

ERGONOMIC PROGRAMS & CUSTOMIZED SOLUTIONS

PROJECT BASED SERVICES & STRATEGIC PARTNERSHIPS





TABLE OF CONTENT

INDUSTRIES WE SERVE

| OUR APPROACH | 3 |
|--------------------------|-------|
| TRAINING | 4-5 |
| WORK ANALYSIS | 6-7 |
| ENGINEERING SOLUTIONS | 8 |
| EARLY INTERVENTION | 9-10 |
| PHYSICAL ABILITY TESTING | 11 |
| PROGRAM AUDITS | 12 |
| TECHNICAL | 13-14 |

Ergonomics is an applied science that pertains to most all industries. We have had the opportunity to partner with leaders in their respective industry, as well as small to mid-sized organizations.







info@ergo-ology.com





ergo-ology.com

Copyright 2021 Ergo-ology

OUR APPROACH

Forming a strategic partnership with Ergo-ology's team of Board-Certified Professional Ergonomists improves your operating efficiencies and reduces the number of workplace injuries in your organization. Through programs and services custom-tailored to meet your operation's unique needs, we help you continuously improve your processes and work environments, as well as educate your team on ergonomic best practices.

By applying a four-phase improvement process, Ergo-ology **discovers** your operation's ergonomic challenges, **constructs** a comprehensive plan of solutions tailored to meet your needs, **integrates** ergonomic initiatives across your facility, and **adjusts** these plans as your operating processes evolve.



Although Ergo-ology addresses each organization's ergonomic challenges with a customized package of solutions, those applied most frequently are detailed in the following pages.

Your personalized ergonomic improvement program may or may not include these items. Ergo-ology offers far more services than we have space to list! Regardless of your optimal solution, each offering is strategically implemented following stringent guidelines to meet your organization's needs and ensure success.

SERVICE LEVELS



We understand the importance of flexibility in today's business world. One size does not fit all! That's why we offer two types of service levels in addition to our customized approach.

Whatever your specific need, the time frame required to reach your goal, or the industry you're in, Ergo-ology can build the solution for your success.

Copyright 2021 Ergo-ology

TRAINING



ERGONOMIC FUNDAMENTALS

This easy to comprehend training session explains the basics of ergonomics, and teaches your team members how to identify ergonomic related risks within specific job functions.

Employees gain the experience to:

- Identify existing risks within job functions
- Understand how ergonomic injuries occur
- Identify signs and symptoms of Musculoskeletal disorders (MSDs)

CERTIFIED ERGONOMIC PROCESS SPECIALIST© (CEPS)

Employees who are responsible for ergonomics at your facility will be educated on how to identify, evaluate, prioritize and solve ergonomic related problems.

Employees gain the experience to:

- Identify potential risks within job functions
- Conduct risk assessments using multiple risk tools
- Receive tools to prioritize tasks with ergonomic problems
- Understand common methods to solve ergonomic problems



DESIGN FOR ERGONOMICS (D4E)

Engineers will learn ergonomic design principles using anthropometric measurements. Principles will include measurements of heights, reaches, clearances, grips, forces, and cognitive factors that effect the human during operations.

Employees gain the experience to:

- Examine common mistakes of product and work station design
- Understand the process to correct poor existing designs
- Receive engineering design guidelines to utilize in existing and future designs

TRAINING



MANUAL MATERIAL HANDLING BOOT CAMP®

This is a customized hands-on "train-the-trainer" event centered around learning proper biomechanics techniques of specific manual handling tasks. This includes 3 primary educational components: "LEARN, DO & SEE".

Key Take Aways:

- Trainers receive a certification to lead future "Bootcamps" with employees
- Trainers receive soft-skills advice for leading and teaching others
- Participants learn both general and specific techniques for safely handling items



ERGONOMIC LEADERSHIP PROGRAM® (ELP)

This annual program consists of 3 progressive levels that provide a framework and guidance for a facility to build an ergonomic infrastructure program. It is designed for facilities with a dedicated ergo champion and ergonomic committee of employees from different departments to sustain learnings.

