DoD Manual 6055.05

Occupational Medical Examinations: Medical Surveillance and Medical Qualification

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Purpose: In accordance with the authority in DoD Directive 5124.11; the April 10, 2019 Deputy Secretary of Defense Memorandum; and DoD Instruction (DoDI) 6055.05, this issuance implements policy, assigns responsibilities, and provides the procedures for developing and conducting occupational medical examinations for:

- Medical surveillance to determine the impact of health risks associated with specific jobs, processes, and exposures.
- Medical qualification determination for employment.

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SECTION 1: GENERAL ISSUANCE INFORMATION

1.1. APPLICABILITY.

This issuance:

a. Applies to:

(1) OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff and the Joint Staff, the Combatant Commands, the Office of Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this issuance as the "DoD Components").

(2) All military personnel.

(3) All DoD civilian employees, including nonappropriated fund (NAF) instrumentality employees, unless otherwise noted.

b. Does **not** apply to:

(1) Medical examinations specified by labor-management agreements.

(2) Medical examinations supporting the accession or retention of military personnel.

(3) General employee health promotion and disease prevention programs conducted under DoDI 1010.10.

(4) DoD civilian employee workers' compensation policy, treatment, and recordkeeping, in accordance with Volume 810 of DoDI 1400.25.

(5) Non-work-related exposures.

(6) Contractors, unless the DoD is authorized to provide occupational medicine (OM) services to contract personnel as specified in contract documents.

(7) Volunteers, unless an agreement is in place for the DoD to provide OM services.

(8) Foreign nationals, host-nation personnel, or local national personnel, unless the DoD is authorized to provide OM services to such individuals.

(9) Medical and health care services that lead to the traditional provider-patient relationship where there is an obligation to provide personal health care.

(10) The reasonable accommodation process for DoD civilian employees with disabilities conducted pursuant to Part 1630 of Title 29, Code of Federal Regulations (CFR).

1.2. POLICY.

This manual implements the policies in DoDI 6055.05 by implementing the procedures to:

a. Provide a safe and healthy work environment for all military personnel and DoD civilian employees.

b. Develop and administer occupational medical surveillance programs, in accordance with:

(1) DoD Directive 6490.02E.

(2) DoDIs 6055.05 and 6490.03.

c. Provide occupational medical examinations for:

(1) Medical qualification determinations under Part 339 of Title 5, CFR.

(2) Worker exposures to DoD workplace hazards that may result in adverse health effects for:

(a) Regulated hazards in accordance with Part 1910 of Title 29, CFR.

(b) Hazards that do not have specific medical surveillance programs regulated by the Occupational Safety and Health Administration (OSHA).

SECTION 2: RESPONSIBILITIES

DOD COMPONENT HEADS.

The DoD Component heads establish and maintain OM programs that support assigned personnel, in accordance with:

a. DoDI 6055.05.

b. Parts 293 and 339 of Title 5, CFR.

SECTION 3: OVERVIEW OF MEDICAL SURVEILLANCE AND QUALIFICATION EXAMINATIONS

3.1. PURPOSE.

Occupational medical examinations are performed for two distinct purposes: medical surveillance and medical qualification. Occupational medical examinations are provided only if they are based on the requirements of the duty position (medical qualification) or objective evaluation of potential or actual hazards or exposures (medical surveillance).

a. Medical Surveillance Examinations.

Occupational medical surveillance examinations are performed when exposures may cause employee injury or illness. The goal of occupational medical surveillance is to prevent or minimize adverse health effects by identifying evidence of unexpected exposures or overexposures before they cause harm.

b. Medical Qualification Examinations.

Occupational medical qualification examinations:

(1) Are performed to determine the nature of a medical condition that affects safe and efficient performance.

(2) Result in a medical recommendation to supervisors and human resources (HR) personnel. Supervisors, in consultation with HR personnel, as appropriate, will then decide whether the examinee is placed or retained in a position or separated from employment.

3.2. DOCUMENTATION OF THE EXAMINATION.

a. To improve efficiency, medical surveillance examinations may be performed at the same time as medical qualification examinations. To prevent confusion, providers should be alert to the medical surveillance and medical qualification aspects of examinations when communicating with management and clearly document and distinguish between the purposes for each part of the examination.

b. The OM provider should ensure that the reasons for including each part of the combined medical examination are recorded. As with all medical examinations, the purpose, pertinent history, physical examination findings, and results of studies will be recorded for each OM examination. This is important for the:

(1) Proper performance of the examination and follow-up.

(2) Investigation of abnormalities.

(3) Interpretation of results.

(4) Formulation of medical recommendations.

3.3. COMMUNICATION.

a. Examinee.

The examining OM provider must:

(1) Provide examinees with information concerning the unique nature of the provider-examinee relationship for OM examinations compared to the more traditional provider-patient relationship associated with personal health care.

(2) Provide examinees with the purpose of the medical examination, whether that be:

(a) Medical surveillance;

(b) Medical qualification; or

(c) Both.

(3) Inform all examinees of the results of their medical tests and examinations performed as components of the OM examination. For more details, see Paragraphs 4.7.c. and 6.4.d. of this issuance.

(4) Provide examinees with any recommendations for work restrictions that will be made to the HR or supervisory official requesting the examination.

(5) Consider, if the examinee was found "not medically qualified" to perform the duties of the position, or there was a recommendation for a work restriction, any supplementary information the examinee provides from a personal health care provider. The OM provider will evaluate the supplementary information to consider whether the determination or recommendations should be changed.

b. Supervisor or HR Personnel.

The OM provider must:

(1) Provide the supervisor or HR personnel with:

(a) The medical qualification or medical surveillance examination completion status.

(b) Duty status recommendations—including any restrictions, duty limitations, and requirements for using personal protective equipment (PPE) required by Part 1910 of Title 29, CFR.

(2) Notify the supervisor or HR personnel when assistance is needed with identifying the cause of an overexposure to an occupational hazard; and work with industrial hygiene (IH), safety, and the supervisory chain to recommend mitigation measures when an overexposure is

suspected or confirmed. Employment of mitigation measures is the responsibility of the supervisory chain.

3.4. REFUSAL TO PARTICIPATE IN EXAMINATIONS.

a. Service Members.

Report any Service member's refusal or inability to schedule or fully participate in either medical qualification or medical surveillance examinations to the Service member's chain of command. The report should provide general information regarding the examination status and a recommendation in the absence of examination completion.

(1) Medical Surveillance.

The medical surveillance record should reflect that it is not possible to determine whether the Service member has a detectable adverse health impact from the possible or actual exposures to be evaluated.

(2) Medical Qualification.

The medical qualification record should reflect that it is not possible to determine if the Service member is medically qualified to perform the position duties to be evaluated.

b. Civilian Employees (Appropriated Fund (APF) Governed by Title 5, CFR).

Civilian employees' participation in an established medical examination program meeting the requirements of Section 339.205 of Title 5, CFR and Part 1630 of Title 29, CFR, whether for medical qualification or medical surveillance, is a condition of employment absent an approved medical or religious exemption. A request for an exemption from those examinations must be reported to the appropriate supervisory official.

(1) Medical Surveillance.

The OM provider should report that the employee did not complete the examination for medical surveillance and that it is not possible to determine whether the employee has a detectable adverse health impact from the possible or actual exposure(s) that were to be evaluated. In addition, notifications to both IH and safety personnel may be appropriate.

(2) Medical Qualification.

(a) Report incomplete medical qualification examinations to the authorized examination-requesting official using an appropriate DoD Component form or the Optional Form (OF)-178, "Certificate of Medical Examination" (available at https://www.opm.gov/forms/pdf_fill/of178.pdf). The authorized examination-requesting official will likely be an HR official or supervisor, in accordance with the policy of the DoD Component concerned.

(b) The agency medical officer should inform the authorized examination-requesting individual that the examinee was determined "not medically qualified" and provide an explanation. The explanation must state the reason (e.g., "the examinee has not participated in the examination process"). This information can be reported directly to the authorized examination-requesting official, following DoD Component-specific requirements, stating that the examinee did not:

1. Participate in the examination process—if no part of the examination process was completed; or

2. Complete the examination process—if the examinee began, but did not complete, the examination process.

c. NAF Employees.

NAF employee requirements to participate in medical qualification or medical surveillance examinations are dependent on the applicable DoD Component's policy. Report an employee's refusal to participate in examinations to the appropriate examination-requesting official (e.g., "employee has not presented for [or completed] the examination"):

(1) Medical Surveillance.

The medical surveillance record should reflect that it is not possible to determine whether the employee has a detectable adverse impact from the possible or actual exposure(s) that were to be evaluated.

(2) Medical Qualification.

The medical qualification record should state that it is not possible to determine if the examinee is medically qualified to perform the position duties that were to be evaluated.

3.5. PAYMENT FOR MEDICAL EXAMINATIONS.

a. The DoD is responsible for the costs associated with the completion of required elements of medical surveillance and medical qualification examinations. Payment for any testing for non-occupationally related conditions (e.g., diabetes) is the responsibility of the applicant or examinee.

b. The responsibility for following up on abnormal medical test results or examinations, including any associated costs, depends on the purpose of the examination and employment status of the examinee.

(1) Medical Surveillance Examinations.

The DoD is responsible for medical surveillance examinations. This includes the responsibility for following up on abnormal findings related to the medical surveillance examination and any associated costs, until or unless it is determined that the abnormal findings

are not job related. For incidental (non-occupational) abnormal findings, employees are responsible for:

(a) Following up with their personal health care provider.

(b) Paying for any associated costs.

(2) Medical Qualification Examinations.

The DoD is responsible for the costs associated with the required, initial medical qualification examination. After the required, initial examination, it is the examinees' responsibility to follow up on any abnormal findings with their personal health care provider and pay for all associated costs. This includes costs that may arise from the examinee seeking additional information, evaluation, or documentation to be provided to the OM examiner for review and assessment regarding the medical qualification.

SECTION 4: GENERAL PROCEDURES FOR MEDICAL SURVEILLANCE EXAMINATIONS

4.1. OVERVIEW.

This section reviews the overall process for medical surveillance examinations in the DoD. It is **not** intended to comprehensively cover all aspects of medical surveillance and does **not** cover all OSHA requirements.

4.2. IDENTIFY EMPLOYEES WITH POTENTIALLY HAZARDOUS WORKPLACE EXPOSURES.

a. The primary source of information used to identify hazardous workplace exposures are workplace surveys and assessments typically performed by safety and IH personnel. Safety and IH personnel:

(1) Complete workplace assessments, surveys, and job-hazard analyses, in accordance with Part 1910 of Title 29, CFR and DoDI 6055.05.

(2) Identify hazards and hazardous exposures to individual employees and document the survey and assessment information in the Defense Occupational and Environmental Health Readiness System-IH.

b. Personnel contributing to the identification of hazardous workplace exposures include:

(1) Industrial hygienists.

(2) Safety personnel.

(3) OM clinic personnel.

(4) Public health personnel.

(5) Employees.

(6) Supervisors.

c. Determination of an individual employee's hazardous exposures includes evaluating:

(1) Individual Employee Exposure.

(a) Objective, quantifiable assessment of individual employees' exposures (e.g., radiation dosimetry, personal air sampling) is the preferred method for identifying employees for medical surveillance. It provides concrete documentation for decision making to consider individuals who require medical surveillance.

(b) The individual employee exposure assessment characterizes stressors, job demands, and exposure routes and quantifies levels of personal exposure. Since this is an intensive use of IH resources, individual employee exposure assessments are not always available. The National Institute for Occupational Safety and Health (NIOSH) has guidance available for occupational exposure estimation (commonly referred to as "exposure banding") available at https://wwwn.cdc.gov/Niosh-oeb/. This tool may be used to generate exposure guidance and associated medical surveillance recommendations when no specific occupational exposure information is available.

(2) Job Title.

Job title and description may guide the process of characterizing workplace exposures associated with specific work tasks.

(3) Workplace Exposure.

This grouping assumes that all employees assigned to a workplace performing the same work tasks are exposed to the same level of potential or actual hazard with the same route of exposure.

(a) The parameters for the presumed group's exposure are based on a worksite characterization, generally completed by IH or safety personnel. This allows for the same estimates of potential or actual health effects to be applied to all employees at the same workplace.

(b) Enrolling employees in an occupational medical surveillance program, based on the assumption that all employees are exposed similarly because of their workplace assignment, should only be done when there is reasonable certainty that the exposure is experienced by all employees.

(4) Similar Exposure Group (SEG).

The SEG is established by IH personnel. Employees who are assigned to the SEG perform similar work tasks. It is possible for a single workplace to have employees who are assigned to multiple SEGs, depending on their assigned tasks. Individual employee exposure characterization is performed on a representative sample of employees within the SEG. Since all employees assigned to a particular SEG perform the same work tasks and have similar exposures (frequency, duration, concentration), any exposure characterization results are assigned to each employee assigned to the SEG.

d. When occupational exposure and hazard information are not available, OM personnel should obtain such information by requesting an IH workplace assessment survey or safety survey.

