

FSGA/HAAF GARRISON
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GARRISON SAFETY SOP – ANNEX M

ERGONOMICS



FSGA/HAAF Safety Program SOP
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1. Purpose:

This Annex to the FSGA/HAAF Garrison Safety and Occupational Health (SOH) SOP establishes the Ergonomics Program in support of the Garrison SOH program and Safety and Occupational Health Management System (SOHMS). This Annex establishes responsibilities, and procedures for implementing ergonomics which is the science of fitting the work environment to the people who do the work. It also outlines the goals of the SIAD Ergonomics Program and addresses organizational involvement in preventing illnesses and injuries by eliminating or reducing occupational risk factors.

2. Scope

This Annex to the Garrison SOH SOP applies to all military and civilian personnel assigned to the FSGA/HAAF Garrison. It is intended to provide adequate information so all levels of leadership, SMs, and civilian workforce can properly implement the Garrison SOH Program.

3. References

29 CFR 1910 - Occupational Safety and Health Standards

29 CFR 1960 - Basic Program Elements for Federal Employee Occupational Safety and Health Programs

DoDI 6055.01 - Department of Defense Instruction (DODI), DOD Safety and Occupational Health (SOH) Program

AR 385-10 - The Army Safety Program

DA Pam 40-21 Ergonomics Program

4. Records Management:

Records created throughout the processes prescribed by this Annex will be identified, maintained, and disposed of according to AR 25-400-2 (The Army Records Information Management System (ARIMS) and DA Pam 25-403 (Guide to Recordkeeping in the Army). The primary means of recordkeeping for the Garrison Safety Office (GSO) will be the Army Safety Management Information System (ASMIS) located at <https://mishap.safety.army.mil> . Record titles and descriptions are available on the ARIMS website <https://www.arims.army.mil>

5. Responsibilities

Directors and Managers will:

- Ensure ergonomic plans are established throughout their areas of responsibilities.
- Ensure supervisors and Unit Safety Officers (USOs) are trained on ergonomic factors that apply to their area of responsibility.
- Ensure area of responsibility is periodically evaluated for identification of ergonomic deficiencies and take appropriate corrective action.
- Ensure ergonomics are implemented in all Job Hazard Analysis (JHA), as appropriate.

Supervisors will:

- Develop ergonomic plans applicable to their areas of responsibility.

- Train employees on reporting procedures for reporting ergonomic related disorders and the importance of early reporting.
- Include ergonomic considerations in JHAs.
- Evaluate the area of responsibility to ensure ergonomic standards are met.
- Provide protective equipment to reduce potential ergonomic injury or illness while engineering controls are implemented.
- Ensure ergonomic considerations are integrated into the purchase of new furniture.
- Contact the GSO to schedule Ergonomic Assessments as necessary.

Employees will:

- Assist supervisors in identifying ergonomic hazards.
- Report symptoms of possible ergonomic related injuries or illnesses.
- Use protective devices or equipment as required.

Garrison Safety Office (GSO) will:

- Evaluates workplace for ergonomic problems. This includes equipment testing requirements.
- Advises directors, commanders, and supervisors in resolution of ergonomic related issues.
- Coordinates train the trainer workshops as required.
- Develops and disseminates ergonomic awareness materials.
- Maintains and reviews injury and illness records related to ergonomic problems to develop trend analysis.

Occupational Health and Industrial Hygiene will:

- Assists in evaluating the workplace for ergonomic problems.
- Assists in conducting ergonomic training as needed.
- Assists in identifying personnel with ergonomic related injuries.
- Provides technical assistance in identification and resolution of ergonomic issues.

6. Policy

- Job Hazard Analysis (JHA). Ergonomic considerations will be integrated in the job hazard analysis process.
- Work site analysis. Problem or hazard identification and detailed work site analysis are essential steps in conducting work site analysis.
- Problem or hazard identification. Identification of jobs or work sites with ergonomic risk factors is the first step in the prevention of ergonomic hazards. This is accomplished by direct observation, case referrals, and incident reports.
 - Direct observation is conducted by trained personnel or by workers who can identify tasks or situations which are uncomfortable and may indicate ergonomic risks.