Key Take Aways:

- Receive applicable training, tools and assignments monthly
- Receive guidance and expert support for difficult problems (subscription)
- Upon completion of all 3 tiers will result in a long term sustainable ergonomics program



CERTIFIED ERGONOMICS OFFICE ASSESSOR (CEOA)

This easy to comprehend "train-the-trainer" session explains the basics of office ergonomics, teaching your resources how to identify ergonomic problems, conduct assessments and make adjustments to the human: workstation setup.

Key Take Aways:

- Trainers receive a certification to conduct future office assessments
- Understand various equipment and products in the office space
- Understand the importance of making adjustments to the office layout

WORK ANALYSIS



RISK SCREENING

The purpose of this screening is to identify workstations and tasks that have ergonomic risk and prioritize the need for corrective action. It is most valuable for facilities that do not have a known list of problem jobs and need a general assessment of the facility.

Key Benefits:

- Listing of general ergonomic risks at each workstation
- Risk level score provided
- General direction of solution type provided



RISK ASSESSMENT

The purpose of this assessment is to dissect a known list of problem jobs. Through the use of technical devices and equipment, the level of risk by body part will be collected and analyzed. This a deep-dive assessment to determine root cause and the risk effects.

Key Benefits:

- Detailed description of the sub-tasks and workplace dimensions
- Measurement of risk by body part
- Listing of specific corrective actions; including engineering drawing concepts and links for on-line solution purchases



PHYSICAL DEMANDS ANALYSIS

A Physical Demands Analysis (PDA) is a systematic procedure to quantify and document all of the physical and environmental demand components of a job. Using actual employees performing their jobs, this analysis evaluates the workplace conditions, not the individual employee, by focusing on the physical demands of all essential and nonessential job tasks.

Key Benefits:

Quantified measurements of:

- Work Intensity
- Reaches (horizontal & vertical)
- Lifting Weights
- Push/Pull Forces
- Environmental Conditions
- Climbing, Standing, and Sitting

WORK ANALYSIS

OFFICE SCREENING

The purpose of an office screening is to provide a group of employees a general check-up of their workstation. Screenings allow for employees to ask questions and to receive expert suggestions on modifications. Office screenings are best for proactive offices – ensuring employees are properly set-up while working at the computer.

Key Benefits:

- Expert screening of equipment type and widespread opportunities
- Quick 1:1 interaction with employees needing modification or have questions
- High level report of all employees screened and recommendations for each



OFFICE ASSESSMENT

The purpose of this in-depth assessment of a specific office employee's workstation and equipment is to make adjustments and recommendations, which may include new or different equipment. Employees experiencing discomfort or with a special need will benefit the most.

- Expert screening of equipment type and widespread opportunities
- Quick 1:1 interaction with employees needing modification or have questions
- High level report of all employees screened and recommendations for each

ENGINEERING SOLUTIONS



RESEARCH EXISTING SOLUTIONS

There are many ergonomic solutions in existence but it can be difficult for new searchers to identify and locate appropriate solutions. Utilizing our knowledge of existing product vendors and equipment in the market, our team can assist in locating the solution to best meet your needs and reduce your ergonomics risk.

Key Benefits:

- Utilize experts who are knowledgeable of existing products and solutions who can make recommendations to meet your unique needs
- Efficient method for identifying and purchasing the correct solution



CUSTOM DESIGN CONCEPTS

In the event your situation is unique and a currently available market solution can not be found, our creative design team will develop engineering concept drawings of ergonomic solutions that fit your needs.

Key Benefits:

- Starting point of a customized solution
- Concepts can be turned into fabrication specifications
- Drawings allow for visual understanding of multiple solutions options



DESIGN FABRICATION PRINTS

Once a design concept has been selected, fabrication prints are developed for products, tools and equipment to be manufactured. Our fabrication designs include build dimensions, materials, part numbers and part purchasing locations. In the event you do not have in-house resources, we can fabricate the design and ship it to you.

- Turn-key blueprints for engineering fabrication
- Listing of material parts needed for proper fabrication
- Ability to fabricate the solution and ship it to your door

EARLY INTERVENTION

ERGONOMICS COORDINATOR

Ergonomic Coordinators are healthcare professionals with an extensive background in sports medicine, injury prevention, kinesiology, and wellness. They help reduce injuries by developing warm-up programs, providing individualized employee support, coaching of body mechanics, safe work practices and well-being education.