4.3. DETERMINE AVAILABILITY OF MEDICAL SURVEILLANCE GUIDANCE FOR WORKPLACE HAZARDS.

a. Review sources of medical surveillance guidance, including other DoD policies, DoD Component policies, and OSHA policies (available at https://www.osha.gov/SLTC/medicalsurveillance/surveillance.html).

b. Review quality measures (e.g., sensitivity, specificity, positive predictive value, negative predictive value), when appropriate, for the recommended medical surveillance tests. However, not all tests warrant a review of quality measures (e.g., liver function test, complete blood count).

c. Recognize that there may be hazardous exposures where there are no validated medical surveillance guidelines or requirements. In these circumstances, it is necessary to work with supervisors, safety and IH personnel, and the DoD Component OM authority to implement a hazard-based medical surveillance program.

4.4. ENROLL INDIVIDUAL EMPLOYEES IN MEDICAL SURVEILLANCE PROGRAMS.

The OM provider will:

a. Review available information for each employee (e.g., IH exposure assessment data, worksite safety assessments, required type of examination) and confirm medical surveillance enrollment status (i.e., baseline, periodic, or termination).

b. Determine if there is mandated medical surveillance for employees with particular job tasks or work locations. For DoD civilian employees, this medical surveillance must be established by DoD or DoD Components in compliance with Office of Personnel Management (OPM) requirements in Section 339.205 of Title 5, CFR and Equal Employment Opportunity Commission requirements in Part 1630 of Title 29, CFR.

4.5. IDENTIFY MEDICAL SURVEILLANCE EXAMINATION PROCEDURES.

a. It is important that OM providers develop and follow consistent examination protocols with similar content for employees enrolled in a medical surveillance program.

(1) Ideally, examination protocols will be developed centrally by a DoD Component to encourage consistency and support population-level analysis of occupational injury and illness information.

(2) The Navy and Marine Corps Public Health Center Technical Manual (TM) OM 6260, also known and referred to in this issuance as the "Navy's Medical Matrix":

(a) Guides all occupational medical examinations for Navy and Marine Corps personnel.

(b) Can be used as a resource by other DoD Components. Note that position titles, job duties, and exposure profiles may differ among DoD Components. Use of the Navy's Medical Matrix by a DoD Component must follow DoD Component approval procedures.

b. Medical surveillance program elements should be the same for all employees in a particular program, based on the similar factors that led to medical surveillance enrollment, including:

(1) Specific job tasks or requirements.

(2) Workplace risk factors, including exposure to physical, chemical, biological, radiological, and other stressors.

(3) Target organ systems.

(4) Legal and regulatory requirements.

(5) Environmental risk factors (e.g., specific to work location).

(6) Required use of PPE.

c. Individual employee-specific factors may influence medical surveillance examination elements (i.e., additional or substitute tests). These factors may include:

(1) Personal health.

(2) Previous job tasks, requirements, and work history.

(3) Environmental risk factors (e.g., household and hobby exposures).

(4) Allergies.

(5) Use of tobacco, alcohol, and illicit drugs.

(6) Diet.

(7) Use of prescriptions, over-the-counter medications, vitamins, and other supplements.

d. Medical surveillance examinations are focused and relevant to the surveillance program. Elements of medical surveillance typically include, but are not limited to:

(1) History questions (personal and work history). To comply with Part 1635 of Title 29, CFR, prohibiting discrimination on the basis of genetic history, history questions for DoD civilian employees may not include family history.

(2) Physical examination.

(3) Biological monitoring (testing of body fluids or tissues for the toxic substance itself, a metabolite, or a physiologic change).

(4) Other laboratory and ancillary tests (e.g., spirometry, audiograms, radiographs, and electrocardiograms (EKGs)).

4.6. PERFORM MEDICAL SURVEILLANCE.

a. Medical surveillance examinations include:

(1) Baseline or Initial Examinations.

Baseline or initial examinations:

(a) Document the employee's health status for future comparison.

(b) Should be performed:

1. Before the worker starts work with exposures to potential or actual health risks; or

2. No later than 60 days after assignment, unless more stringent requirements exist.

(2) Periodic Examinations.

Periodic examinations are:

(a) Performed to monitor for any health impacts that hazardous exposures may have on an employee during the surveillance period.

(b) Conducted at scheduled, routine intervals. These intervals may be specified by the regulatory authority (e.g., OSHA), DoD or DoD Component policy, or OM best practices.

(3) Termination of Exposure Examinations.

Termination of exposure examinations are performed to assess pertinent aspects of a worker's health when exposure to the occupational hazard (e.g., the hazard that prompted the medical surveillance) has ceased. Exposure may cease when a worker is reassigned, when a work process or practice changes, or the worker leaves employment. Federal regulations (e.g., Part 1910 of Title 29, CFR) specify termination of exposure examinations for some regulated work activities and occupational exposures to specified hazards.

(4) Situational Examinations.

Situational examinations are conducted in response to a specific incident where a possible overexposure to a hazardous substance is suspected.

(a) Such an incident should prompt an objective determination as to whether:

1. Other employees with suspected overexposure should be examined.

2. The employee or other employees should be enrolled in medical surveillance.

(b) Due to the situational circumstances, protocols may vary from baseline, periodic, or termination of exposure protocols.

(c) Some OSHA programs (e.g., methylene chloride, cadmium, vinyl chloride, hexavalent chromium, beryllium) require enrollment in occupational medical surveillance following situational exposures.

b. To characterize the status of specific organ systems that could be impacted by the potential or actual workplace exposures covered by the medical surveillance program, the OM provider:

(1) Obtains a focused medical history.

(2) Conducts a pertinent review of individual medical systems.

(3) Performs a targeted physical examination.

(4) Orders pertinent ancillary tests.

c. If an illness or condition is identified during the medical surveillance examination, it may or may not be work related. Certain occupational illnesses suggest the presence of a particular workplace hazard and may indicate a failure of a workplace hazard control. These illnesses are occupational sentinel events. A list of some occupational illnesses that may be encountered in the DoD is presented in Table 1.

(1) Though not an all-encompassing list, Table 1 provides examples of DoD work processes, their associated hazards, and corresponding potential medical conditions.

(2) When any of these medical conditions are identified during a medical surveillance examination, they should be reviewed in the context of relevant workplace exposures and other individual factors (e.g., renal failure may be caused by inorganic mercury from a workplace exposure or by individual factors such as the progression of diabetes and hypertension).

Table 1. Examples of Medical Conditions Associated with Workplace Overexposure

Medical Condition	Industry/Process/Occupation	Common Hazardous Agent
Acute bronchitis, pneumonitis, and pulmonary edema due to fumes and vapors	Janitors, explosives manufacture	Ammonia
	Swimming pool chlorination, alkali, and bleach	Chlorine
	Arc welders, nitric acid	Nitrogen oxides
	Welders, metal workers, demilitarization	Cadmium
Acute or chronic renal failure	Firing range workers, solderers, munitions manufacture, corrosion control, radar and sonar (ceramics), batteries	Inorganic lead
	Electrolytic processes	Arsine
	Dentists (also used in mercury vapor lamps, silver-zinc batteries, color cartridges, switches, fuses, paints)	Inorganic mercury
	Welders, metal workers, demilitarization	Cadmium
Agranulocytosis or neutropenia	Fuel handlers	Benzene
	Explosives and pesticide workers	Phosphorus
	Pesticides, pharmaceuticals handlers	Inorganic arsenic
Aplastic anemia	Explosives manufacture	Trinitrotoluene
	Fuel handlers	Benzene
	Radiologists, nuclear reactor workers	Ionizing radiation
Asbestosis	Shipyard workers, firefighters	Asbestos
Cancer of larynx	Shipyard workers, firefighters	Asbestos
Cancer of nasal cavities	Coating applicators (chrome surface treatments, chromate conversion coatings, certain anodizing processes, and primer paints for metal surfaces)	Chromates
	Nickel platers	Nickel
	Carpenters	Wood dust
Cancer of nasopharynx	Carpenters (using treated wood), electricians, disinfectant and pesticide handlers	Chlorophenols
Cancer of trachea, bronchus, and lung	Shipyard workers, construction, firefighters	Asbestos
	Coating applicators, chrome platers, metal painters	Chromates
	Nickel platers	Nickel
	Chemical demilitarization workers	Mustard gas
	Pesticide handlers	Pesticides, herbicides, fungicides, insecticides
	Welders, electroplating	Arsenic, sulfur dioxide, copper, lead, sulfuric acid, arsenic trioxide
	Welders, gas cutters, shipyard workers, firefighters	Hexavalent chromium, asbestos
	Foundry-floor molders and casters	Polycyclic aromatic hydrocarbons
	Chromate painters	Lead chromate, zinc chromate, strontium chromate
	Lathe operators, metal workers, machine assemblers	Mineral and cutting oils
	Radiologists, nuclear reactor workers	Ionizing radiation
	Fuel handlers	Benzene
Cerebellar ataxia	Use of solvents, paints, and adhesives	Toluene

Table 1. Examples of Medical Conditions Associated with Workplace Overexposure, Continued

Medical Condition	Industry/Process/Occupation	Common Hazardous Agent
Chronic beryllium disease	Manufacture of aircraft disc brakes, nuclear weapons and reactors, missile parts, heat shields, x-ray machine parts, mirrors, and spacecraft	Beryllium
Constrictive bronchiolitis	Arc welders, nitric acid, chemical demilitarization workers, food preparation	Nitrogen dioxide, mustard gas, diacetyl
Contact and allergic dermatitis	Use of adhesives and sealants, vehicle building and repair	Irritants (e.g., cutting oils and metal working fluids, phenol, solvents, acids, alkalis, detergents), allergens (e.g., nickel, chromates, formaldehyde, dyes, rubber products)
Extrinsic asthma	Cancer chemotherapy, electroplating, windings of high-temperature furnaces, dentistry	Platinum
	Polyurethane, adhesives, paint workers	Isocyanates
	Alloy, catalyst, cement workers	Chromium, cobalt
	Solderers	Aluminum soldering flux
	Researchers, pathologists, insulation workers	Formaldehyde
	Nickel platers	Nickel sulfate
	Cooks	Flour
	Medical personnel, first responders (latex glove exposure)	Latex particles
Mesothelioma	Shipyard workers, construction, firefighters	Asbestos
Methemoglobinemia	Explosive manufacturers	Aromatic amino and nitro compounds (e.g., aniline, trinitrotoluene, nitroglycerine)
	Rubber workers	Aniline, o-toluidine, nitrobenzene
Parkinson's disease (secondary)	Welders	Manganese
	Exposure to engine exhaust	Carbon monoxide
Raynaud's phenomenon (secondary)	Use of vibrating tools (grinders, riveters, jackhammers, chain saws, etc.)	Hand and arm vibration
Silicosis	Sandblasters, foundry workers, concrete cutters, rock cutters, construction workers	Silica
Toxic encephalitis	Munitions workers, electronic equipment workers, foundry workers	Lead
	Adhesives and grouts, water and waste treatment, textile processing	Acrylamide
Toxic hepatitis	Degreaser or solvent for parts cleaning, maintenance of weapons systems, vapor degreaser	Tetrachloroethane, trichloroethylene, tetrachloroethylene
	Explosives manufacture	Phosphorus, trinitrotoluene
	Epoxy hardening agents, anticorrosive materials, wire coatings, polyurethane foam	Methylene dianiline

Table 1. Examples of Medical Conditions Associated with Workplace Overexposure, Continued

Medical Condition	Industry/Process/Occupation	Common Hazardous Agent
Toxic neuropathy	Pesticide applicators, pigments and pharmaceuticals formulators	Arsenic and arsenic compounds
	Degreasing operations	Hexane
	Solvents for adhesives, lacquers, paint removers, acrylic coatings, plastic-coated fabric	Methyl n-butyl ketone
	Explosives manufacture	Trinitroluene
	Fungicide handlers	Organic mercury
	Ethylene oxide sterilizer operators, microbiologists, supervisors, inspectors	Ethylene oxide
	Adhesives and grouts, water and waste treatment, textile processing	Acrylamide
	Firing range workers, solderers, munitions manufacture, corrosion control, radar and sonar (ceramics), batteries	Inorganic lead
	Dental technicians, surgeons	Methyl methacrylate monomer
Ulceration of skin or nasal mucosa, perforation of nasal septum	Corrosion control workers, painters, sanders	Hexavalent chromium

(3) When clusters of similar exposures or medical conditions occur, that should raise concern and warrant expedited investigation and consultation with IH, safety, and workplace supervisors to assist in evaluating workplace practices, hazards, and appropriate exposure controls.

d. Further investigation may:

(1) Improve the understanding of the impact of potential or actual workplace exposures. This may include additional medical testing and a workplace visit. The IH staff and supervisory and safety personnel will have, or be able to, obtain information about the exposure(s), type of work activities, and the presence and use of hazard controls in the workplace.

(2) Lead to:

(a) A timelier and accurate diagnosis.

(b) Determining if conditions that were not previously considered work related are now recognized as work related.

(c) Preventing future exposures in the workplace.

4.7. REPORT MEDICAL SURVEILLANCE.

a. Medical surveillance reporting includes documentation of the medical surveillance examination with findings of test results and studies in the employee occupational health (OH)

record (i.e., the employee medical folder) and appropriate communication to the employee and supervisors.

b. OSHA requires OM surveillance records be maintained for the duration of employment plus 30 years.

