|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| C:\Users\hcastro\Documents\Logos\BRS_no_white.png | |  | **Erogonomics program** | | | |  | |  |
|  | |  | | |  | **Instructions** | | |  |
|  | | |
| **Program Development** |  | The following sample program is provided to assist you with the preparation and implementation of an effective ergonomics program.  [question.JPG](#Engineering)  Information for the development of your program is provided in the program guide included with this program. You will see question mark icons throughout the document. These are hyperlinks that will take you directly to relevant information in the program guide, and each section in the program guide has a “Back” button to return you to program.  You will need to provide information in several areas within the program. The information needed will be indicated by ***BLUE TEXT***. Other areas of the program may need to be modified or eliminated depending on your organization.  Once your program is customized, we recommend you copy the program material from this document, paste it into a new Word document, and remove the icons. | | | | | | |  |
|  |  |  | | Provided by Bickmore Risk Services | | | | 800.541.4591 | |

[](#Applicability)Ergonomics is the study of people and their interaction with the elements of their job or task including equipment, tools, facilities, processes, and environment. In essence, it is the science of human comfort. When aspects of the work or workplace affect the human body, the result is often a musculoskeletal disorder (MSD). MSDs are wear and tear injuries that can affect muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels, or spinal discs of the body.

[](#Policy)

**POLICY**

It is the policy of ***INSERT NAME*** to provide all employees with a safe and healthy workplace. The ergonomics program is a proactive approach to assist in the identification, prevention, and control of employee exposure to ergonomic risk factors. It is a collaborative effort that includes managers, supervisors, and employees and consists of the following components:

* + Roles and responsibilities
  + Identification of high risk jobs
  + Worksite evaluations and setting priorities
  + Control of ergonomic risk factors
  + Training
  + Early intervention and medical management
  + Program evaluation and follow-up

[](#Purpose)This program enables ***INSERT NAME*** to meet the requirements of the ergonomics regulation, *California Code of Regulations, Title 8 (8 CCR), Section 5110*.

**PURPOSE**

The purpose of the ergonomics program is to apply ergonomic principles to the workplace in an effort to reduce or eliminate the number and severity of MSDs, thus increasing employee productivity, quality, and efficiency, while decreasing workers’ compensation claims.

Identifying and prioritizing jobs with increased risk factors is a critical step in our program. Once risks are identified and prioritized the focus is then on: (1) making changes before an injury/illness has occurred, (2) incorporating ergonomics into the design phase of a new facility or process, and (3) purchasing the appropriate equipment and tools.

**RESPONSIBILITIES**

## Program Administrator

***INSERT NAME*** has the ultimate authority and responsibility for the implementation of the ergonomics program and provides:

* + Executive management oversight of the ergonomics program through the Ergonomics Program Administrator
  + Performance goals and accountability for program implementation in collaboration with department heads
  + Program evaluations and resources to support program implementation

## Ergonomics Program Administrator

The Ergonomics Program Administrator is ***NAME OR TITLE OF EMPLOYEE*** and will report directly to ***NAME OF DIRECT REPORT***.The Ergonomics Program Administrator is responsible for maintaining the program in addition to the following:

* + Facilitating the identification and evaluation of high-risk jobs and overseeing the implementation of control measures
  + Coordinating ergonomics training for managers, supervisors, and employees to ensure the recognition and control of ergonomic risk factors, early reporting procedures, and effective medical management
  + Maintaining documentation of training and worksite evaluations
  + Monitoring the ergonomics program on an annual basis

## Department Heads

Department heads have the authority and responsibility for the implementation of the ergonomics program. Department heads provide leadership to develop a strong safety culture and continuous improvement within their departments. Responsibilities include:

* + Providing leadership and adequate funding to ensure the ergonomics program is effectively implemented
  + Identifying high-risk jobs and ensuring the implementation of recommended control measures
  + Providing manager and supervisor training regarding their program responsibilities
  + Ensuring managers and supervisors are knowledgeable about ergonomic hazards under their supervision and control
  + Encouraging employee participation in the ergonomics program