Key Benefits:

- On-site injury triage through "first-aid" techniques such as massage, kinesiotaping, and job coaching
- Improve employee balance and coordination by implementing daily corrective exercises
- Optimize injury recovery time with on-site rehabilitation and functional capacity evaluations



WARM-UP PROGRAMS

Warm-Up programs are customized based on task specific demands observed at your facility. Our routines are geared to improve the body's ability to handle task specific moves; all while building a team based atmosphere and employee engagement.

Key Benefits:

- Prep the body for daily work demands
- Target the specific body parts that are utilized for work
- Team building and engagement program



TASK SPECIFIC COACHING

Most employees find ways to accomplish the job but not always the safest way. By examining the requirements of the job, our team can develop awareness information to alter the mindset and behavior of how employees conduct work. Our team provides both group and one-on-one training on "HOW TO" leverage the body when interacting with products and equipment. For example, manipulating a loaded handcart

- Onsite coaching on how to engage with products and equipment
- Physical demonstrations of proper movement and handling techniques
- Explanation of the why and need to alter current behaviors

EARLY INTERVENTION

WORK HARDENING PROGRAMS

The purpose of a work hardening program is to build the physical capability (fitness) of the employee gradually so that the demands of work do not result in overexertion. This requires identification of light duty tasks and determination of work volume levels per body part for each essential job task. As the physical ability of the person increases, the work volume should also increase until the employee can safety handle all of the physical job requirements.

Key Benefits:

- Prepare new-hires and returning injured employees for physical working conditions
- Gradually increase the physical work volume to prevent overexertion before the employee has acclimated to returning to work



REASONABLE ACCOMMODATION RECOMMENDATIONS

Under the ADA, employers are required to provide reasonable accommodations to qualified employees with disabilities, unless doing so would pose an undue hardship. Our team will assess the work environment and provide recommendations to improve the capability of any disabled employee in their work environment.

Key Benefits:

 Assurance that disabled employees reasonably have the right tools, equipment and workstations to effectively conduct the essential functions of the job

PHYSICAL ABILITY TESTING



The Physical Ability testing program consists of seven steps. Each of the steps need to follow in the sequence shown below.

1. ONSITE JOB ANALYSIS

A detailed onsite job analysis is conducted to identify the physical demanding components and essential job functions of desired job titles. Demands are quantified and will be used as objective pass/fail criteria for future testing.

2. WORKER TASK QUESTIONNAIRES (WTQ'S)

To establish validity with the EEOC and OFCCP, a statistically significant sample of employees in those job titles will be asked to complete the WTQ to validate the data we collected in the onsite job analysis.

3. TEST BATTERY DESIGN AND EEOC DOCUMENTATION

A series of task oriented, test elements are developed that comprise a job-related physical ability test battery. Our process, testing justification and documentation reflects the requirements set forth by the EEOC in the Uniform Guidelines on Employee Selection Procedures.

4. ONSITE OR CLINIC TRAINING AND TESTING

We coordinate training and testing with test administrators onsite or at clinic locations. Test administrators conduct the tests and submit the results.

5. EVALUATION OF PROGRAM EFFECTIVENESS (PRE-/POST-IMPLEMENTATION ANALYSIS)

A relative comparison of the quantity and nature of workers' compensation injury rates and productivity amongst individuals (pre. vs. post testing) is conducted. ROI reports are reviewed with our clients, as requested.

6. ANNUAL JOB REQUIREMENT REVIEW CIRCULATION AND INTERPRETATION

To ensure the test battery is always up-to-date, a Job Requirement Review (JRR) is conducted annually to ensure the test battery continues to reflect the current and relevant physical requirements.

7. ONSITE JOB REANALYSIS

To ensure ongoing legal defensibility and as required by the EEOC, we recommend a reanalysis at least every 5 years of each job title for which testing has been developed.

PROGRAM AUDITS

| 2 |
|---|
| |

DISCOVERY AUDIT

Uncovers the current ergonomic condition of a company or single facility that is NEW to ergonomics. Based on findings from onsite observations, discussions of resources, constraints and program goals; we will construct a "blue-print" report to guide decision makers on the most effective and efficient next steps to grow your future program. Recommendations are customized based on your specific situation and the goals you have for your future program.