(1) Pursuant to Subpart E of Part 293 of Title 5, CFR, OM records for DoD civilian employees must be maintained for the duration of employment plus 30 years or as long as the official personnel file is maintained, whichever is longer.

(2) In the DoD, OM records for NAF employees will follow these same requirements.

c. The content of the employee OH record for DoD civilian employees (i.e., medical folder) will include:

(1) Time and place of the delivery of OM services.

(2) Names(s) of personnel delivering OM services, including:

(a) Full names.

(b) National provider identifier numbers.

(3) Description and results of all services delivered (i.e., history, physical examination, laboratory, and ancillary testing).

(4) Summary statements, delivered in writing or orally, regarding information and recommendations provided to the employee, the supervisory chain, HR, industrial hygienists, safety personnel, or others. Copies of written communications should be retained, when possible, to create a more complete record.

d. The format of the employee OH record may include requirements regarding use of specific forms, whether in electronic or hard-copy format. Hard-copy forms, after completion, should be electronically scanned and uploaded to the electronic OH record, if applicable.

(1) Medical documentation received from an employee should be:

(a) Validated (i.e., the record's origin by provider, laboratory or organization, date the record was created, and the content is legible).

(b) Included in the employee OH record (i.e., medical folder) to show:

1. Submission by the employee.

2. The origin outside of the OH clinic.

(2) The OM provider should add supplementary evaluations or annotations to the submitted medical documentation, as appropriate.

e. When an occupational illness is confirmed, it must be recorded in accordance with Part 1904 of Title 29, CFR and DoDI 6055.07.

f. The OM provider must inform each employee of the employee's medical surveillance examination results following completion of the examination. Information will include:

(1) The significance of work-related hazards in the work environment with an explanation tailored to the nature of exposures, hazards, and health status of the worker.

(2) All medical conditions or other findings that are identified and whether or not the employee is at an increased risk of health impairment from continued exposure to work-related hazards.

(3) Recommended workplace exposure limitations and use of PPE in consultation with IH and safety personnel.

(4) Recommendations to the supervisor or chain of command on the use of appropriate work restrictions, administrative controls, PPE, and engineering controls (e.g., environmental or facilities modifications) to reduce or mitigate employee exposure of the examinee and other employees in consultation with IH and safety personnel.

(5) Recommendation for DoD civilian employees to contact their supervisor and supporting HR office for workers' compensation claims filing procedures. Workers' compensation is an HR program in which OM has an important supporting role.

g. Communication with the supervisory or command chain, HR personnel, industrial hygienists, safety personnel, or other management representatives (e.g., facilities managers) must comply with applicable health information privacy protections.

4.8. PREPARE FOR FUTURE MEDICAL SURVEILLANCE EVALUATION CYCLE.

a. All steps described in Paragraphs 4.2. through 4.8. should be re-evaluated upon changes to work practices or the work status of the employee, as determined during routine safety and IH surveys or upon notification of the supervisor. It should not be assumed that work processes, tasks, position assignments, and actual or potential exposures will remain the same.

b. Revalidation may involve requesting updated information (i.e., the previous year's workplace assessments) to identify:

(1) Hazardous work exposures; or

(2) Changes in employee job titles and functions.

SECTION 5: POSITION- AND TASK-SPECIFIC PROCEDURES FOR MEDICAL SURVEILLANCE EXAMINATIONS

5.1. OVERVIEW.

This section provides medical surveillance examination requirements that are specific to particular DoD personnel, groups, and exposures. It does not include all OSHA and DoD Component requirements.

5.2. MEDICAL SURVEILLANCE FOR OSHA- AND DOD-REGULATED HAZARDS.

a. Medical surveillance requirements for all OSHA-regulated hazards can be found on OSHA's website at https://www.osha.gov/SLTC/medicalsurveillance/standards.html. OM providers will follow the requirements outlined for OSHA-regulated hazards and this issuance when conducting medical surveillance examinations, unless there are more protective requirements issued by the DoD or a DoD Component such as the DoD's blood lead requirement described in Table 2.

b. The OSHA surveillance requirements are the minimum mandatory requirements for medical surveillance. They apply to military personnel and DoD civilian employees, except as otherwise indicated and designated as "military-unique."

5.3. MEDICAL SURVEILLANCE CONSIDERATIONS FOR REPRODUCTIVE HEALTH.

a. General.

(1) Reproductive hazards are those stressors that have the potential to adversely affect the reproductive process. Generally, engineering controls, administrative policies, and PPE that protect workers from harmful chemical, biological, or physical stressors will also protect their reproductive health.

(2) OM providers, working with IH and safety personnel, should be familiar with potential reproductive hazards in the work environment so that they can:

(a) Advise supervisors, leaders, and HR personnel about reproductive hazard management.

(b) Provide appropriate examination of, and counseling for, concerned workers.

(c) Communicate with an employee's personal health care provider if requested by the employee.

b. Additional Policies and Technical Guidance.

DoD Component-specific policies and technical guidance are available to assist the OM providers in providing optimum care for employees in their reproductive years. These references include:

(1) Army Regulation (AR) 40-501.

(2) Department of the Army Pamphlet (DA PAM) 40-11.

(3) Office of the Chief of Naval Operations Instructions 5100.23H and 6000.1D.

(4) Navy and Marine Corps Public Health Center TM-6260.01D.

(5) Air Force Manual 48-146.

c. Medical Surveillance Considerations for Pregnant Workers.

While uncomplicated pregnancy does not necessarily require significant alteration of the work environment, modification of job tasks may be required to create the safest and healthiest environment for the pregnant worker and the unborn child.

d. Medical Surveillance Considerations for Breastfeeding Workers.

While breastfeeding does not necessarily require significant alteration of the work environment, control of environmental exposures and promotion of workplace hygiene can limit the transfer of workplace contaminants into the breast milk.

5.4. MEDICAL SURVEILLANCE CONSIDERATIONS FOR NANOMATERIAL WORKERS.

a. Description of Nanomaterials.

The term "nanomaterial" only describes the physical property of the material (i.e., having a particle size of less than 100 nanometers in at least one dimension), not its complete physical and chemical makeup or toxicity. The toxicity of nanomaterials may be affected by their physical properties (e.g., influencing absorption), and the chemical form of the particles, routes of entry, and dose of exposure. The exposure profile of nanomaterials may depend on their formulation. DoD uses aluminum nanoparticles in diesel fuel additives, alloys, and explosives. DoD use in research areas includes nanomaterial use in printed electronics and protective armor.

(1) The sonication, shaking, stirring, pouring, or spraying of powdered nanomaterials can result in inhalation exposure. Nanoparticles that are fixed within a matrix are usually less hazardous until there is mechanical disruption (e.g., grinding, cutting, or burning). In addition to inhalation, nanomaterials may be absorbed through the skin or ingested.

(2) Nanomaterials are found in commercial products and there are no requirements to specifically identify the presence of nanomaterials on labels or safety data sheets. However,

awareness of the nanomaterial's presence is necessary to suitably limit exposure and establish appropriate medical surveillance programs. Supervisors, IH, safety, and logistics personnel can assist the supervisory chain in obtaining risk assessment information.

b. Medical Surveillance.

(1) Currently, there are no Federal or OSHA occupational exposure or medical surveillance requirements for nanomaterials.

(2) There are recommended exposure limits for titanium dioxide, carbon nanotubes, and carbon nanofibers published by the NIOSH. Additional information about occupational exposure, risks, and medical surveillance from nanomaterials is available at https://www.cdc.gov/niosh/topics/nanotech/.

5.5. MEDICAL SURVEILLANCE FOR LASER WORKERS.

a. Medical surveillance is required for personnel working with Class 3b and Class 4 lasers and laser systems; but **not** required for personnel working with Class 1, Class 2, or Class 3a lasers or laser systems.

b. All laser accidents should be reported through the local safety office in accordance with DoD Component procedures. Consult DoDI 6055.15 for information on reporting exposures to the DoD Laser Injury Hotline.

c. Laser workers must have an ocular and visual history, visual acuity, and central visual fields test (via an Amsler grid or similar macular integrity test) as part of baseline (preplacement) and termination examinations. Visual acuity and central field tests must be performed on each eye separately.

(1) No further examination is required if the medical history is normal for the eyes and the visual acuity is adequate for the job. Central visual fields are deemed normal via an Amsler grid test or similar macular integrity test.

(2) Medically significant departures from normal limits must be evaluated to determine the reason and potential duty limitations. This may be done by ocular funduscopic examination or other tests, as deemed appropriate by the eye care professional (i.e., optometrist or ophthalmologist), OM provider, or flight surgeon. Baseline funduscopic photography may be useful for documenting the retinal status but is not part of routine, laser surveillance.

d. Incidental laser workers do not require any medical surveillance unless the supervisor or supporting OM provider, based on the worker's medical history, determines that selected baseline examinations or tests are appropriate.

5.6. MEDICAL SURVEILLANCE FOR WORKERS EXPOSED TO ELECTROMAGNETIC FREQUENCY RADIATION.

Medical surveillance is required for personnel working within electromagnetic frequency radiation fields as specified in DoDI 6055.11.

5.7. MEDICAL SURVEILLANCE FOR PEST MANAGEMENT PERSONNEL.

a. Medical Surveillance for Personnel Who Work with Cholinesterase-Inhibiting Pesticides.

(1) Cholinesterase testing is the most important tool in the medical surveillance of workers who use cholinesterase inhibiting pesticides. To oversee reliability of test results for a given individual, serial cholinesterase monitoring should be performed in the same laboratory using the same analytical method, whenever possible. Establishing an individual's baseline (pre-exposure) value for both plasma and red blood cell (RBC) cholinesterase activity is essential for medical monitoring and supervision. All subsequent monitoring results must be interpreted as a percentage of the individual's baseline value.

(2) Depression of an employee's cholinesterase, either plasma or RBC, should be investigated. Plasma and RBC cholinesterase can be depressed in the absence of chemical inhibition. About three percent of the population has a naturally low level of plasma pseudo-cholinesterase that is genetically determined.

(a) Individuals with hepatitis, cirrhosis, malnutrition, chronic alcoholism, and dermatomyositis exhibit low plasma cholinesterase activities. Cocaine, carbon disulfide, benzalkonium salts, organic mercury compounds, ciguatoxins, solanines, pregnancy, birth control pills, and metoclopramide may also depress the plasma cholinesterase level.

(b) Plasma cholinesterase (also commonly referred to as "pseudo-cholinesterase") is more labile than RBC cholinesterase and, therefore, is less reliable in reflecting actual enzyme depression at neuro-effector sites. It is generally more rapidly inactivated by exposure to organophosphates. Since plasma cholinesterase is produced in the liver, it can be regenerated relatively quickly, compared to RBC cholinesterase. After mild exposure, there is sometimes a rebound phenomenon resulting in elevated levels of plasma cholinesterase.

(c) RBC cholinesterase (also commonly referred to as "true cholinesterase") is biochemically the same enzyme as the acetylcholinesterase located at the neuro-effector cell synapses. It is often depressed more slowly than plasma cholinesterase by exposure to organophosphates. Regeneration of RBC cholinesterase is slow and occurs only as new RBCs are regenerated (at a rate of approximately one percent per day).

(d) The State of California Environmental Protection Agency's Guidelines for Physicians Who Supervise Workers Exposed to Cholinesterase Inhibiting Pesticides presents the current rationale for using both plasma cholinesterase and RBC cholinesterase determinations.

(e) For values less than 80 percent of the baseline plasma or RBC cholinesterase values:

1. Promptly retest to confirm depression to less than 80 percent of baseline.

2. Investigate and review the affected employee's work practices (e.g., sanitation, pesticide-handling procedures, equipment usage) and safety equipment (e.g., operation and condition).

3. Assess potential impacts on other employees.

4. Maintain a written record of findings; any available information about changes in equipment and procedures; and recommendations made to the employee, supervisors, and safety personnel.

(f) For values less than 70 percent of RBC cholinesterase baseline value or less than 60 percent of plasma cholinesterase, recommend to the supervisory chain of command that the employee be removed from exposure to cholinesterase-inhibiting pesticides.

1. The employee must not be allowed to return to work with these pesticides until the RBC cholinesterase and plasma cholinesterase activity levels both return to 80 percent or more of the baseline.

2. Maintain written records of the date removal was recommended to the supervisory chain and, if notified by the supervisory chain, the date when the employee is returned to exposure.

(g) A worker removed from a job because of depressed cholinesterase levels may be employed at other types of work.

(3) Recommended cholinesterase testing intervals:

(a) Before starting pesticide work (baseline).

(b) At 45 to 60 days.

(c) Quarterly thereafter, if exposure continues.

(4) Two cholinesterase testing methods are in use: the Ellman (TestMate) technique and the Michel (Delta pH). A conversion equation has been developed for comparing these two methods. The health professional should contact the U.S. Army Public Health Center Cholinesterase Reference Laboratory at (410) 436-8259 or (410) 436-3983 for details.

(a) Results should be reported in international units per milliliter on the converted Ellman scale.