## Managers and Supervisors

Managers and supervisors support the ergonomics program by actively observing employees to identify ergonomic hazards. Duties of all managers and supervisors include:

* + Assisting the Ergonomics Program Administrator with the identification and evaluation of high-risk jobs
  + Reviewing worksite evaluations and ensuring the implementation of effective control measures, including a system to monitor their effectiveness
  + Encouraging active participation by employees in the ergonomics program, including attendance at required training and participation in the development of controls
  + Attending ergonomics training for managers and supervisors

## Employees

Employees are an essential element to the success of the ergonomics program and will be asked for their input and assistance with identifying ergonomic risk factors, worksite evaluations, and development and implementation of controls and training. All employees will:

* + Comply with our ergonomics program including the safe and appropriate use of tools, equipment, parts, materials, and procedures
  + Attend required ergonomics training
  + Report MSD signs, symptoms, and work-related hazards as early as possible to facilitate proactive interventions and prompt medical treatment
  + Take responsibility for personal health and safety

**[](#ID)ERGONOMICS PROGRAM**

## 

## Identification of High-Risk Jobs

The following methods will be used to identify and prioritize high-risk jobs:

* + Worksite evaluations (refer to Appendix A and Appendix B)
  + Self assessment and employee input (refer to Appendix C and Appendix D)
  + Walk throughs and observations
  + Review of loss data and Cal/OSHA 300 log

## Worksite Evaluation

Worksite evaluations provide a systematic approach for identifying ergonomic risk factors found within a job, process, or workstation. We use two worksite evaluation methods: the computer workstation evaluation (Appendix A) and the job hazard analysis (Appendix B).

The Ergonomics Program Administrator may schedule a worksite evaluation based upon the following:

* + Any job, process, or workstation that has contributed to a worker’s current MSD
  + A job, process, or workstation that has historically contributed to MSDs
  + Specific jobs, processes, or workstations that have the potential to cause MSDs
  + An employee reports an MSD sign or symptom to his/her supervisor

Other triggers that may require a worksite evaluation include, but are not limited to:

* + Change of jobs, tasks, equipment, tools, processes, scheduling, or work shifts
  + When a safety walk through, inspection, or survey has uncovered potential MSD hazards
  + Self-assessment identifying significant ergonomic hazards

**[](#Risk)**

**Risk Factors**

Risk factors are aspects of the work that increase the likelihood that an injury will take place. The result is often an MSD. The worksite evaluation will assist the Ergonomics Program Administrator in identifying the following ergonomic risk factors:

* + Awkward postures
  + Repetitive motion
  + Forceful exertion
  + Contact stress
  + Vibration

Other factors are also considered, such as lighting, noise, and temperature.

**[](#Control)Control Measures**

Once the risk factors are identified, the hazards will be addressed by using the following control measures:

Engineering Controls

This is our preferred method for controlling ergonomic hazards. They may encompass a redesign of the workplace, changes in processes, or purchases of specialized equipment to eliminate the risk factors.

Administrative Controls

Although engineering controls are preferred, administrative controls are implemented as temporary measures until engineering controls can be implemented or when engineering controls are not technically feasible. Since administrative controls do not eliminate hazards, management makes every attempt to ensure the practices and policies are followed.

Personal Protective Equipment (PPE)

Where engineering and administrative controls are not feasible or practical, PPE will be provided to reduce risk factors.

## Reporting Procedures

Employees who experience discomfort or symptoms associated with MSDs are to immediately report to their direct supervisor. The supervisor will complete and submit the worksite evaluation request form (Appendix E) to the Ergonomics Program Administrator.

Any injury diagnosed as a work-related MSD by a licensed health care provider will be immediately reported to the supervisor or Ergonomics Program Administrator.

Supervisors or any member of management who acquire information that an employee is experiencing symptoms of an MSD must notify the Ergonomics Program Administrator.

The Ergonomics Program Administrator will ensure appropriate action is taken and order an ergonomic evaluation if needed.

Supervisors notify the Ergonomics Program Administrator upon receipt of a request for an evaluation, modification, or accommodation.

