PREVENTION OF REPETITIVE MOTION INJURIES

1.0 Purpose
The information presented in this program document will assist department management in recognizing ergonomic risk factors and implementing RMI prevention strategies. The County has a history of promoting measures to prevent RMIs and departments are encouraged to continue occupational safety educational efforts, workplace improvements, and injury prevention efforts before injuries occur.

Section 5110, California Code of Regulations, Title 8 sets forth requirements for employers to implement a program to prevent Repetitive Motion Injuries (RMIs). The regulation applies to work sites where an injury has occurred to more than one employee and,

a) The RMI has been predominantly, (50%) or more, caused by a work process;
b) There must be a relationship of employees injured doing similar work or process;
c) The RMIs were objectively diagnosed and identified by a licensed physician; and,
d) The injuries occurred in the last 12 months, but not before July 3, 1997.

Under the preceding circumstances, the employer shall establish a RMI program to minimize injuries. A program to reduce RMIs shall include:

a) Work Site Evaluations: Each job, process, or operation of identical work activity covered by S. 5110 or a representative number of such jobs, processes or operations of identical work activities shall be evaluated for exposures that have caused RMIs.
b) Control of RMI exposures shall be controlled or corrected in a timely manner to the extent feasible by engineering controls, administrative controls, adjustable fixtures or tool re-design.
c) Training shall be provided to employees that explains the County and department RMI prevention program; explanation of exposures associated with RMIs; the symptoms and consequences of injuries caused by repetitive motion; the importance of reporting symptoms and injuries to the employer; and, the methods used by the department to minimize RMIs.
2.0 RMI Defined
For the purposes of this document, CTD (cumulative trauma disorder) and RMI (repetitive motion injury) may be used interchangeably to describe injury or illness arising from repetitive work activities. This type of injury is associated with cumulative application of repeated biomechanical stress to tissues and joints of the body. As the trauma occurs over a period of time, OSHA defines this type of medical condition as an illness; in some instances, a similar injury with an acute and sudden onset might be defined as an injury. This type of injury/illness includes but is not limited to bursitis, ligament sprains, muscle strains, nerve entrapment, and tendon related disorders. Back injuries and lower extremity injuries may often be included in this category of illness/injury, but generally, the term applies to upper extremity symptoms of the hand, arm, shoulder, neck, and upper back.

Generally, RMI symptoms will be persistent or recurring. RMI symptoms may include any of the following: pain from movement, from pressure, or from exposure to cold or vibration, except when the pain is due to an acute injury (e.g. burn, abrasion, splinter, slip and fall); change in skin color (e.g. skin turns blue, or abnormally white or red) on exposure to cold or vibration; numbness or tingling in an arm, leg or digit, especially in fingertips at night; decreased range of joint motion; decreased grip strength; swelling of a joint or part of an arm, leg or digit.

It is important that medical diagnosis and treatment be promptly provided when symptoms are presented. Many methods of treatment are available ranging from conservative therapy to surgery. It is generally agreed in the medical community that early intervention and prevention strategies can play a significant role in eliminating or minimizing the physical effects of RMI exposures.

3.0 RMI Risk Factors
There are several risk factors associated with repetitive motion and physical activities that are known to contribute to causation of CTD/RMI.

3.1 Continuous use of the same tool/instrument or of similar tools and instruments in construction, agricultural or repair activities.

3.2 Repetitive keystroking, manually striking, or pressing a data entry device.

3.3 Processing of agricultural products to include cutting, trimming, peeling or loading activities.

3.4 Work where repeated motions or exertions are paced by a mechanical or electrical device such as a packaging or labeling operation.

3.5 Repetitive manual operation of a cash register or presentation of an object to a data scanning or optical coding device.