(b) To be acceptable, the results between the alternative and the reference methods should have at least a 0.9 correlation coefficient squared.

(c) Methods that test whole blood and do not provide separate measures for plasma and RBC cholinesterase determinations are not acceptable.

b. Medical Surveillance for Other Pest Management Professionals.

Review these references to determine if additional medical surveillance requirements exist depending on the specific tasks of the pest management professional:

(1) DoDI 4150.07.

(2) Armed Forces Pest Management Board Technical Guide No. 3.

(3) AR 40-562/Bureau of Medicine and Surgery Instruction 6230.15B/Air Force Instruction (AFI) 48-110_IP/Coast Guard Commandant Instruction M6230.4G.

5.8. MEDICAL SURVEILLANCE FOR WORKERS EXPOSED TO HAZARDOUS NOISE.

a. General Requirements.

(1) Personnel exposed to hazardous noise must participate in a hearing conservation program (HCP), including audiometric monitoring pursuant to DoDI 6055.12.

(2) Personnel are at risk for noise-induced hearing injury and must be enrolled in an HCP, if they are exposed to:

(a) Continuous or intermittent noise levels greater than or equal to 85 A-weighted decibels (8-hour, time-weighted average) for at least one day per year;

(b) Impulse noise levels greater than or equal to 140 decibels peak for any duration; or

(c) Ultrasonic noise exposures that occur under special circumstances.

b. Service-Unique HCP Requirements.

In addition to the requirements of the DoD HCP, Service-unique information can be found in:

(1) DA PAM 40-501.

(2) AFI 48-127.

(3) Office of the Chief of Naval Operations Manual 5100.23.

(4) Navy and Marine Corps Public Health Center TM 6260.51.99.2.

5.9. MEDICAL SURVEILLANCE FOR WORKERS EXPOSED TO LEAD.

a. General.

(1) Most retained lead in the human body is ultimately deposited in bones. Bone-to-blood lead mobilization increases due to factors such as pregnancy, menopause, physiologic stress, kidney disease, broken bones, and advanced age. It is also exacerbated by calcium deficiency.

(2) The normally inert lead pool poses a special risk because it is a potential endogenous source of lead that can maintain blood lead levels (BLLs) long after exposure has ended. Significant drops in a person's BLL may take several months, or sometimes years, even after removal from the exposure source.

b. Medical Surveillance Requirements.

In accordance with the OSHA lead standard (Section 1910.1025 of Title 29, CFR), BLL and zinc protoporphyrin level sampling and analysis is required to be tested at least every 6 months for workers meeting defined criteria. Table 2 provides the DoD requirements for medical surveillance and management based on occupational BLL monitoring. The DoD requirements are more stringent than OSHA requirements.

(1) OSHA's medical removal BLL is based on one blood test at or greater than 60 micrograms per deciliter (µg/dL) or the average of three consecutive BLL tests at or greater than 50 µg/dL. OSHA allows employees to return to work when their BLL is at or below 40 µg/dL.

(2) The DoD's medical removal is based on one blood test at or greater than 30 µg/dL or an initial and follow-up BLL at or greater than 20 µg/dL. The employee's return-to-work is considered when BLL drops below 15 µg/dL.

c. Employee Notification.

OSHA requires employee notification of results within 5 working days after the receipt of biological monitoring results and written notification for employees whose BLL is at or above 40 µg/dL. The DoD requires written notification for employees whose BLL is at or above 20 µg/dL. The remaining sections of the OSHA lead standard (e.g., medical surveillance action level (AL), examination frequency and content, collection of work and medical histories) still apply.

d. Deviation from Requirements.

Where military necessity requires deviation from these guidelines, leadership at the appropriate level of authority will follow the requirements of DoDI 6055.01 to assess, accept, document, and periodically reevaluate the risk.

Table 2. Blood Lead Results and Health-Based Management Requirements

BLL µg/dL	Short-Term Risks (Lead Exposure < 1 year)	Long-Term Risks (Lead Exposure ≥ 1 year)	Actions*
< 5	Studies have demonstrated adverse effects from lead, including effects on neurologic, reproductive, and renal functions and on blood pressure at extremely low levels of exposure, appear not to have a threshold as reported by the Association of Occupational and Environmental Clinics' Medical Management Guidelines for Lead-Exposed Adults.		Supervisor/Personnel Management • Inform personnel of potential health risks. • Consider reduction or avoidance of lead exposure for all workers. • Enroll personnel exposed to lead above the 30 micrograms per cubic meter (µg/m^3) AL in medical surveillance. Medical Management • As part of health education and risk communication, recommend reduction or avoidance of lead exposure. • Educate on potential health risks. Medical Surveillance • Coordinate with IH, safety, and employee management. • Use current OSHA selection criteria (i.e., AL of 30 µg/m^3 for 30 days per year). • Repeat BLL and zinc protoporphyrin testing at least every 6 months for individuals selected for BLL surveillance and more frequently at the discretion of a medical provider.
5-9	• Possible spontaneous abortion. • Possible postnatal developmental delay.	Short-term risks plus possible: • Hypertension. • Kidney dysfunction.	Supervisor/Personnel Management • Inform personnel of potential health risks. • Consider reduction or avoidance of lead exposure for all workers. • Enroll personnel exposed to lead above the AL in medical surveillance. Medical Management • As part of health education and risk communication, recommend reduction or avoidance of lead exposure. • Educate on potential health risks. Medical Surveillance • Coordinate with IH, safety, and employee management. • Use current OSHA selection criteria (i.e., AL of 30 µg/m^3 for 30 days per year). • Repeat BLL and zinc protoporphyrin testing at least every 6 months for individuals selected for BLL surveillance and more frequently at the discretion of a medical provider.

Table 2. Blood Lead Results and Health-Based Management Requirements, Continued

BLL µg/dL	Short-Term Risks (Lead Exposure < 1 year)	Long-Term Risks (Lead Exposure ≥ 1 year)	Actions*
10-19	Possible: • Spontaneous abortion. • Postnatal developmental delay. • Reduced birth weight. • Adverse effects on sperm and semen at BLL > 15 µg/dL.	Short-term risks plus possible: • Hypertension and cardiovascular disease. • Kidney dysfunction. • Subclinical neuro-cognitive deficits.	Supervisor/Personnel Management • Inform personnel of potential health risks. • Consider reduction or avoidance of lead exposure for all workers. • Enroll personnel exposed to lead above the AL in medical surveillance. Medical Management • As part of health education and risk communication, recommend reduction or avoidance of lead exposure. • Educate on potential health risks. Medical Surveillance • Coordinate with IH, safety, and employee management. • Use current OSHA selection criteria (i.e., AL of 30 µg/m^3 for 30 days per year). • Repeat BLL testing every 3 months or more frequently at the discretion of a medical provider.
20-29	Possible: • Spontaneous abortion. • Postnatal developmental delay. • Reduced birth weight. • Adverse effects on sperm or semen.	Short-term risks plus possible: • Hypertension and cardiovascular disease. • Kidney dysfunction. • Clinical neuro-cognitive deficits.	Supervisor/Personnel Management • Inform personnel of potential health risks. • Remove employee from lead exposure if repeat BLL testing (in a month) is at or above 20 µg/dL. • Collaborate with OM and notify employee, in writing, within 5 working days of receiving results for any BLL of 20 µg/dL or above. • Return employee to lead work after two BLLs, each < 15 µg/dL, 1 month apart. • Coordinate with IH personnel to identify, assess, and better control lead exposures. Medical Management • Notify supervisor/personnel management to remove employee from lead exposure if repeat BLL testing performed in 1 month is at or above 20 µg/dL. • Notify employee in writing within 5 working days of receiving results for any BLL of 20 µg/dL or above. • Educate on potential health risks. Medical Surveillance • Perform monthly BLL testing. • Recommend to supervisor/personnel management employee's return to lead work after two BLLs, each < 15 µg/dL, 1 month apart. • When worker is returned to lead work and BLL is maintained at ≤ 15 µg/dL for 1 month, repeat BLL testing every 3 months for the next year, or more frequently at the discretion of a medical provider. Surveillance frequency and management for each new BLL result will correspond to the directions in this table.

Table 2. Blood Lead Results and Health-Based Management Requirements, Continued

BLL µg/dL	Short-Term Risks (Lead Exposure < 1 year)	Long-Term Risks (Lead Exposure ≥ 1 year)	Actions*
30-39	Possible: • Spontaneous abortion. • Possible postnatal developmental delay. • Reduced birth weight. • Adverse effects on sperm or semen.	Short-term risks plus possible: • Hypertension and cardiovascular disease. • Kidney dysfunction. • Clinical neuro-cognitive deficits. • Nonspecific symptoms.**	<u>Supervisor/Personnel Management</u> • Inform personnel of potential health risks. • Remove employee from lead exposure if single test result is ≥ 30 µg/dL. • Collaborate with OM and notify employee, in writing, within 5 working days of receiving results for any BLL of 20 µg/dL or above. • Return employee to lead work after two BLLs, each < 15 µg/dL, 1 month apart. • Coordinate with IH personnel to identify, assess, and better control lead exposures. <u>Medical Management</u> • Notify supervisor/personnel management to remove employee from lead exposure. • Notify employee in writing within 5 working days of receiving results. • Educate on potential health risks. <u>Medical Surveillance</u> • Perform monthly BLL testing. • Recommend employee return to lead work after two BLLs, each < 15 µg/dL, 1 month apart. • When worker is returned to work and BLL is maintained at 15 µg/dL or below for 1 month, repeat BLL testing every 3 months, or more frequently at the discretion of a medical provider. • Surveillance frequency and management for each new BLL result will correspond to the directions in this table.

Table 2. Blood Lead Results and Health-Based Management Requirements, Continued

BLL µg/dL	Short-Term Risks (Lead Exposure < 1 year)	Long-Term Risks (Lead Exposure ≥ 1 year)	Actions*
40-79	Possible: • Spontaneous abortion. • Postnatal developmental delay. • Reduced birth weight. • Neurocognitive deficits. • Sperm abnormalities. • Adverse effects on sperm or semen.	Short-term risks plus possible: • Hypertension and cardiovascular disease. • Kidney dysfunction/ neuropathy. • Neurocognitive deficits. • Subclinical peripheral neuropathy. • Anemia. • Colic. • Gout. • Nonspecific symptoms.**	Supervisor/Personnel Management • Inform personnel of potential health risks. • Remove employee from lead exposure if single test result is ≥ 30 µg/dL. • Collaborate with OM and notify employee, in writing, within 5 working days of receiving results for any BLL of 20 µg/dL or above. • Return employee to lead work after two BLLs, each < 15 µg/dL, 1 month apart. • Coordinate with IH personnel to identify, assess, and better control lead exposures. Medical Management • Notify supervisor/personnel management to remove employee from lead exposure. • Consider chelation therapy for BLL > 50 µg/dL with significant symptoms or signs of lead toxicity. Notify employee in writing within 5 working days. • Educate on potential health risks. Medical Surveillance • Perform monthly BLL testing. • Recommend employee return to lead work after two BLLs, each < 15 µg /dL, 1 month apart. • When worker is returned to work and BLL is maintained at 15 µg/dL or below for 1 month, repeat BLL testing every 3 months, or more frequently at the discretion of a medical provider. • Surveillance frequency and management for each new BLL result will correspond to the directions in this table.

Table 2. Blood Lead Results and Health-Based Management Requirements, Continued

BLL µg/dL	Short-Term Risks (Lead Exposure < 1 year)	Long-Term Risks (Lead Exposure ≥ 1 year)	Actions*
≥80	All of the short-term risks for BLLs between 5 and 79 µg/dL plus possible: • Encephalopathy. • Anemia. • Colic.	All of the short- and long-term risks for BLLs between 5 and ≥ 80 µg/dL.	Supervisor/Personnel Management • Inform personnel of potential health risks. • Remove employee from lead exposure if single test result is ≥ 30 µg/dL. • Collaborate with OM and notify employee, in writing, within 5 working days of receiving results for any BLL of 20 µg/dL or above. • Return employee to lead work after two BLLs, each < 15 µg/dL, 1 month apart. • Coordinate with IH personnel to identify, assess, and better control lead exposures. Medical Management • Notify supervisor/personnel management to remove employee from lead exposure. • Refer employee for immediate/urgent medical evaluation. • Educate on potential health risks. • Notify employee in writing within 5 working days of receiving results for any BLL of 20 µg/dL or above. • Probable chelation therapy. Medical Surveillance • Perform monthly or more frequent BLL testing. • Consider employee return to lead work after two BLLs < 15 µg/dL 1 month apart. • When worker is returned to work and BLL is maintained at 15 µg/dL or below for 1 month, repeat BLL testing every 3 months or more frequently at the discretion of a medical provider. • Surveillance frequency and management for each new BLL result will correspond to the directions in this table.

* Consider more conservative management (i.e., remove employee from lead exposure at lower BLLs) in the context of combined exposures to lead and other hazards (e.g., exposure to heavy metals increases the risk of noise-induced hearing loss). Medical conditions that may be at increased risk from continued exposure include pregnancy, chronic renal dysfunction (serum creatinine > 1.5 µg/dL for men and > 1.3 µg/dL for women, or proteinuria), hypertension, neurologic disorders, and cognitive dysfunction.
** Nonspecific symptoms may include headache, fatigue, sleep disturbance, anorexia, constipation, arthralgia, myalgia, and decreased libido.

e. Chelating Therapy Guidelines.