The supervisor is responsible for discussing the identified exposures and recommended solutions with the employee. In addition, the supervisor is responsible for implementing the recommended corrective actions. The employee will be asked for input regarding ideas about improving ergonomics in his/her work area. Employees are responsible for using equipment correctly and performing tasks as outlined in the recommended solutions.

The Ergonomics Program Administrator will contact the supervisor and determine if a follow-up worksite evaluation is necessary to measure the effectiveness and/or implementation status of the recommendation(s).

## Training

Training is designed to educate managers, supervisors, and employees to recognize work-related ergonomic risk factors and to understand and implement appropriate control measures.

Ergonomics awareness training will be provided and documented:

* + When the program is introduced and annually thereafter
  + To all new employees
  + When new jobs, tasks, tools, equipment, machinery, workstations, or processes are introduced
  + When high exposure levels to ergonomic risk factors have been identified

The training will cover all the following topics:

* + Ergonomics program
  + Risk factors associated with MSDs
  + Symptoms and consequences of injuries caused by MSDs
  + Importance of early reporting symptoms of MSDs to supervisors
  + Awareness of safe work methods and techniques (i.e., stretch breaks, proper use of assistive devices/PPE) to minimize risk factors associated with MSDs

Specialized training may be provided for managers, supervisors, and employees who work in identified high-risk jobs or departments (i.e. police, fire, public works, etc.).

## Medical Management

Pursuant to the law, we provide medical care to all employees injured at work. We maintain a good working relationship with our medical care provider, ***INSERT NAME OF MEDICAL FACILITY***. All work-related injuries and illnesses will be referred to ***INSERT NAME OF MEDICAL FACILITY*** unless the injured employee has notified ***INSERT NAME*** in writing, prior to the injury or illness, that other provisions have been made.

In the event of a work-related injury or illness, the medical care provider/professional will:

* + Provide diagnosis and treatment for injured employee(s)
  + Determine if reported MSD signs or symptoms are work-related
  + Comply with our early return-to-work program by recommending restricted, modified, or transitional work duties when appropriate
  + Provide timely work status reports

.