3.6 Routine assumption of a crouched or stooped body posture.

3.7 Routine manual lifting of objects weighing 20 pounds or more, or beyond physical ability.

3.8 Other risk factors associated with CTD and RMI are: frequency, force, duration, awkward posture, work rest intervals, poor design of tools or equipment, presence of vibration, and exposure of toes or fingers to cold while performing repetitive work.
4.0 Control of RMI Risk Factors

The control of RMI risk factors often uses simple concepts to solve complex problems. A good practice is to involve the supervisor and the person who performs the repetitive activity in the analysis of ergonomic and workplace problem solving. Follows are several commonly used principles in ergonomic problem solving:

4.1 Reduce the frequency of the repetitive activity.
4.2 Reduce the total time duration of the activity.
4.3 Alternate tasks and vary work routines. This helps relieve static posture, reduces fatigue, and rests the eyes.
4.4 Reduce the amount of force needed to do the work.
4.5 Change body position and posture, reduce the need to bend or assume awkward postures while working. Rearranging workspace or items used during work is often practical.
4.6 Provide appropriate devices to reduce force, strain, fatigue, and awkward postures. Examples are adjustable chairs and work surfaces, task lighting, glare filters, footrests, and properly designed tools and equipment.
4.7 Consider the entire physical work environment to include temperature, noise, housekeeping, lighting/glare, general safe work practices, and similar concerns.
4.8 Consider the psychological and social dynamics in the work place. Factors such as general morale, disciplinary actions taken or pending, budget constraints, interpersonal work relationships, and management style may influence how employees present RMI symptoms.

5.0 Specific Prevention Strategies

Cooperation and communication is required from all segments of the County organization to develop and maintain a safe work environment for employees. Over a period of time, consistent application of the principles, policies and procedures discussed in this document will reduce lost time an provide a more productive and motivated work force.

5.1 Department Management: It is a responsibility of managers and supervisors to provide a safe work environment. Supervisors and managers must be prepared to coordinate and communicate with employees on work practices and procedures in order to maximize opportunities to prevent RMI injury by early intervention. Whenever possible, RMI prevention techniques should be integrated into the routine practices and procedures of the work unit. As with other health and safety issues, documentation of RMI prevention efforts establishes a historical record and, in some instances, may demonstrate compliance with regulatory requirements. The departmental budget planning process should give consideration to occupational safety requirements.

5.2 Risk Management: The County Safety Officer will assist departments in developing specific policies, procedures, training, workstation evaluations, or other resources to help work units prevent RMI incidents. Workers Compensation claims will be reviewed and work site evaluations will be conducted to prevent re-injury to employees; such evaluations may be done by designated department representatives or supervisory staff, the County Safety Officer, or contract consultants depending on the particular circumstances.
5.3 Purchasing: Purchasing management has implemented procedures to review the acquisition of new office furniture or other equipment. Such procedures consider adjustability, durability, and review of regulatory requirements, ANSI 100 standards, cost, and the expected future use of the equipment. The procedures are reviewed periodically.

5.4 Information Technology: The Information Technology Department is the technical resource on hardware and software applications. Some of these applications may be related to engineering controls to prevent RMI exposures.

5.5 Health Promotion: The Wellness Program provides several types of training that benefits occupational safety and injury prevention. The training that relates to RMI prevention may include: back injury prevention; symptoms of RMI; an emphasis on early reporting of symptoms; cooperation and communication with supervision to eliminate hazards; proper use of adjustable work components; use of hand trucks, carts, and other mechanical assistance to reduce lifting and material handling; methods to reduce physical fatigue, and general good health practices. The training resources and types of instruction will be continually evaluated for effective and appropriate implementation. Site-specific training on injury prevention will be made available as approved by departmental management.

6.0 County Injury and Illness Prevention Program (IIPP)

The County Safety Officer, County Administrative Office, Human Resources and Employment Services Division administers the County IIPP required by Section 3203, California Code of Regulations, Title 8. Each department is responsible to develop specific safety programs and procedures applicable to the occupational health and safety needs of employees in the department.

6.1 IIPP Program Procedures 28.0: Prevention of Repetitive Motion Injuries will be considered the primary compliance document for RMI injury prevention strategies. Departments should develop appropriate work site and task specific practices and procedures that support the objective of providing a safe workplace.

6.2 Resources Sharing: Departments that develop site-specific practices and procedures are encouraged to share their acquired experience with other organizational units in the County. Resource and information sharing will lead to reduced costs and consistent results in RMI prevention efforts.

6.3 Safety Program Management Committee: This committee is comprised of Department Safety Representatives from all County Departments. The Department Safety Representative is responsible for maintenance of the departmental IIPP and will be kept informed and updated on the subject of RMI prevention via committee activities and minutes of meetings. The committee may form special task groups or sub-committees to maintain emphasis and monitor progress on safety issues including RMI prevention.