Chelating therapy is not without inherent risks, including redistribution of lead into the central nervous system and severe drug reactions. If chelation therapy is performed, it should be managed by those familiar with it and should be conducted in a medical treatment facility with emergency capabilities, including cardiac monitoring. Additional guidance is provided in Section 1910.1025 of Title 29, CFR. When BLLs are:

(1) Greater than or equal to 100 µg/dL, chelation therapy is recommended.

(2) Eighty to 99 µg/dL, strongly consider chelation therapy.

(3) Fifty to 79 µg/dL, consider chelation therapy if symptoms of lead toxicity are present.

5.10. MEDICAL SURVEILLANCE FOR IONIZING RADIATION WORKERS.

a. Occupational:

(1) Exposure to ionizing radiation occurs in numerous workplace settings within the DoD, including health care (e.g., radiologic imaging, radiation oncology), nuclear propulsion, industrial radiographic imaging, and research. Radiation health protection programs are:

(a) Required by DoDI 6055.08.

(b) Used throughout the DoD to preserve and maintain the health of personnel while they accomplish necessary work:

1. In or around areas contaminated with radioactive material; or

2. In areas where they are exposed to ionizing radiation.

(2) Medical surveillance for ionizing radiation workers is best accomplished through personnel dosimetry as required by DoDI 6055.08.

(a) Radiation:

1. Dosimeters should be worn during all work with potential for exposure to ionizing radiation.

2. Dosimetry is more sensitive than any medical examination or test for detecting radiation overexposures.

(b) Routine medical surveillance examinations for individuals occupationally exposed to ionizing radiation are not necessary unless workers are also exposed to other occupational hazards that require examinations.

b. Applicants for ionizing radiation work who have previously undergone radiation therapy, or had radiation overexposures, should be counselled that they may be at increased risk of harm from further radiation overexposure and should discuss any health concerns with their personal health care provider. Current employees may discuss concerns with a DoD OM provider.

(1) DoD radiation workers must report any changes in their health status that might impact their ability to safely perform their jobs. A reported overexposure to ionizing radiation may, but does not necessarily, indicate the need for a medical examination. The circumstances associated with the reported radiation overexposure and the estimated organ or whole body dose should help determine the:

(a) Type and extent of any examination, if needed.

(b) Types of laboratory or medical tests.

(2) The supporting OM provider, in consultation with the supervisor and radiation safety officer, should determine:

(a) If a medical examination is necessary.

(b) What tests might be needed.

(c) What treatment and follow-up is appropriate.

(3) Place copies of reports documenting reported overexposures in the:

(a) DoD civilian employee's medical folder; or

(b) Service member's treatment record.

c. Documenting a determination that a suspected overexposure did not occur is as important as documenting actual overexposures. Radiation overexposures, once identified (whether by a recognized break in procedure or by dosimetry), are to be handled (including diagnosis, treatment, and follow-up) as workers' compensation cases.

d. Service-specific guidance on radiation health protection can be found in:

(1) Bureau of Medicine and Surgery Naval Medical Command P-5055.

(2) AFI 48-148.

(3) DA PAM 385-25.

5.11. MEDICAL SURVEILLANCE FOR EXPLOSIVE ORDNANCE DISPOSAL (EOD) PERSONNEL.

a. EOD personnel:

(1) Duties include locating, identifying, disarming, neutralizing, recovering, and disposing of explosives. These explosive ordnances may be:

(a) Conventional, chemical, biological, incendiary, and nuclear devices.

(b) Contaminated with toxic or radioactive materials.

(2) Are at risk for blast injuries, including traumatic brain injury, and should undergo a pre-deployment baseline neurocognitive assessment pursuant to DoDI 6490.13. The purpose of this examination is primarily for medical qualification and secondarily for medical surveillance.

(3) Are **not** at routine risk for exposure to depleted uranium, so baseline and periodic bioassays are not required. Biomonitoring is indicated following specific episodes of exposure to depleted uranium aerosols or fragments in accordance with:

(a) Assistant Secretary of Defense for Health Affairs Policy Memorandum 03-012.

(b) Under Secretary of Defense for Personnel and Readiness Policy Memorandum 04-004.

b. Table 3 summarizes the medical surveillance examination schedule for EOD personnel. For additional information concerning medical qualification requirements for EOD personnel, see Paragraph 6.11.

5.12. MEDICAL SURVEILLANCE FOR RESPIRATORY HAZARDS.

a. Many occupational hazards have the potential to adversely affect a worker's ability to breathe, ranging from acute irritants (e.g., chlorine) to long-term threats (e.g., asbestos). Occupational medical surveillance programs involving respiratory hazards generally include radiographic monitoring and occupational spirometry testing as key components. Occupational spirometry, when done properly, is objective and reproducible and provides a good indication of respiratory function that can be followed over time. For standards requiring radiographic monitoring and occupational spirometry as part of medical surveillance examinations, see Part 1910 of Title 29, CFR.

b. Occupational spirometry:

(1) Is focused on healthy adult workers. Medical spirometry, by contrast, is performed on patients to diagnose or to assess response to treatment by personnel who function under a medical specialist (e.g., a pulmonologist). Periodic occupational medical surveillance spirometry must be performed in accordance with Parts 1910, 1915, and 1926 of Title 29, CFR.

(2) Is administered by personnel who have been certified by NIOSH. Spirometry results are interpreted by OM providers.

(3) Should be performed periodically to evaluate lung function over time.

(4) To assure the quality of occupational spirometry, NIOSH developed a program that certifies occupational spirometry training courses as having met these standards (including the qualifications of the instructors, the class size, etc.). Personnel who successfully complete NIOSH-approved spirometry training are considered qualified to administer occupational spirometry. Respiratory therapists, and others qualified for medical spirometry, must successfully complete NIOSH-approved spirometry training to administer occupational spirometry.

5.13. EXPOSURE ASSESSMENT FOR PER- AND POLYFLUOROALKYL SUBSTANCES IN DOD FIREFIGHTERS.

a. Section 707 of Public Law 116-92 requires DoD to offer blood testing to all DoD firefighters for exposure to per- and polyfluoroalkyl substances (PFAS) during their annual physical examination.

b. PFAS testing is not part of firefighter medical surveillance or qualification, but is done solely to assess exposure. This requirement is only to offer blood (serum) testing for select PFAS compounds and record the testing results of the concentration of PFAS in the firefighter's OH record. Current scientific evidence does not indicate that blood levels will identify a health problem, predict or rule out the development of future health effects, or provide information for medical treatment. Medical surveillance procedures detailed elsewhere in this issuance do not apply.

c. Participation in this testing is voluntary.

d. The PFAS compounds specified in this paragraph will be tested.

(1) Perfluorooctanoic acid.

(2) Perfluorooctanesulfonic acid.

(3) Perfluoronanoic acid.

(4) Perfluorohexanesulfonic acid.

(5) Perfluorobutanesulfonic acid.

(6) Perfluoroheptanoic acid.

e. These PFAS compounds were selected for the DoD firefighting testing panel because they:

(1) Have been associated with aqueous film-forming foam used by DoD firefighters.

(2) Are part of the larger testing panel of the National Health and Nutrition Examination Survey of the general public.

f. OM providers should work with supporting safety and IH personnel to address any work-related issues associated with PFAS exposures.

SECTION 6: GENERAL PROCEDURES FOR MEDICAL QUALIFICATION EXAMINATIONS

6.1. OVERVIEW.

a. General.

Medical qualification examinations are conducted for:

(1) Civilian APF examinees occupying positions with medical standards or physical requirements, in accordance with Part 339 of Title 5, CFR. Many of the specific medical qualification requirements for general schedule examinees are in the occupational requirements of the job series. This information can be found in OPM's qualification standards for each occupational series at https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards.

(2) Civilian NAF examinees in positions with medical standards or physical requirements, given the environmental factors associated with the position. These examinations are performed in accordance with guidance provided by the civilian personnel authority.

(3) Active duty personnel currently in, or being considered for, specific task assignments that have medical standards or physical requirements not otherwise specified in DoD or Service recruitment or retention policies.

b. Overview for DoD Civilian Employees.

Medical qualification examinations are performed at the request of authorized officials (e.g., supervisors and HR personnel) for DoD civilian employees who are:

(1) Applicants for, tentative selectees for, or employees in positions with medical standards or physical requirements.

(a) The purpose of the medical qualification examinations is to assess whether an examinee is medically qualified for a position with medical or physical requirements given the functional requirements and environmental factors associated with the position. The request for medical qualification examinations must be:

1. Specific for the position's medical standard or physical requirements within the context of all associated environmental factors as reported by the authorized examination requesting official.

2. Recorded on:

a. Part B of OF-178; or

b. DoD Component medical qualification examination documentation.

(b) Medical certification examinations are a subset of medical qualification examinations. The certification requirements for certain jobs are determined by an external regulatory body, such as the Federal Motor Carrier Safety Administration (FMCSA) for commercial motor vehicle (CMV) operators. In general, these external regulatory bodies guide the interpretation of the examination and follow-up actions. Depending on the requirements of the external regulatory body, the medical examination results or interpretation may require reporting to the regulatory body.

1. If an examinee does not meet one or more of the established medical certification standards, the examinee is considered "not medically qualified" and this information is reported to HR personnel or examination requesting official. Depending on the external regulatory body granting the certification, there may be a process for the examinee to request an exception to the policy.

2. Temporary medical conditions (e.g., elevated blood pressure) may be temporarily medically disqualifying. In such circumstances, the procedures of the certification agency (external regulatory body) must be followed, but only if a DoD standard is not more stringent.

(2) Civilian APF employees who have applied for, or are receiving, continuity of pay or compensation as a result of an injury or disease pursuant to the provisions of Part 10 of Subchapter B of Chapter 1 of Title 20, CFR. These medical qualification examinations:

(a) Determine the examinee's medical limitations that may affect job placement decisions.

(b) Support the goal of HR and supervisors to identify work tasks that could be performed by the examinees within the limitations of their current medical status or condition.

(c) Are requested and delivered in accordance with procedures in Volume 810 of DoDI 1400.25.

c. Roles and Responsibilities.

(1) Command and supervisory personnel, in consultation with HR personnel in the case of DoD civilian employees, identify medical qualification standards and physical requirements for particular duty positions within the context of associated environmental factors. For DoD civilian employees, medical qualification standards must be established by DoD or DoD Components in compliance with OPM requirements in Section 339.205 of Title 5, CFR, and Equal Employment Opportunity Commission requirements in Part 1630 of Title 29, CFR.

(2) The examining OM provider serves as an advisor to the command, supervisory, and HR personnel and does **not** create medical standards or physical or position requirements or make employment decisions.

(3) The examining OM provider determines medical qualifications and notifies command, supervisory, and HR personnel, as applicable, who take into account the examining OM provider's determination, in making the decision of suitability for a position or function.

6.2. REQUESTING AND SCHEDULING MEDICAL QUALIFICATION EXAMINATIONS.

a. Authorization to Request Examinations.

The authority to request a medical qualification examination is with command, supervisory, or HR personnel, as applicable and not with the examining OM provider.

b. Timing of Examinations.

Authorized officials (e.g., supervisors or HR personnel) will determine the type and frequency of the medical qualification examinations.

(1) Event-triggered medical qualification examinations may be requested:

(a) After a conditional offer of employment.

(b) Before job reassignment.

(c) After identifying a new:

1. Work task or new requirement to wear specialized equipment.

2. Functional requirement or other change(s) to environmental factors, in accordance with Paragraph 6.1.b.(1)(a).

(2) Routinely scheduled periodic medical qualification examinations may be requested (e.g., annually, bi-annually). To improve efficiency, OM clinics may initiate the scheduling of periodic medical qualification examinations. If so, the scheduling process should include steps so that an authorized official (e.g., supervisor, HR personnel) confirms that:

(a) The employees to be scheduled continue in positions requiring medical qualification examination.

(b) The position's medical and physical requirements, and associated environmental factors, have not changed since the previous medical qualification examination.

6.3. CONTENT OF MEDICAL QUALIFICATION EXAMINATIONS.

a. General.

The content of medical qualification examinations varies, but generally includes: a history, physical examination, and ancillary tests.

(1) For Department of Navy examinations:

(a) The content of each medical qualification examination is described in the Navy's Medical Matrix.

(b) Additional medical qualification examination elements are not authorized.

(2) If at any time during the medical qualification examination the examining OM provider feels the examinee is withholding information or not being truthful, the provider should:

(a) Inform the authorized and requesting HR office or the supervisor that a complete examination is not possible.

(b) Record this on the OF-178 or the DoD Component-specific medical qualification examination documentation.

b. History.

For all examinees, the history includes both occupational history and relevant personal medical history.

(1) The examinee is responsible for providing accurate and relevant history through documentation and during the interview portion of the examination. To comply with Part 1635 of Title 29, CFR, prohibiting discrimination on the basis of genetic history, history questions for DoD civilian employees may not include family history.