### Appendix A

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Computer Workstation Evaluation | | | | | | | | | |
| **Employee Information** | | | | | | | | | |
| **Employee Name:** | | **Evaluation Date:** | | | | | | | |
| **Supervisor/Contact**: | | **Dominant Hand:  Right  Left** | | | | | | | |
| **Evaluator:** | | | | | | | | | |
| **Symptoms** | | | | | | | | | |
| **Check all that apply & indicate** | **wrist/forearm/elbow** | | | | | **neck/shoulder** | | **lower back** | |
| **Right/Left if applicable** | **eyestrain/headaches** | | | | | **mid/upper back** | | **no symptoms** | |
| **Hours Worked:  FT  PT  8 hrs  10 hrs  Overtime \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | | | | | | | | |
| **Tasks Performed** | | | | | | | | | |
| **Data Entry:** | | | **< 2 hrs** | | | | **2 – 4 hrs** | | **> 4 hrs** |
| **Phone Use:** | | | **< 2 hrs** | | | | **2 – 4 hrs** | | **> 4 hrs** |
| **Writing:** | | | **< 2 hrs** | | | | **2 – 4 hrs** | | **> 4 hrs** |
| **Other:** | | | **< 2 hrs** | | | | **2 – 4 hrs** | | **> 4 hrs** |
| **WORKSTATION CHECKLIST** | | | | | | | | | |
| **Chair – Sitting Posture** | |  | |  | **Recommendations/Adjustments** | | | | |
| **Backrest provides lumbar support** | | **Y** | | **N** | **backrest adjusted  not adjustable** | | | | |
| **Feet resting flat on the floor or on a footrest** | | **Y** | | **N** | **adjusted chair height  order footrest** | | | | |
| **Shoulders relaxed and armrests providing forearm support** | | **Y** | | **N** | **adjusted armrests  not adjustable** | | | | |
| **Seat depth adjusted properly** | | **Y** | | **N** | **adjusted seat depth  not adjustable** | | | | |
| **Additional Comments/Recommendations:** | | | | | | | | | |
| **Keyboard** | |  | |  | **Recommendations/Adjustments** | | | | |
| **Elbows close to sides at a 90°-110° angle** | | **Y** | | **N** | **adjusted keyboard tray  chair adjusted** | | | | |
| **Wrists straight and parallel to the floor** | | **Y** | | **N** | **adjusted keyboard tray  chair adjusted** | | | | |
| **Keyboard centered to monitor** | | **Y** | | **N** | **reposition keyboard  alternate keyboard** | | | | |
| **Wrists protected from edge or hard surface** | | **Y** | | **N** | **order wrist rest  adjust chair or tray** | | | | |
| **When typing wrists are neutral (no ulnar deviation)** | | **Y** | | **N** | **recommend alternate keyboard** | | | | |
| **Additional Comments/Recommendations:** | | | | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Computer Workstation Evaluation** | | | | |
| **Pointing Device (Mouse)** |  | |  | **Recommendations/Adjustments** |
| **Provides palm support** | **Y** | | **N** | **recommend alternate pointing device** |
| **Shoulders remain in a neutral position** | **Y** | | **N** | **reposition device  alternate keyboard** |
| **Wrist in neutral position (no ulnar deviation)** | **Y** | | **N** | **reposition device  alternate pointing device** |
| **Additional Comments/Recommendations:** | | | | |
| **Monitor** |  | |  | **Recommendations/Adjustments** |
| **Top of the screen is about 15º below eye level** | **Y** | | **N** | **adjusted height of monitor** |
| **Monitor 18”- 24" from eyes (arms length)** | **Y** | | **N** | **adjusted position of monitor** |
| **Monitor tilted slightly (~15º) up** | **Y** | | **N** | **adjusted angle of monitor** |
| **Employee does not wear bifocals** | **Y** | | **N** | **lowered the monitor  raised the chair** |
| **Additional Comments/Recommendations:** | | | | |
| **Lighting** |  | |  | **Recommendations/Adjustments** |
| **Lighting level is comfortable** | **Y** | | **N** | **dim lights  recommend task light** |
| **No glare on the monitor screen** | **Y** | | **N** | **reposition monitor  close blinds** |
| **Additional Comments/Recommendations:** | | | | |
| **Workspace and Tools** |  | |  | **Recommendations/Adjustments** |
| **Documents off flat work surface, located between the keyboard and monitor** | **Y** | | **N** | **order “in-line” document holder** |
| **Shoulders in a relaxed position when writing** | **Y** | | **N** | **chair adjusted** |
| **Frequently used items within reach** | **Y** | | **N** | **rearranged work area** |
| **Avoid cradling the phone between head and shoulder** | **Y** | | **N** | **recommend head set** |
| **Ten-key calculator used infrequently** | **Y** | | **N** | **recommend gel palm rest** |
| **Additional Comments/Recommendations:** | | | | |
| **Environment** |  | |  | **Comments/Discussions** |
| **Temperature is comfortable** | **Y** | | **N** |  |
| **Regular breaks and micro-breaks are taken** | **Y** | | **N** |
| **Activities are varied throughout the day** | **Y** | | **N** |
| **Additional Comments/Recommendations:** | | | | |
| *Evaluator Signature* | | *Employee Signature* | | |

### Appendix B

### Job Hazard Analysis

|  |  |  |  |
| --- | --- | --- | --- |
| **Job:** | **Department:** | | |
| **List of Required PPE:** | | | |
| **Analysis By:** | **Reviewed By:** | | |
| **Date:** | **Date:** | | |
| **Sequence of Steps** | | **Potential Hazards** | **Control Measures** |
|  | |  |  |
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### Appendix C

