Solutions
BEST PRACTICES: ERGONOMICS

➢ Ergonomic Training (All)
➢ Ergonomic Assessments & Safety Observations
➢ Onsite Injury Prevention Program
➢ Post Offer Testing / Job Descriptions
➢ Stretch/Flex & Balance Program
➢ Onsite Work Conditioning Program
➢ Health & Wellness Initiatives
People Make SUCCESS Happen!

- People as assets
- The user friendly workplace
- Innovation
Resources