- Case referrals from Reasonable Accommodations Requests, the Occupational Health Clinic (OHC), Industrial Hygienist (IH), or the GSO may be used to identify a work area with potential ergonomic risk.
- Specific health or performance events such as wrist pain, back pain, or increased mishaps may be indicative of ergonomic risks.
- Reports such as accident reports, occupational and health reports, and GSO/USO inspections are used to help identify ergonomic risk factors.
- The following are risk factors that contribute to ergonomic related disorders that should be considered in identifying ergonomic problems or hazards:
 - Repetitive motions (especially during prolonged activities).
 - Sustained or awkward postures.
 - Excessive bending or twisting of the wrist.
 - Continued elbow or shoulder elevation (for example, overhead work).
 - Forceful exertions (especially in an awkward posture).
 - Excessive use of small muscle groups (for example, pinch grip).
 - Acceleration and velocity of dynamic motions.
 - Vibration.
 - Mechanical compression.
 - Restrictive workstation (for example, inadequate clearances).
 - Improper seating or support.
 - Inappropriate hand tools.
 - Machine-pacing and production-based incentives.
 - Extreme temperatures.
 - Extended exposure to noise.
- The combined effect of several risk factors in a job workstation may lead to a higher probability of causing an ergonomic disorder.
- Detailed analysis. Detailed analysis is necessary for further evaluation of those jobs or work sites. Personnel conducting analysis should systematically:
 - Consider the concept of multiple causes.
 - Look for trends, including age, gender, work task, and time of injury.
 - Identify the work task or portions of the process which contain risk factors.
- Prevention and control of ergonomic hazards. The primary method of preventing and controlling exposure to ergonomic hazards is through effective design (or redesign) of a job or work site. Following are intervention methods in order of priority for preventing and controlling ergonomic hazards.

- Process elimination. Elimination of the ergonomically demanding process essentially eradicates the hazard.
- Engineering controls. Ergonomic engineering controls redesign the work site or equipment to fit the limitations and capabilities of workers. Equipment or work site redesign typically offers a permanent solution.
- Substitution. Substituting a new work process or tool (without ergonomic hazards) for a work process with identified ergonomic hazards can effectively eliminate the hazard.
- Work practices. Practices that decrease worker exposure to ergonomic risks include changing work techniques, providing employee conditioning programs, and regularly monitoring work practices. Also included are equipment maintenance, adjustment, and modification of current equipment or tools, as necessary.
- Proper work techniques. Proper work techniques include methods that encourage correct posture, use of proper body mechanics, appropriate use and maintenance of hand and power tools, and correct use of equipment and workstations.
 - Trained ergonomic personnel in consultation with the OHC should identify those jobs that require a break-in period. The OHC should evaluate those employees returning from a health-related absence and define the break-in period for each individual employee.
 - Regular monitoring of operations helps to ensure proper work practices and to confirm that the work practices do not contribute to cumulative trauma injury or hazardous risk factors.
 - Effective schedules for facility, equipment, and tool maintenance, adjustments and modifications will reduce ergonomic hazards. This includes ensuring proper working condition, having sufficient replacement tools to facilitate maintenance, and using effective housekeeping programs. Tool and equipment maintenance may also include vibration monitoring.
- Administrative controls. Administrative controls can be used to limit the duration, frequency, and severity of exposure to ergonomic hazards. Examples of administrative controls include, but are not limited to:
 - Reducing the number of repetitions by decreasing production rate requirements and limiting overtime work.
 - Reducing the number of repetitions by reducing line and or production speed or by having worker input into production speed (for example, using worker-based rather than machine-based production speed).
 - Providing rest breaks to relieve fatigued muscle-tendon groups. The length of the rest break should be determined by the effort required, total cycle time, and the muscle-tendon group involved.
 - Increasing the number of employees assigned to the task (for example, lifting in teams rather than individually).
 - Instituting job rotation as a preventive measure, with the goal of alleviating physical fatigue and stress to a particular set of muscles and tendons. Job rotation should not be used in response to symptoms of cumulative trauma, as this can contribute to symptom

development in all employees involved in the rotation schedule rather than preventing problems. Analysis of the jobs used in the rotation schedule should be conducted by trained ergonomic and health care personnel.

- Providing light or restricted duty assignments to allow injured muscle-tendon groups time to rest, assisting in the healing process. Light or restricted duty assignments should be provided when physical limitations (as identified by a health care provider) allow the worker to return to work performing less than their normal work requirements. Every effort must be made to provide light or restricted duty assignments.
- PPE is not necessarily recommended for controlling exposure to ergonomic hazards, because little research has been conducted to support claims of their usefulness.
 - Ergonomic appliances such as wrist rests, back belts, back braces, and so on are NOT considered to be PPE. Consultation with trained ergonomic personnel on the effectiveness of such devices should be made prior to purchase and must be approved by the Safety Office.
 - Ergonomic hazards should be considered when selecting PPE. PPE should be provided in a variety of sizes, should accommodate the physical requirements of workers and the job, and should not contribute to ergonomic hazards.
- Health care management. Early recognition and medical management of ergonomic disorders are critical to reduce the impact of injury on both the employee and employer.
 - Common symptoms of musculoskeletal ergonomic disorder can include, but are not limited to pain, tingling, numbness, stiffness, and weakness in the neck, shoulders, arms, hands, back, and legs. Other symptoms can include headaches, visual fatigue, and increased errors.
 - Employees with symptoms of ergonomic disorders should report to medical personnel for an evaluation. Active-duty Soldiers should report to their primary care provider. Civilians have the right to choose a civilian source of care. Civilians should report to the Occupational Health Nurse even if they are being treated by their own physician.
 - Supervisors should ensure that symptomatic Soldiers and employees report for a medical evaluation in a timely manner.