Key Benefits:

- Identification of the most impactful starting point
- Justification and reasoning of recommendations
- Providing objective means to decision makers



ERGONOMICS PROGRAM AUDIT

Ergonomic Program Audits are best utilized by facilities with an active ergonomics program and are seeking to become "best in class". The audit is designed to dissect cultural and technical aspects of your program through onsite observations, interviews, review of documentation and physical corrective action implementations. A relative score is provided for 8 primary areas of your program. Recommendations to improve each score are provided.

Key Benefits:

- Deep understanding of program strength and opportunity
- Means to improve areas of opportunity provided
- Identification of areas not considered in the current program



ERGONOMICS COMPLIANCE AUDIT

OSHA encourages employers to implement effective programs or other measures to reduce ergonomic hazards and associated MSDs. Our Compliance Audit identifies areas that OSHA, EEOC (under the ADA), and OFCCP would deem unacceptable. We provide recommendations that will satisfy regulatory requirements.

Key Benefits:

- Ensure ergo risk is within acceptable limits and reasonably accommodated
- Gain insight into efforts / initiatives that will improve working conditions
- Receive recommendations for ergonomic solutions of specific workstations

ergo-olagy 12

TECHNICAL



MUSCLE RESPONSE TESTING (EMG)

Electromyography (EMG) is a quantitative measurement of the muscle's biometric response while conducting repetitive manual handling type movements. This evaluation consists of applying surface (skin) electrodes to specific muscles of interest. Generally, the purpose of this type of testing is used to predict likelihood of muscle fatigue or measure an employee's effort requirement during the prototyping stages of product development (tools, equipment, etc.).

Key Benefits:

- Understand muscle vitality over time during repetitive work
- Understand the effect of job rotation
- Determine which tool/equipment has best usability
- An in-depth assessment of strain/sprain likelihood



BIOMECHANICAL MODELING

Through Biomechanical Modeling, a virtual test of the current or future workplace task and environmental conditions can be compared to known anthropometric limitations. If human limitations are exceeded, modifications to lessen the physical demand can be implemented to avoid future risk conditions altogether.

Key Benefits:

- Proactive approach to understand the physical demand of a set of work conditions
- Comparative analysis of demands against human capabilities and limitations
- Expert analysis of existing conditions to determine injury causation likelihood



WORK INTENSITY (O₂)

Oxygen consumption is a direct indicator of how physically demanding a job is on the employee. Generally, this is type testing is conducted in a laboratory VO2 Max test. We have developed methods to take the biometric conditions, such as oxygen consumption, galvanic responses, heart rate, accelerometry, and other biometric responses to calculate energy expenditure through non-invasive, on-site methods.

Key Benefits:

- Compare work intensity levels against NIOSH recommendations
- Forecast or adjust to proper headcount per work volume (i.e. warehouse)
- Gain insight to current heat stress risks and limitations

- Gain an understanding of current workforce health condition

Copyright 2021 Ergo-olog

TECHNICAL

| ノ |
|---|
| |

HEAT STRESS PROGRAM

Testing a variety of conditions including the work intensity of workers, convection, radiation, evaporation, clothing (therms), temperature and ventilation are all necessary to formulate a proper Heat Stress program. By determining all possible work conditions, a matrix is developed outlining the exposure time limit for each condition. We then recommend engineering controls (such as increased ventilation), administrative controls (e.g., work/rest schedules) to improve the overall work condition thereby reducing the metabolic heat load.

VIBRATION TESTING

ISO, ANSI and EU have published standards for whole body, hand, and arm vibration. Based on the vibration magnitude and frequency, safe exposure limits can be determined. Localized vibration testing is typically conducted on hand tools, grinders, jack hammers, etc. Whole body tests are typically performed on lift trucks, platforms, etc. Vibration collection equipment is non-invasive and typically attaches to the equipment or hand tool of interest.

Key Benefits:

- Understand the exposure time for work in a variety of environmental conditions
- Implement controls to lessen the heat load on the workforce
- Determine proper work: rest cycles for specific work situations

- Determine compliance with recommended exposure limits
- Determine if equipment modifications impact exposure limits
- Determine the usability of a prototype design prior to manufacturing