### Computer Workstation Self-Assessment Questionnaire

This questionnaire is intended for use by employees to complete a self-assessment for potential ergonomic risk factors at their workstation. Answer the questions below to determine problems that might cause musculoskeletal disorders (MSDs). If you answer “NO”, turn to the page(s) indicated in the Cal/OSHA publication *Easy Ergonomics for Desktop Computer Users* for improvement options located at <http://www.dir.ca.gov/dosh/dosh_publications/computerErgo.pdf>. Contact your supervisor for additional assistance.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Date: | Name: | | | | |
| Work hrs/week: | Dept: | Position: | | | |
| Describe symptoms (if applicable): | | | | | |
| **ACTIVITY** | | | **Yes** | **No** | **If NO, see page:** |
| **WHEN SITTING** | | | | | |
| Is the chair height adjusted so that your feet rest comfortably flat on the floor or footrest, with your knees just slightly lower than the hips? | | |  |  | 9 |
| Look at the depth of the seat pan. Is there a small gap (2-4 inches) between the back of your legs and the front edge of the seat pan? | | |  |  | 10 |
| Does the curve of the back of the chair fit into your low back? | | |  |  | 11 |
| Does the back of the chair tilt back? | | |  |  | 12 |
| With your shoulders relaxed, are the armrests slightly below your elbows, and do your arms hang comfortably at your sides? | | |  |  | 13 |
| Can you get your chair close enough to your keying, pointing, or writing surfaces without reaching? | | |  |  | 15 |
| **WHEN KEYING** | | | | | |
| With your shoulders relaxed and your fingers curved, is the home row of keys at the same height as your elbows or slightly below your elbows? | | |  |  | 17 |
| **WHEN POSITIONING THE CURSOR WITH A POINTING DEVICE** | | | | | |
| Is the pointing device positioned close to the keyboard? | | |  |  | 20 |
| **WHEN ORGANIZING THE WORK SPACE** | | | | | |
| Are you able to use your work surface and equipment without over reaching or using awkward postures? | | |  |  | 23 |
| **WHEN VIEWING THE MONITOR** | | | | | |
| Is the monitor in front of you and the top line of print is at or just below eye level or even lower if you wear bifocal or progressive lenses, AND are you able to scan the screen from top to bottom using only eye movements, not head movements? | | |  |  | 27 |
| Can you sit against the back and read the monitor screen from a comfortable distance without experiencing eye fatigue, blurred vision, or headaches? | | |  |  | 28 |
| Is the monitor screen free of glare? | | |  |  | 29 |
| **WHEN READING THE DOCUMENT** | | | | | |
| Is the document off the flat work surface and positioned between the monitor and the keyboard? | | |  |  | 31 |
| **WHEN USING NEW SOFTWARE PROGRAMS & OPERATING SYSTEMS** | | | | | |
| Have you been trained on the software programs and operating system you are using? | | |  |  | 33 |

### Appendix D

### Material Handling Self Assessment Questionnaire

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Date: | Shift: | | Hrs/Week: | | | |
| Employee Name: | Phone #: | | Position: | | | |
| Department/Location: | | Supervisor: | | | | |
| ***Answer questions about your workstation. If any answer is “no”, see your supervisor.*** | | | | | | |
|  | | | | Yes | No | |
| Are the weights of loads in your job tasks light to moderate? | | | |  |  | |
| Is the pushing or pulling force in your job task light to moderate? | | | |  |  | |
| Are walking surfaces: | | | |  |  | |
| Level? | | | |  |  | |
| Wide enough? | | | |  |  | |
| Clean and dry? | | | |  |  | |
| Are objects: | | | |  |  | |
| Free of sharp or narrow edges? | | | |  |  | |
| Easy to grasp? | | | |  |  | |
| Stable? | | | |  |  | |
| Able to be held without slipping? | | | |  |  | |
| Equipped with handholds? | | | |  |  | |
| Is the workspace free of obstructions? | | | |  |  | |
| Are mechanical aids or equipment available? | | | |  |  | |
| Is the available equipment maintained? | | | |  |  | |
| Is the available equipment used? | | | |  |  | |
| Does material handling avoid: | | | |  | |  |
| Movements below knuckle height and above shoulder height? | | | |  | |  |
| Sudden movements during handling? | | | |  | |  |
| Twisting and bending at the waist? | | | |  | |  |
| Extended reaching? | | | |  | |  |
| Is repetition avoided by: | | | |  | |  |
| Scheduling? | | | |  | |  |
| Job rotation? | | | |  | |  |
| Self-pacing? | | | |  | |  |
| Planned breaks? | | | |  | |  |
| Is help from other staff available? | | | |  | |  |
| Do you have an unobstructed view while transporting or moving materials? | | | |  | |  |
| Have you received training in materials handling and lifting procedures? | | | |  | |  |