(2) Documentation of medical history for medical qualification of Service members and NAF employees will be in accordance with the DoD Component policies and procedures. Documentation for APF civilian employees includes, but is not limited to:

(a) Part A of OF-178 or DoD Component Medical Qualification Examination Documentation.

Completion of occupational and relevant personal history must be performed by the examinee. Signature of the examinee certifies that the:

1. Information provided is complete and accurate.

2. Examinee consents to the release of the medical qualification examination results to the employing or hiring agency.

(b) Personal Health Records.

Before scheduling the medical qualification examination, the supporting HR office should encourage the examinee to bring relevant personal health documentation with them so that the examining OM provider may review it at the time of the medical qualification examination. If the examining OM provider needs additional information because of a question or concern that arises during the medical qualification examination, the examining OM provider may request that the examinee provide further documentation.

1. At the examining OM provider's discretion, the examinee may be given more time (e.g., until the next business day) to provide additional information.

a. If acquiring additional information would take longer than approximately 1 day (e.g., requiring a personal medical appointment), then the OF-178 or DoD Component-specific medical qualification documentation should be completed by the examining OM provider without waiting for the additional personal health documentation.

b. It then becomes the responsibility of the requesting official to inform the examinee of the acceptable timeframe to provide additional information to the examining OM provider for consideration.

c. The supporting HR office or supervisor must inform the examining OM provider that the examinee has been afforded more time to provide additional information.

d. The OM provider must consider all additional information provided by the examinee within that timeframe.

2. If additional information is needed and not made available by the supporting HR office or supervisor, the examining OM provider will determine that the examinee is not medically qualified and provide an explanation on the medical qualification examination documentation in accordance with Section 339.403(b) of Title 5, CFR.

a. The explanation must inform examinees that they may submit supplemental medical documentation for consideration and further review relative to potential medical eligibility.

b. The OF-178 or DoD Component-specific medical qualification documentation is then returned to the requesting, authorized official.

3. If the examinee submits supplemental information for consideration relative to potential medical eligibility, then the examining OM provider will review the information and report back to the requesting official. The information review may or may not include a return appointment or clinic visit by the examinee.

4. Sample language for use in medical qualification examination documentation where an examinee has submitted supplemental medical documentation may include: "The examinee has submitted supplemental information for consideration and further review relative to potential medical eligibility. The information has been reviewed, and the medical qualification determination is [select one option].":

a. "The examinee has been determined medically qualified. [Specify restrictions if any.]"

b. "The examinee has been determined not medically qualified. [Select one option]": "Additional information is not likely to change this medical qualification determination" or "Additional or more complete information may change this medical qualification determination."

(c) Veterans with Disability Ratings.

The supporting HR office will identify individuals requesting veteran's preference at the time a medical qualification examination is requested. Veterans who have received a disability rating and who are requesting preferential consideration (e.g., 10-point veteran's preference) for employment in positions that have medical standards or physical requirements will have a Department of Veterans Affairs (VA) rating decision that contains information that is appropriate for OM provider review.

1. The OM examiner should determine if the veteran is applying for a position with functional requirements that conflict with the current status of the veteran's medical conditions and functional limitations described in the disability rating. The veteran should work with the VA to understand the VA rating and identify potential conflicts in advance of the medical qualification examination. The final determination of a potential conflict will be made during the medical qualification examination process. Overcoming a conflicting VA rating, and any associated expense, is the responsibility of the veteran.

2. Before requesting a medical qualification examination, the HR office will direct the veteran to supply copies of the VA rating decision and supporting documentation. The veteran will provide this documentation to the OM clinic before or during their scheduled examination. The documentation:

a. Will include details of the diagnosis, treatment, and evaluation of the veteran's Service-connected disabilities and associated medical examination results.

b. Will include all medical reports dealing with the medical conditions listed in the veteran's claim, if the veteran is pending an evaluation for a rating decision from the VA.

c. Is considered part of the medical qualification examination, as it will include important information that quantifies and qualifies any physical impairment.

d. May include a VA report of medical examination for disability evaluation, completed by claimants, before undergoing a VA examination for disability benefits. The VA examiner will have recorded the findings of the disability examination.

e. May include a VA rating decision which has been discontinued, but that may be referenced in older cases.

3. If the veteran reports for a scheduled medical qualification examination without bringing the necessary documentation described in Paragraph 6.3.b.(2)(c)2., the examining OM provider should notify HR and not conduct the medical examination until the needed documentation is provided.

(d) Access to DoD-Held Medical Information.

1. Selected civilian positions may have a condition of employment requiring full and complete access to all medical information held by the DoD, regardless of whether that information was collected for employment or personal health purposes. Failure of the examinee

to authorize the disclosure of medical information held by DoD must be reported to the authorized requesting official.

2. The Department of Defense Form 2870, "Authorization for Disclosure of Medical or Dental Information" (available on the DoD Forms Management Program Website at https://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd2870.pdf) should be used for the examining OM provider to document that the examinee has granted access to all medical information held by the DoD. The examinee's failure to authorize access can also be documented on this form for recordkeeping purposes.

c. Physical Examination.

The physical examination should be limited to items relevant to the position for which the examinee is being considered. An expansive physical examination should not be performed within the context of the medical qualification examination.

d. Ancillary and Supporting Tests.

Ancillary and supporting tests should be limited to tests that are relevant to the position for which the examinee is being considered. If a test result is outside of expected parameters, the same test should be repeated once to confirm the result.

6.4. INTERPRETATION, DOCUMENTATION, AND NOTIFICATION OF MEDICAL QUALIFICATION DETERMINATION.

a. Interpretation of Examination Findings.

(1) For each examinee, determining medical qualification requires a case-by-case, facts-based assessment.

(2) A history of a medical condition may result in medical disqualification, if the medical condition:

(a) Is medically disqualifying, according to an applicable OPM-approved medical standard; or

(b) Would impair the ability to safely perform one or more essential job functions. If the medical condition is recurrent, then the likelihood of recurrence impacting safe job performance must be assessed. Determination of whether a reasonable accommodation is possible is not an OM responsibility. Reasonable accommodations are made by the supervisor in accordance with DoD Component policies and procedures. On request, OM providers can assist supervisors and HR personnel in this effort.

b. Documentation of Examination.

Employee medical qualification examinations must be recorded on DoD Component medical qualification examination documentation or on an OF-178.

(1) The examinee and the authorized requesting official (e.g., HR official, supervisor) complete basic examinee and job description information (e.g., the type of information that is described in Parts A and B of the OF-178) before the examinee arrives for the medical qualification examination. If this information is unavailable, the examining OM provider should not proceed with the examination.

(2) The examining OM provider completes:

(a) Part C of the OF-178; or

(b) Equivalent information on the DoD Component medical qualification examination documentation.

(3) The agency medical officer (i.e., a medical officer designated by the DoD Component), before returning it to the civilian personnel or requesting authority, reviews and completes:

(a) Part D of the OF-178; or

(b) Equivalent information on the DoD Component medical qualification examination documentation.

(4) The agency medical officer and the examining OM provider may be the same person.

(5) Further documentation supporting the medical qualification determination and any work restrictions, as specified in this paragraph, must be included in the examinee's OH record.

(a) If the individual has restrictions or limitations, but is otherwise qualified, the examining OM provider will document the findings and the medical decision-making that led to the conclusions, recommendations, and restrictions.

(b) Summary statements:

1. Are required for all medical disqualifying conditions, including:

a. Diagnosis.

b. History (including references from previous examinations, treatment, and responses to treatment).

c. Clinical findings (results of laboratory tests, imaging, or special evaluations).

2. Should be provided to the civilian personnel authority or other management representatives only when necessary and authorized.

3. Should only provide the information necessary to make work placement decisions.

c. Notification of Examination Results to the Authorized Requesting Official.

(1) At a minimum, the agency medical officer completes Part D of the OF-178, or its equivalent DoD Component medical qualification form, for the appropriate employment category of the applicant or examinee, indicating either:

(a) Medically qualified or that the examinee has been medically qualified if restrictions are accommodated. Specify restrictions and, if known, include expected restriction duration; or

(b) Medically disqualified, with an explanation. Explanations should not mention specific medical findings unless they are obvious without an examination. Examples of explanations are:

1. The examinee is monocular and job requires binocular vision.

2. Severe hypertension or uncontrolled diabetes could be reported as: "Existence of a condition associated with incapacitation," without mentioning blood pressure or diabetes.

(2) The completed Part D of the OF-178 or equivalent DoD Component medical qualification examination documentation is returned to the authorized requesting official.

d. Examinee Notification of Examination Results.

The examining OM provider should:

(1) Inform all examinees of the results of their medical qualification examination, as soon as possible, following completion of the examination.

(2) Provide an explanation of:

(a) Examination findings, including findings that the examinee is or is not medically qualified for the position with or without recommended work restrictions.

(b) Any medical condition identified that would place the examinee at an increased risk of health impairment.

(c) Recommended work restrictions or devices that must be implemented for medical qualification or exposure mitigation, such as corrective lenses or respirators.

(d) The option to receive a copy of their employee OH record.

(e) Any incidental finding of abnormality or concern, which does not have a direct impact on the final disposition of the medical qualification examination. This would be information that examinees could use if they want to follow up with their personal medical provider.

6.5. MEDICAL QUALIFICATION EXAMINATIONS FOR SPECIFIC GROUPS.

Several occupational groups require special consideration because of their unique exposures, health risks, or otherwise regulated medical qualification requirements. This includes the medical qualification of:

a. Firefighters.

b. Police officers and security guards.

c. Workers who require Department of Transportation (DOT) examinations.

d. Workers enrolled in chemical, biological, or nuclear personnel reliability programs (PRPs).

e. Child care and youth services workers.

f. EOD workers.

g. Respirator users.

6.6. MEDICAL QUALIFICATION EXAMINATIONS FOR FIREFIGHTERS.

a. General Considerations for the Firefighter Examination.

The primary purpose of the firefighter occupational medical qualification examination is to determine medical qualification for duty (e.g., whether the firefighter can safely wear a respirator). The secondary purpose is exposure-related medical surveillance (e.g., whether the firefighter has suffered respiratory injury due to smoke inhalation). These examinations are performed in support of the requirements of DoDI 6055.06.

(1) The OM examiner should review the specific duties of the job to determine potential exposures (e.g., hazardous materials) that would trigger more specific medical surveillance examination components. The medical qualification components of the firefighter examination determine the likelihood of a firefighter's ability to safely execute the essential functions of the job. Table 3 summarizes the recommended firefighter examination schedule, its components, and the purpose of each component.

(2) The OM examination does not directly assess the capacity to execute the essential functions of firefighting (e.g., the examination does not directly measure the firefighter's ability to climb a ladder and carry a weight while wearing standard firefighting gear). The examination evaluates historical and medical parameters that may be reasonably correlated with safe and effective fire suppression and rescue. The medical qualification examination looks for evidence of the existence of conditions that impair the ability to perform the essential job functions, including conditions associated with sudden or subtle incapacitation.

(3) The National Fire Protection Association (NFPA) Standards 1500, 1581, 1582, and 1583 do not apply to DoD firefighters. The physical examination guidelines in these NFPA standards include items outside the scope of the DoD firefighter OM medical qualification examination, such as physical ability testing and items that fall under the category of preventive services, primary care, and health promotion.

b. Guidelines for Medical Evaluation of Firefighters.

(1) General.

(a) OPM provides medical qualification standards for Fire Protection and Prevention positions at https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/0000/fire-protection-and-prevention-series-0081/.

(b) The conditions in Paragraphs 6.6.b.(1) through (10):

1. Can potentially interfere with safe performance of firefighter essential job functions.

2. Should be evaluated for potential medical disqualification.

3. Potentially medical disqualifying conditions are not limited to those described in Paragraphs 6.6.b.(2) through (11). Any condition associated with sudden or subtle incapacitation, or that otherwise prevents the examinee from safely performing the functions of the job, should be considered medically disqualifying.

(2) Insulin-Dependent Diabetes Mellitus.

Insulin-dependent diabetes mellitus is a condition associated with sudden or subtle incapacitation. Insulin-dependent diabetics are generally unable to safely perform firefighting duties. The examinee:

(a) May be qualified on a case-by-case basis, if an otherwise-qualified, insulin-dependent diabetic examinee can show evidence of adequate glycemic control, no severe hypoglycemic episodes, and strenuous exercise tolerance and has no evidence of:

1. Diabetic retinopathy;

2. Peripheral neuropathy; or

3. Impaired renal function.

(b) Must provide personal medical records for review, including the preceding 3 months of blood glucose self-monitoring records and urinary micro-albumin, and hemoglobin A1c, which are useful in assessing and monitoring diabetic control. Generally, hemoglobin A1c should be under eight. Additional pertinent personal health care records may include urinary albumin to creatinine ratio test and evaluation for coronary heart disease, such as with an exercise stress test.

(3) Cardiac Disease.