7. Training:

The GSO in conjunction with the OHC will provide train the trainer ergonomic education for USOs and supervisors as needed. USOs and supervisors will ensure employees are trained as required by their tasks and as identified by JHAs.

Training curriculum. Training will consist of but not be limited to the following:

- The potential risk of ergonomic disorders.
- The possible causes and symptoms.
- How to recognize and report symptoms.
- The means of prevention.
- The sources of treatment.

Types of training.

- General. Employees who are potentially exposed to ergonomic hazards should receive formal instruction on hazards associated with their jobs and equipment. This training could be conducted at the initial orientation and annually thereafter.
- Specific training. New employees and reassigned workers should receive an initial orientation and hands-on training prior to being placed in a full production position. The initial orientation should include: a demonstration of the proper use, care, and operating procedures for all tools and equipment; use of safety equipment; and the use of safe and proper work procedures such as proper lifting techniques.

Appendix A – Abbreviations

AR	Army Regulation
ARIMS	Army Records Information Management System
ASMIS	Army Safety Management Information System
CFR	Code of Federal Regulations
DA Pam	Department of the Army Pamphlet
DoDI	Department of Defense Instruction
FSGA	Fort Stewart Garrison
GSO	Garrison Safety Office
HAAF	Hunter Army Airfield
IH	Industrial Hygiene
JHA	Job Hazard Analysis
OHC	Occupational Health Clinic
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
SM	Service Member
SOH	Safety and Occupational Health
SOHMS	Safety and Occupational Health Management Systems
SOP	Standard Operating Procedure
USO	Unit Safety Officer

Appendix B – Terms

- **Administrative Controls:** Work rotations; adequate rest periods; utilization of personal protective equipment (PPE); job transfer or reassignment; and job specific training.
- **Cumulative Trauma Disorder (CTD):** Disorders of the musculoskeletal or nervous system that are the result of, or contributed to by, the biomechanical risk factors listed in Section 6. CTDs are a class of musculoskeletal disorders involving damage to the tendons, tendon sheaths, synovial lubrication of the tendon sheaths, and the related bones, muscles, and nerves.
- **Engineering Controls:** Physical changes in the work area (such as, use of mechanical lifting devices, adjustable chairs and furniture, etc.).
- **Environment:** The circumstances, conditions and influences that affect the behavior and performance of people in the workplace, such as vibration, noise, lighting, temperature, humidity, air flow, and workstation organization.
- **Equipment:** Includes all equipment used to perform tasks such as hand tools, machinery and furniture.
- **Ergonomics:** A body of knowledge about human abilities, human limitations, and other human characteristics that is relevant to the design of tools, machines, systems, tasks, jobs, and environments for safe, comfortable, and effective human use. The aim of the discipline is to fit the job to the person in order to prevent the development of occupational injury or illness, reduce the potential for fatigue, error, or unsafe acts, and to increase effective, efficient work.
- **Musculoskeletal Disorders (MSDs):** Disorders that involve nerves, tendons, muscles, and supporting structures, such as vertebral disks. These conditions differ in severity from mild periodic episodes to severe, chronic, and debilitating.
- **Personal Protective Equipment (PPE):** Devices worn by employees that provides some degree of protection from hazard.
- **Repetitive Motion:** A job may be considered repetitive if there are more than 1,000 repetitions (such as the cycle time to complete a task is less than 30 seconds) per an 8 hour shift.
- **Risk Factors:** Repetitive and/or prolonged activities; forceful exertions; awkward postures, including reaching above shoulders or behind the back or twisting; prolonged static load; excessive vibration from power tools; inappropriate or inadequate hand tools; poor body mechanics, such as bending over at the waist, continuous lifting from below the ankles or above the shoulder, or twisting of the waist; improper lifting or moving of heavy objects; inadequate equipment, such as old and deficient chairs, work surfaces, and tools; inadequate lighting; improper use of protective equipment.
- **Video Display Terminal (VDT) Users:**
 - Casual – An operator who has access to a VDT and uses it on an infrequent or irregular basis. An operator may perform VDT duties up to two hours a day.
 - Intermittent – An operator who has access to a VDT and uses it between two and four hours a day.

- Continuous – An operator whose primary function consists of entering or retrieving information from the VDT four or more hours per day.
- **Work-related Musculoskeletal Disorders (WMSDs):** The range of health problems arising from repeated stress to the body encountered in the workplace. These health problems may also affect the nervous and neurovascular systems and may include the various occupationally induced cumulative trauma injuries, and repetitive motion disorders.

APPENDIX C

ANNUAL GSO REVIEWS