### Appendix E

### Worksite Evaluation Request

|  |  |  |
| --- | --- | --- |
| **Employee Information** | | |
| Employee Name: | Job/Title: | |
| Department: | Location: | |
| Contact number for employee: | Self-Assessment Questionnaire Completed? | |
| Describe areas of concern or discomfort of employee: | | |
| Supervisor Name: | Date Submitted: | |
| **Ergonomics Program Administrator Section** | | |
| Type of Worksite Evaluation  Computer Workstation Evaluation Job Hazard Analysis | | Date employee contacted: |
| Date evaluation is scheduled: | | |
| Comments: | | |
| Follow-Up Action Plan: | | |
| Date Evaluation Completed: | Date of Follow-Up: | |

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| ***C:\Users\hcastro\Documents\Logos\BRS_no_white.png*** | |  | **Ergonomics Program** | | | |  | |  |
|  | |  | | |  | **Applicability** | | |  |
|  | | |
| ***Program Development Guide*** |  | **Frequently Asked Questions**  **Q: Do I really need an ergonomics program?**  A: The Cal/OSHA Ergonomics Regulation (<http://www.dir.ca.gov/title8/5110.html>) applies to a job, process, or operation where a repetitive motion injury (RMI) has occurred to more than one employee and:   * The RMI is work-related * The employees were performing identical work activity, i.e. performing the same task such as word processing, assembly, or loading. * The RMIs were diagnosed by a licensed physician. * The RMIs were reported within a 12-month period.   **Q: Where can I find additional information about the history of the Cal/OSHA ergonomics regulation?**  A: <http://www.dir.ca.gov/DOSH/ergohist.htm>  **Q: If I’m not subject to the regulation at this point, what is the advantage of implementing one?**  A: Ergonomic related injuries are typically the most frequent and costly of all work-related injuries. | | | | | | |  |
|  |  |  | | ***Provided by Bickmore Risk Services*** | | | | ***800.541.4591*** | |

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|  | |  | | |  | **Applicability** | | |  |
|  | | |
| ***Program Development Guide*** |  | Consider the following statistics.  chart1.bmp  Chart 3.bmpChart 2.bmp[BACK button.JPG](#ApplicabilityBack) | | | | | | | |
|  |  |  | | ***Provided by Bickmore Risk Services*** | | | | ***800.541.4591*** | |

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| ***C:\Users\hcastro\Documents\Logos\BRS_no_white.png*** | |  | **Ergonomics Program** | | | |  | |  |
|  | |  | | |  | **Policy** | | |  |
|  | | |
| ***Program Development Guide*** |  | **Frequently Asked Questions**  **Q: Should our policy mainly address actions we take to address employees who have ergonomic injuries?**  A: The program should include provisions for addressing those employees who are injured, but the policy should focus on proactive actions that can be taken to prevent ergonomic injuries  [BACK button.JPG](#PolicyBack) | | | | | | |  |
|  |  |  | | ***Provided by Bickmore Risk Services*** | | | | ***800.541.4591*** | |

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|  | |  | | |  | **Purpose** | | |  |
|  | | |
| ***Program Development Guide*** |  | **Frequently Asked Questions**  **Q: The purpose section indicates we should be looking at all risk factors in each job category. This seems overwhelming. Where should we start?**  A: First, start with those jobs where significant exposure is obvious. Another place to start is with those positions where employees know employees have complained about discomfort in the past. Another good method of prioritizing where to look first is to ask employees about those positions they think present the most risk. Who knows the job better than the workers?  [BACK button.JPG](#PurposeBack) | | | | | | |  |
|  |  |  | | ***Provided by Bickmore Risk Services*** | | | | ***800.541.4591*** | |