(a) Sudden cardiac death, the leading cause of duty-related death among firefighters in the United States, accounts for just over half of all on-duty firefighter deaths. Approximately 90 percent of these cases are attributable to coronary heart disease, and they usually occur in firefighters over 45 years of age. However, no screening test exists that identifies asymptomatic individuals with normal resting EKGs who will experience sudden cardiac death. Given the strenuous work required in firefighting, finding evidence of coronary disease is particularly important in this occupational group.

(b) If the history or physical examination findings indicate the existence of coronary heart disease (not merely the existence of risk factors) likely to interfere with safe job performance, the firefighter examinee should be medically disqualified until fitness can be documented by cardiologic evaluation, which may include an exercise stress EKG.

(c) Cardiac diseases associated with sudden or subtle incapacitation preclude safe firefighter job performance.

1. Those identified to have conditions in this category should be restricted from strenuous duties or medically disqualified while being evaluated and treated by their primary care provider or cardiologist. Diseases in this category include conditions such as:

a. Acute pericarditis, acute endocarditis, or acute myocarditis.

b. Unresolved or undiagnosed recurrent syncope.

c. Any condition requiring an automatic implantable cardiac defibrillator.

d. History of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease.

e. Third-degree atrioventricular block.

f. Cardiac pacemaker.

g. Brugada syndrome.

h. History of heart transplant.

2. Concerns regarding pacemakers and automatic implantable defibrillators include the:

a. Potential for malfunction in high-electromagnetic fields.

b. Exacerbation of the underlying arrhythmia in high-stress environments resulting in subtle or sudden incapacitation.

(d) Severe hypertension is associated with sudden or subtle incapacitation. Firefighter examinees:

1. With systolic blood pressure of 160 or greater, diastolic blood pressure of 100 or greater, or evidence of end organ damage (nephropathy, retinopathy, vascular or cardiac complications) have significant risk of incapacitation. This is especially the case when performing strenuous firefighter job functions (e.g., performing fire suppression and rescue tasks while wearing self-contained breathing apparatus).

2. Should be restricted from performing strenuous firefighter job functions or medically disqualified while being evaluated and treated by their primary care provider.

3. With hypertension should also be directed to their primary care providers for treatment and periodic screening for asymptomatic end organ damage.

(e) Firefighter examinees with valvular heart disease should be evaluated and cleared to work by a cardiologist familiar with the duties of a firefighter.

(4) Peripheral Vascular Disease.

(a) Vascular disease associated with sudden or subtle incapacitation is generally a cause for medical disqualification, such as:

1. Aneurysm of the aorta, carotid, or femoral arteries, unless repaired.

2. Claudication due to arterial insufficiency.

3. Unresolved thrombophlebitis.

4. Use of anticoagulants other than aspirin.

(b) Significant vascular disease by report or examination may be detected by findings of:

1. Bruit (at any large artery);

2. Venous stasis;

3. Unequal peripheral pulses;

4. Limb coolness or cyanosis; or

5. Vascular abnormalities on funduscopic examination.

(5) Respiratory Conditions.

Respiratory conditions associated with subtle or sudden incapacitation or impaired ability to communicate or that hinders use of respirators, if required by the position held, are generally a cause for medical disqualification. Baseline spirometry is required and annual spirometry is recommended. In accordance with OPM standards, examinees must be free from any pulmonary or chest wall disease or condition that results in not being able to perform the duties of the

position. Examples of respiratory conditions that would likely prevent safe firefighter duty performance include, but are not limited to:

(a) Tracheostomy.

Tracheostomy, unless completely closed.

(b) Asthma.

Asthma, unless the asthma is mild and does not interfere with job performance as determined on a case-by-case basis. Indications that the asthma is mild and does not interfere with job performance include:

1. The condition is intermittent and is not precipitated by stress, exercise, or dust or smoke exposure;

2. The condition does not require medications for the worker to continue activity;

3. There is no history of sudden or subtle incapacitation due to asthma; or

4. Asthma is persistent, but:

a. Does not cause limitation of normal activity, is asymptomatic or causes symptoms less than 2 days a week.

b. Does not cause night-time awakenings more than twice a month.

c. Does not require use of a short-acting beta 2 agonist.

d. Forced expiratory volume in the first second (FEV_1) is at least 80 percent of predicted and FEV_1/forced vital capacity (FVC) is normal.

e. There is no history of sudden or subtle incapacitation due to asthma (i.e., is less severe than the "mild" classification described in National Institutes of Health Publication No. 07-4051).

(c) Chronic Obstructive Pulmonary Disease (COPD).

In general, the parameters listed in this paragraph would be considered indicators of acceptable pulmonary function in a firefighter examinee with COPD.

1. Ratio of FEV_1 to FVC greater than 0.70 and FEV_1 greater than or equal to 70 percent predicted.

2. No history of sudden or subtle incapacitation due to COPD.

3. No limitation of normal activity.

4. No history of requiring medications for the firefighter to continue normal or firefighting activity.

(d) Pulmonary Hypertension.

Pulmonary hypertension can:

1. Impair the ability to:

a. Use respiratory protective equipment.

b. Perform strenuous physical activity.

2. Cause sudden or subtle incapacitation.

(e) Spontaneous Pneumothorax.

History of two or more episodes of spontaneous pneumothorax, unless there has been surgical correction of the underlying condition or mechanism and no subsequent spontaneous pneumothorax.

(f) Pulmonary Embolism.

Pulmonary embolism, if:

1. Acute;

2. Recent (within the last 3 months);

3. Recurrent; or

4. Chronic requiring anticoagulation.

(g) Active Pulmonary Tuberculosis.

Active pulmonary tuberculosis poses a direct threat to the examinee and coworkers. The examinee is not medically qualified due to a medical condition that poses a direct threat to coworkers. The supervisory chain should be advised to remove the worker from the workplace until the threat resolves. Follow local procedures for reporting to the local public health department.

(6) Musculoskeletal Disorders.

Musculoskeletal disorders associated with sudden or subtle incapacitation or that otherwise interfere with performance of one or more of the essential job functions. Examples include:

(a) A history of repeated joint dislocations, not surgically corrected, that interfere with firefighter duties.

(b) Acute back condition (strain, sprain, etc.) at the time of the physical examination. On resolution, re-examination should be performed or personal provider documentation should be reviewed to determine medical qualification.

(c) Fracture of any bone or dislocation of any joint, other than the fingers or toes, at the time of the physical examination. On resolution, re-examination should be performed for medical qualification.

(d) Any condition that prohibits free movement of the spine and pelvic joints.

(e) Anomalies in the number, form, proportion, and movement of the extremities that interfere with function, including:

1. Nonunions.

2. Non-reducible dislocations.

3. United fractures and reduced dislocations with incomplete restoration of function.

4. Amputation of arm, hand, leg, or foot.

5. Loss of:

a. Any skeletal portion of the thumb of either hand.

b. More than the two distal phalanges of the ring or little fingers of either hand.

6. Clubfoot.

7. Any:

a. Joint instability;

b. Pes cavus;

c. Weak foot; or

d. Pes planus with symptoms unresponsive to orthotics.

8. Loss or deformity of:

a. Great toe; or

b. Any two toes on the same foot.

9. Torn cartilage or loose foreign bodies within the knee joint.

10. Instability of the knee joint.

11. Inadequate healing after a surgical procedure.

(7) Neurological Disorders.

(a) Vertigo at the time of the physical examination. On resolution, re-examination should be performed or private provider documentation should be reviewed to determine medical qualification.

(b) Recurrent vertigo of unknown etiology, unless resolved.

(c) Cerebral arteriosclerosis as evidenced by documented episodes of focal, reversible, or irreversible neurological impairment.

(d) Epilepsy that causes sudden or subtle incapacitation. This would generally not be compatible with safe job performance as a firefighter.

(e) Degenerative neurological disease or disorder that results in documented evidence of neurological impairment that renders the applicant unable to perform the duties of the position.

(f) Progressive neurologic disease, including:

1. Myasthenia gravis.

2. Muscular dystrophies.

3. Huntington's chorea.

4. Amyotrophic lateral sclerosis.

5. Bulbar palsy.

6. Dementia.

(g) Multiple sclerosis, unless:

1. It can be documented that the condition is stable for 3 years.

2. There is no:

a. Cognitive impairment.

b. Residual impairment of limb or spine function that would otherwise impair safe job performance.

3. Medications do not impair judgment or job function.

(8) Mental Disorders.

A history of serious mental disease that would likely impair safe job performance (e.g., a psychiatric disorder characterized by psychosis or a condition requiring antipsychotic medication(s)).

(9) Visual Disorders.

(a) The OPM provides vision standards for firefighter positions.

1. Corrected distant vision worse than 20/30 in the best eye and worse than 20/70 in the other eye is medically disqualifying.

2. If it has been determined that, for all firefighters at a worksite (not just one individual), it is likely that corrective lenses may be lost or broken, then uncorrected distant vision better than 20/100 using both eyes may be required.

(b) The inability to distinguish basic colors may be medically disqualifying for firefighter positions. Correctly identifying fewer than 8 out of 14 Ishihara color plates indicates possible impairment of color vision and requires further evaluation. This may be done by using a test capable of identifying the degree of color blindness or evaluation by an optometrist or ophthalmologist. In such cases, impairment of color vision worse than "moderate" would likely impair safe performance as a firefighter.

(c) Acute or chronic eye disease is medically disqualifying for firefighter positions. This does not include disorders of the palpebral conjunctiva, including allergic conjunctivitis, unless the condition is severe enough to:

1. Impair vision or the use of protective eyewear; or

2. Distract the worker from firefighting. Field of vision should be tested by confrontation.

(10) Ear Disorders.

(a) The OPM provides hearing standards for firefighter positions (i.e., no loss of 30 or more decibels in the unaided worst ear at 500, 1000, and 2000 hertz). Firefighter examinees with impaired hearing who have been effectively performing their jobs must be evaluated on a case-by-case basis regarding their ability to safely continue in the position. If there are questions about the impact of impaired hearing on job performance, the employee may obtain an evaluation from an audiologist. If the firefighter is usually enrolled in the HCP, then referral to an audiologist as part of the HCP may be appropriate.

(b) Meniere's disease, if diagnosed by a health care provider, unless resolved. For provider-diagnosed Meniere's disease to be considered "resolved," there:

1. Should be no sudden episodes of vertigo, dizziness, hearing loss, or tinnitus for at least 2 years.

2. Must be documentation from an ear, nose, and throat specialist that the condition is not expected to:

a. Cause sudden episodes of vertigo, dizziness, hearing loss, or tinnitus; or

b. Otherwise interfere with firefighting responsibilities.

(11) Other Potentially Medically Disqualifying Disorders.

The disorders specified in this paragraph are potentially medically disqualifying for firefighter examinees, in accordance with OPM standards.

(a) Any condition of the nose, mouth, or throat that interferes with:

1. Distinct speech;

2. Free breathing; or

3. The use of:

a. Breathing apparatuses; or

b. Protective equipment.

(b) Acute or chronic disease or inflammation of the abdominal viscera, hernia, or significant enlargement of the liver or spleen that interferes with the performance of the duties of the position.

6.7. MEDICAL QUALIFICATION EXAMINATIONS FOR POLICE OFFICERS AND SECURITY GUARDS.

a. Purpose of the Police Officer and Security Guard Examination.

(1) Primary Purpose.

The primary purpose of the police officer and security guard occupational medical examination is to determine medical qualification for duty. This applies to both military and civilian personnel.

(a) Table 3 summarizes the recommended police officer and security guard medical qualification examination content. The core content (history, examination, and laboratory) is to be supplemented by qualification requirements based on an examinee's position-specific essential functions (e.g., hazardous duties).

(b) Medical qualification examinations are conducted at preplacement, and then annually, with the same examination performed if the position duties have not changed.

(c) Between examinations and in accordance with relevant personnel policy:

1. Police officers and security guards should self-report to their supervisor if they receive a diagnosis or develop a medical condition or symptom that may impact their performing the full range of their position duties.

2. The employee need not divulge specific personal health information other than having a change in health. The self-report will trigger an interim request from the supervisory chain for a medical qualification evaluation. An interim examination should be limited to the diagnosis, medical condition, or symptom of concern.

(2) Secondary Purpose.

The secondary purpose of the police officer and security guard occupational medical examination is to perform occupational exposure-related medical surveillance. Except for audiometric surveillance for occupational noise exposure, there are no routine exposure-related medical surveillance requirements for police officer or security guard positions.

(a) The OM examiner should review the specific duties of the job to determine whether there are potential exposures (e.g., lead exposure from weapons qualification) that would trigger medical surveillance examination components. Those medical surveillance examination components that are pertinent to a specific individual in a specific position should be added to the medical examination scheduled after coordination with the authorized requesting official.

(b) The frequency of medical surveillance should follow the common guidance for that exposure. Baseline examination may occur at the same time as the preplacement examination. Some potential exposure(s) require a termination examination.

b. Guidelines for Medical Evaluation of Police Officers and Security Guards.

(1) General.

The OPM provides medical qualification standards for police officers (available at https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/0000/police-series-0083/) and security guards (at https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/0000/security-guard-series-0085/).

(a) OPM has granted the DoD's application of medical qualification standard for police officers to security guards.