6.4 Resource Elements: Existing resources that support the goals of RMI prevention but are not a specific IIPP component may be integrated into RMI prevention strategies. Examples are the Vision Service Plan that provides prescription computer glasses for designated employees; departmental employee safety committees; Workers compensation evaluations to help return employees to work in alternative or modified duties; and, integration of recognized ergonomic practices into new or existing work practices.
7.0 County Organizational Support Elements

7.1 Management Support: Managers and supervisors are expected to support and promote health and safety objectives set forth by the Board of Supervisors, Administration, and Executive Management. Such support and emphasis should be viewed as a business practice that is equal to any other management objective or department goal.

7.2 RMI Prevention Training: Departments will assess the training needs required to prevent RMI exposures. General and specific RMI prevention training will be provided to employees. This training may be integrated into other safety or professional training requirements provided to the employee. Supervision will require that employees comply with safe work practices. All safety training should be documented and retained for at least three years. Safety training records may be subject to Cal-OSHA inspection.

7.3 Symptoms Reporting: Employees shall be encouraged to report any RMI symptoms suspected to be work related. Such reporting shall require a documented follow-up inquiry by supervision regardless of whether a Workers Compensation claim is filed or if medical treatment is provided. A good faith effort to resolve complaints about ergonomic factors or work practices must be made by supervision with reliance on appropriate personnel practices.

7.4 Administrative Controls: Appropriate management techniques may be used to help prevent RMI incidents. Examples include varying task routines, mandatory break periods, job rotation, altering daily work patterns, mini-breaks, and similar strategies. Workstation evaluations prior to complaints or symptoms may also be considered an administrative control.

7.5 Personal Protective Equipment (PPE): This includes special clothing provided by the employer, padding, gloves, or other devices worn or attached to the body of the employee. Use of PPE requires specific training and documented procedures. PPE shall not be considered a substitute for feasible engineering or administrative controls.

7.5.1 Restrictions on PPE Use: Departments shall not provide employees with wrist splints, elastic arm braces, back braces, or similar devices that immobilize a body part; such devices are to be provided and used under medical supervision only.

7.6 Engineering Controls: Appropriate measures to reduce RMI incidents include but are not limited to: adjustable chairs, adjustable tables/work surfaces; foot rests; document holders; task lighting; glare screens; use of hand trucks, carts, or other mechanical assistance devices, and adaptive instruments or tools. Any modification to the work environment to reduce RMI exposures may be considered an engineering control. Specialized technical expertise may be required in some situations in order to avoid creating one problem while attempting to solve another.
7.7 Work Station Evaluations: A work station evaluation shall be performed whenever –

- An evaluation is considered necessary by management.
- An employee alleges that RMI symptoms are work related or exacerbated by work.
- An employee is diagnosed as having a work related RMI.
- Management has knowledge or cause to believe that a specific work activity presents a RMI risk. Such knowledge may be acquired from observation, employee complaints, safety inspections and similar sources.

Designated department staff in most instances may perform preliminary computer workstation evaluations to respond to ergonomic concerns. IIPP Form 28.C - Ergonomic Workstation Evaluation is recommended for use in most instances for computer operations.

**All third party workstation evaluations for injured employees by outside consultants will be coordinated by the County Safety Officer and conducted in accordance with provisions set forth in the County Workers Compensation Procedure Manual.**

7.8 Employee Work Environment Survey: It is often helpful to solicit information by a survey of a specific work group. Survey information can be used in a variety of ways to determine problem areas and to identify concerns which employees may otherwise be reluctant to present. Survey results are most beneficial if the contributor is identified, but use of anonymous survey results may also provide important information. The County Safety Officer will provide a sample survey form upon request.

7.9 Risk Assessment: Departments may request assistance from the County Safety Officer, the Wellness Program, or other technical resources designated by Risk Management in order to evaluate RMI prevention strategies in specific work situations.

7.10 Investigations and Audits: Work unit management, supervision, and employees will provide professional cooperation with any work site evaluation, audit or investigation initiated by County management or Risk Management that involves occupational health and safety complaints or investigation of a work related RMI injury.

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Issued by: Gary L. Metzler, County Safety Officer

Referenced Exhibits:

IIPP Form 28.C ____ Ergonomic Workstation Evaluation