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|  | |  | | |  | **Identification of High-Risk Jobs** | | |  |
|  | | |
| ***Program Development Guide*** |  | **Frequently Asked Questions**  **Q: Are there any additional clues I can use to identify and prioritize high-risk jobs?**  A: Look for:   1. Certain jobs or work conditions cause worker complaints of undue strain, localized fatigue, discomfort, or pain that does not go away after overnight rest. 2. Workers visiting the clinic make frequent references to physical aches and pains related to certain types of work assignments. 3. Job tasks involving activities such as repetitive and forceful exertions; frequent, heavy, or overhead lifts; awkward work positions; or use of vibrating equipment. 4. Clues that indicate ergonomic problems may also suggest the scope of the effort required to correct them. For example, signs implicating multiple jobs in various departments and involving a large percentage of the workforce would indicate the need for a full-scale, organization-wide program. Alternatively, signs that the suspected problems are confined to isolated tasks and relatively few workers may suggest starting with a more limited, focused activity.   [BACK button.JPG](#IDBack) | | | | | | |  |
|  |  |  | | ***Provided by Bickmore Risk Services*** | | | | ***800.541.4591*** | |

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|  | |  | | |  | **Risk Factors** | | |  |
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| ***Program Development Guide*** |  | What are considered the risk factors that lead to RMIs?  **Awkward posture**  When any joint of your body bends or twists excessively, outside a comfortable range of motion   * Neck - Looking upward, backward, and sideways * Shoulders/Arms - Over reaching; forward, backward, over shoulders, across the body * Elbow/Forearms - Rotating forearm, raising elbows * Wrists/Hands - Bending forward, backward, spreading fingers, and using power grip * Upper and Lower Back - Bending forward, backward, sideways and twisting * Legs/Knees - Standing on one leg, kneeling, squatting   When unavoidable:   * Change tasks * Stretch * Take frequent short breaks * Consider rest/recovery time     **Solution**  Move material closer    **Risk Factor**  Must reach for material  Causes stress on joints and muscles | | | | | | | |
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| ***C:\Users\hcastro\Documents\Logos\BRS_no_white.png*** | |  | **Ergonomics Program** | | | |  | |  |
|  | |  | | |  | **Risk Factors** | | |  |
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| ***Program Development Guide*** |  | **Repetitive motion**  Performing a task that uses the same muscle groups over and over with limited rest or recovery.  Includes repetitive use of:   * Wrenches * Screwdrivers * Computer work   To avoid, consider:   * Appropriate rest and recovery * Job rotation * Power tools     **Solution**  Power tools  Job rotation  Appropriate rest &recovery  **Risk Factor**  Overuse of same muscles  Fatigue | | | | | | | |
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| ***Program Development Guide*** |  | **Forceful exertion**  Amount of physical effort required to perform a task.  Muscles fatigue with increased muscular exertion.  Examples include:   * Lifting tires and batteries * Using wrenches, screwdrivers, and other high-torque tools   Solutions include:   * Frequent breaks * Job rotation * Adjustable equipment * Powered equipment     **Risk Factor**  Requires physical effort to perform a task  **Solution**  Adjustable handles  Center of gravity is at waist  Powered equipment | | | | | | | |
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| ***Program Development Guide*** |  | **Contact stress**  Continuous contact or rubbing between hard or sharp objects and soft tissue  Examples include:   * Kneeling on the floor * Resting on the edge of a vehicle when working under the hood * Compressing and extending hands when using a computer   Solutions include:   * Padding * Equipment with better design     **Risk Factor**  Localized pressure  May lead to MSDs  **Solution**  Larger handle  Pad the handle | | | | | | | |
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| ***Program Development Guide*** |  | **Vibration**  Can lead to spasm of the small blood vessels in the hand, wrist, arm  Examples include:   * Using power tools * Driving vehicles   Solutions include:   * Job rotation * Frequent breaks * Padded handles * Anti-vibration gloves       **Risk Factor**  Can lead to spasm of the small blood vessels in the hand, wrist, arm  **Solution**  Job rotation  Frequent breaks  Padded handles  Anti-vibration gloves  [BACK button.JPG](#RiskBack) | | | | | | | |
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|  | |  | | |  | **Control Measures** | | |  |
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| ***Program Development Guide*** |  | **Frequently Asked Questions**  **Q: What happens if we make the wrong recommendation and actually increase risk factors related to a particular job?**  A: Testing and evaluation verify that the proposed solution actually works and identifies any additional enhancements or modifications that may be needed. Employees who perform the job can provide valuable input into the testing and evaluation process. Worker acceptance of the changes put into place is important to the success of the intervention.  After the initial testing period, the proposed solution may need to be modified. If so, further testing should be conducted to ensure that the correct changes have been made, followed by full-scale implementation.  **Q: This seems like a lot of work for one person. Is it doable?**  A: Designating the personnel responsible, creating a timetable, and considering the logistics necessary for implementation are elements of the planning needed to ensure the timely implementation of controls. It needs to be a group effort with oversight of an administrator. The administrator is not doing all of the work.  **Q: Once an evaluation is completed, is it necessary to follow up?**  A: A follow up evaluation is necessary to ensure that the controls reduced or eliminated the ergonomic risk factors and that new risk factors were not introduced. This follow up evaluation should use the same risk factor checklist or other method of job analysis that first documented the presence of ergonomic risk factors. If the hazards are not substantially reduced or eliminated, the problem-solving process is not finished.  The follow up may also include a symptom survey, which can be completed in conjunction with the risk-factor checklist or other job analysis method. The results of the follow up symptom survey can then be compared with the results of the initial symptom survey (if one was performed) to determine the effectiveness of the implemented solutions in reducing symptoms. | | | | | | |  |
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| ***Program Development Guide*** |  | **Engineering Controls**  Engineering control strategies to reduce ergonomic risk factors - some example include:   * Workstation layout * Height-adjustable workbench or desk * Locating tools and materials within short reaching distances * Selection and use of tools * Using clamps and vise-grips to hold work pieces to relieve awkward hand/arm positions * Pistol hand grips for knives or squeeze grip actuated screwdrivers * Lighter-weight packaging materials to reduce lifting loads * Work methods * Using mechanical assist devices * Using handles or slotted hand holds * Height-adjustable material bins * Removing obstructions * Using mechanical assist devices to relieve heavy load lifting; using handles or slotted hand holes in packages requiring manual handling; pistol handle grips for knives to reduce wrist bending postures; squeeze-grip-actuated screwdrivers to replace finger-trigger-actuated screwdrivers | | | | | | | |
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| ***C:\Users\hcastro\Documents\Logos\BRS_no_white.png*** | |  | **Ergonomics Program** | | | |  | |  |
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| ***Program Development Guide*** |  | **Administrative Controls**  Administrative controls are management-dictated work practices and policies to reduce or prevent exposures to ergonomic risk factors. Administrative control strategies include  **Changes in job rules and procedures**   * Rest breaks * Reducing shift length * Broadening or varying the job content   **Adjusting the work pace**   * Rotating workers through jobs that are physically tiring, and * Training workers to recognize ergonomic risk factors and to learn techniques for reducing the stress and strain while performing their work tasks.   Although engineering controls are preferred, administrative controls can be helpful as temporary measures until engineering controls can be implemented or when engineering controls are not technically feasible. Since administrative controls do not eliminate hazards, management must ensure that the practices and policies are followed.  PPE   * Gloves that absorb vibration * Gloves that protect the hands from cuts * Clothes/gloves that protect against the cold * Gel shoe insoles to cushion the foot/lower extremity when walking on hard surfaces   One of the most controversial questions in the prevention of MSDs is whether the use of personal equipment worn or used by the employee (such as wrist supports, back belts, or vibration attenuation gloves) are effective. Some consider these devices to be PPE. Whether braces, wrist splints, back belts, and similar devices can be regarded as offering personal protection against ergonomic hazards remains open to question. Although these devices may, in some situations, reduce the duration, frequency, or intensity of exposure, evidence of their effectiveness in injury reduction is inconclusive.  [BACK button.JPG](#ControlBack) | | | | | | | |
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