(b) The conditions listed in Paragraphs 6.7.b.(2) through (10):

1. Can potentially interfere with the safe performance of police officer or security guard essential job functions.

2. Should be carefully evaluated by the OM examiner for potential medical disqualification.

(c) Potentially medically disqualifying conditions are not limited to those described in Paragraphs 6.7.b.(2) through (10). Any condition associated with sudden or subtle incapacitation, or that otherwise prevents the individual from safely performing the functions of the job, should be considered medically disqualifying.

(2) Insulin-Dependent Diabetes Mellitus.

Insulin-dependent diabetes mellitus is a condition associated with sudden or subtle incapacitation. Insulin-dependent diabetics are generally unable to safely perform police officer or security guard duties. The examinee:

(a) May be qualified on a case-by-case basis if an otherwise qualified, insulin-dependent diabetic examinee:

1. Can show evidence of:

a. Adequate glycemic control.

b. No severe hypoglycemic episodes.

c. Strenuous exercise tolerance (by history).

2. Has no evidence of:

a. Diabetic retinopathy;

b. Peripheral neuropathy; or

c. Impaired renal function.

(b) Must provide personal medical records for review—including the preceding 3 months of blood glucose self-monitoring records, urinary micro-albumin, and hemoglobin A1c—which are useful in assessing and monitoring diabetic control. Generally, hemoglobin A1c should be under eight. Additional pertinent personal health care records may include a urinary albumin to creatinine ratio test and evaluation for cardiac disease, such as with an exercise stress test.

(3) Cardiac Disease.

(a) If the history or physical examination findings indicate the existence of coronary heart disease (not merely the existence of risk factors) likely to interfere with safe job performance, the examinee should be medically disqualified until further investigation documents showing cardiovascular fitness is sufficient for strenuous exertion without risk to health.

(b) Cardiac diseases associated with sudden or subtle incapacitation are not compatible with safe job performance. Examinees discovered to have these conditions should be

restricted from strenuous duties or medically disqualified while being evaluated and treated by their primary care provider or cardiologist. Diseases in this category include conditions such as:

1. Acute pericarditis, acute endocarditis, or acute myocarditis.

2. Unresolved or undiagnosed recurrent syncope.

3. Any condition requiring an automatic implantable cardiac defibrillator.

4. History of ventricular tachycardia or ventricular fibrillation due to ischemic or valvular heart disease.

5. Third-degree atrioventricular block.

6. Cardiac pacemaker.

7. Brugada syndrome.

8. History of heart transplant.

(c) Severe hypertension is associated with sudden or subtle incapacitation. Examinees with:

1. Systolic blood pressure of 160 or greater, diastolic blood pressure of 100 or greater, or evidence of end organ damage (nephropathy, retinopathy, vascular or cardiac complications):

a. Have risk of sudden or subtle incapacitation.

b. Should be restricted from arduous duties, or medically disqualified, while being evaluated and treated by their primary care provider.

2. Hypertension should be directed to their primary care providers for treatment and periodic screening to prevent disease progression (e.g., asymptomatic end organ damage).

(d) Examinees with valvular heart disease should be evaluated and cleared to work by a cardiologist familiar with the position duties.

(4) Peripheral Vascular Disease.

(a) Vascular disease associated with sudden or subtle incapacitation is generally a cause for medical disqualification. Examples include:

1. Aneurysm of the aorta, carotid, or femoral arteries (unless repaired).

2. Claudication due to arterial insufficiency.

3. Unresolved thrombophlebitis.

4. Use of anticoagulants other than aspirin.

(b) Significant vascular disease, by report or examination, may be reflected by:

1. Bruit (at any large artery);

2. Venous stasis;

3. Unequal peripheral pulses;

4. Limb coolness or cyanosis; or

5. Vascular abnormalities on funduscopic examination.

(5) Respiratory Conditions.

Respiratory conditions associated with sudden or subtle incapacitation that impair the ability to communicate or that hinders use of respirators, if required by the position held, are generally a cause for medical disqualification. For examinees who are not in a respiratory protection program, it may be appropriate to request that the examinees obtain periodic spirometry reports from their personal health care providers. Examples of respiratory conditions likely to preclude safe police officer or security guard duty performance include, but are not limited to:

(a) Asthma.

Asthma, unless the asthma is mild and does not interfere with job performance as determined by a case-by-case, individualized review. Indications that the asthma is mild and does not interfere with job performance include the:

1. Condition is intermittent and is not precipitated by stress, exercise, or dust or smoke exposure; does not require medications for the worker to continue activity; and there is no history of incapacitation due to asthma; or

2. Asthma is persistent, but:

a. Does not cause limitation of normal activity.

b. Is asymptomatic or causes symptoms less than 2 days a week.

c. Does not cause night-time awakenings more than twice a month.

d. Does not require use of a short-acting beta 2 agonist.

e. FEV_1 is at least 80 percent of predicted.

f. FEV_1/FVC is normal.

g. There is no history of sudden or subtle incapacitation due to asthma (i.e., is less severe than the "mild" classification described in National Institutes of Health Publication No. 07-4051).

(b) COPD.

In general, the examinee should have no:

1. History of:

a. Sudden or subtle incapacitation due to COPD.

b. Requiring medications for the individual to safely perform the duties of a police officer or security guard.

2. Limitation of normal activity.

(c) Pulmonary Hypertension.

Pulmonary hypertension can:

1. Impair the ability to:

a. Use respiratory protective equipment.

b. Perform strenuous physical activity.

2. Cause sudden or subtle incapacitation.

(d) Spontaneous Pneumothorax.

History of two or more episodes of spontaneous pneumothorax, unless there has been surgical correction of the underlying condition or mechanism and no subsequent spontaneous pneumothorax.

(e) Pulmonary Embolism.

Pulmonary embolism, if:

1. Acute;

2. Recent (within the last 3 months);

3. Recurrent; or

4. Chronic requiring anticoagulation.

(f) Active Pulmonary Tuberculosis.

Active pulmonary tuberculosis poses a direct threat to the examinee and coworkers. The examinee should be determined "not medically qualified" due to a medical condition that poses a direct threat to coworkers. The supervisory chain should be advised to remove the worker from the workplace until the threat resolves. Follow local procedures for reporting to the local public health department.

(6) Musculoskeletal Disorders.

Musculoskeletal disorders associated with sudden or subtle incapacitation or that otherwise interfere with the performance of one or more of the essential job functions. Examples include:

(a) A history of repeated joint dislocations, not surgically corrected, that interfere with police officer or security guard duties.

(b) Acute back condition (strain, sprain, etc.) at the time of the physical examination. On resolution, re-examination should be performed or private provider documentation should be reviewed to determine medical qualification.

(c) Fracture of any bone or dislocation of any joint other than the fingers or toes at the time of the physical examination. On resolution, re-examination should be performed for medical qualification.

(d) Any condition that prohibits free movement of any joint, with a particular emphasis on the spine and pelvic joints.

(e) Anomalies in the number, form, proportion, and movement of the extremities that interfere with function, including:

1. Nonunions.

2. Non-reducible dislocations.

3. United fractures and reduced dislocations with incomplete restoration of function.

4. Amputation of arm, hand, leg, or foot.

5. Loss of:

a. Any skeletal portion of the thumb of either hand.

b. More than the two distal phalanges of the ring or little fingers of either hand.

6. Clubfoot.

7. Any:

a. Joint instability;

b. Pes cavus;

c. Weak foot; or

d. Pes planus with symptoms unresponsive to orthotics.

8. Loss or deformity of:

a. Great toe; or

b. Any two toes on the same foot.

9. Torn cartilage or loose foreign bodies within the knee joint.

10. Instability of the knee joint.

11. Inadequate healing after a surgical procedure.

(7) Neurological Disorders.

(a) Vertigo at the time of the physical examination is medically disqualifying for carrying or using a weapon. On resolution, re-examination should be performed or private provider documentation should be reviewed to determine medical qualification.

(b) Recurrent vertigo of unknown etiology, unless resolved.

(c) Cerebral arteriosclerosis as evidenced by documented episodes of focal, reversible, or irreversible neurological impairment.

(d) Epilepsy that causes sudden or subtle incapacitation. This would generally not be compatible with safe job performance as a police officer or security guard.

(e) Degenerative neurological disease or disorder that results in documented evidence of neurological impairment that renders the examinee unable to perform the duties of the position.

(f) Progressive neurologic disease, including:

1. Myasthenia gravis.

2. Muscular dystrophies.

3. Huntington's chorea.

4. Amyotrophic lateral sclerosis.

5. Bulbar palsy.

6. Dementia.

(g) Multiple sclerosis, unless:

1. It can be documented that the condition has been stable for 3 years.

2. There is no:

a. Cognitive impairment.

b. Residual impairment of limb or spine function that would otherwise impair safe job performance.

3. Medications do not impair judgment or job function.

(8) Mental Disorders.

A history of serious mental disease that would likely impair safe job performance (e.g., a psychiatric disorder characterized by psychosis, a condition requiring antipsychotic medication(s)). Mental disorders that are screened for during this evaluation may include, but are not limited to:

(a) Delirium, dementia, amnesia, and other cognitive disorders.

(b) Major depressive disorder.

(c) Manic-depressive disorder (bipolar).

(d) Dissociative disorders.

(e) Kleptomania.

(f) Panic disorder and other anxiety disorders (depending on the cause, duration, and severity).

(g) Pathological gambling.

(h) Pyromania.

(i) Schizophrenia and other psychotic disorders.

(j) Personality disorders.

(k) Mental retardation.

(l) Alcohol or drug dependences.

(9) Visual Disorders.

Pursuant to OPM requirements, police officers and security guards must have good near and distant vision and the ability to distinguish basic colors. The local hiring authority may establish specific vision standards for a particular position and will annotate this on the OF-178 or DoD Component medical qualification documentation. When an examinee's vision is worse than indicated in Paragraphs 6.7.b.(9)(a) through (b), it is likely that the individual will not be able to safely perform the essential job functions; the OM examiner should consider this in the examiner's individualized assessment.

(a) Research suggests that corrected distance vision needed for safe job performance of many police and security guard positions is at least 20/30 in one eye and 20/100 in the other, or 20/40 in one eye and 20/70 in the other. Near vision is often needed to be correctable to 20/40 binocularly (i.e., with both eyes open), and uncorrected binocular visual acuity often needs to be at least 20/100. Supervisors or HR personnel will specify vision requirements for the specific job.

(b) Examinees should:

1. Be able to discriminate between vivid red and green colors.

2. Have a normal muscle balance.

3. Not have a history of abnormal night vision.

4. Have at least a total:

a. Horizontal visual field of 120 degrees.

b. Vertical visual field of 40 degrees (i.e., 20 degrees above the horizontal meridian and 20 degrees below the horizontal meridian) in each eye.

(10) Ear Disorders.

In accordance with OPM requirements, police officers and security guards must have the ability to hear the conversational voice.

(a) Local hiring authorities may establish specific hearing standards for a particular position and must annotate this on the OF-178 or DoD Component medical qualification documentation.

(b) Meniere's disease is medically disqualifying when diagnosed by a health care provider, unless resolved. For provider-diagnosed Meniere's disease to be considered "resolved," there:

1. Should be no sudden episodes of vertigo, dizziness, hearing loss, or tinnitus for at least 2 years.

2. Must be documentation from an ear, nose, and throat specialist that the condition is not expected to:

a. Cause sudden episodes of vertigo, dizziness, hearing loss, or tinnitus; or

b. Otherwise interfere with police officer or security guard responsibilities.

6.8. MEDICAL QUALIFICATION EXAMINATIONS FOR CMV OPERATORS.

Examinees who currently occupy or who are being considered for positions requiring a commercial driver's license must hold a DOT Medical Examiner's Certificate stating that they are physically qualified to drive a CMV, in accordance with Sections 391.41 through 391.49 of Title 49, CFR.

a. OM providers who perform DoD civilian CMV operator examinations must be listed on the National Registry of Certified Medical Examiners (NRCME) and must complete applicable forms in accordance with FMCSA requirements.

(1) The NRCME is an FMCSA program that requires all providers who perform physical examinations on commercial drivers to be trained and certified on the FMCSA standards, guidelines, and regulations, in accordance with Section 391.41 of Title 49, CFR. Information on the program can be found at https://www.fmcsa.dot.gov/regulations/national-registry/national-registry-certified-medical-examiners.

(2) Providers performing CMV examinations for military personnel:

(a) Do not require listing with the NRCME.

(b) Must be familiar with applicable DOT medical requirements and associated advisory criteria (e.g., Medical Expert Panel or Medical Review Board recommendations).

(3) Both civilian and military CMV operators must meet DOT medical standards.

b. Obstructive sleep apnea is not itself a medically disqualifying condition according to current FMCSA regulations and advisory criteria; however:

(1) Untreated, obstructive sleep apnea:

(a) May lead to a dangerous increase in fatigue and cognitive dysfunction.

(b) Is also associated with an increased risk of developing hypertension, heart disease, stroke, diabetes, and obesity—all of these conditions may be medically disqualifying.

(2) The OM examiner is encouraged to:

(a) Reference current consensus guidelines when making disposition determinations (e.g., the November 21, 2016 Final Medical Review Board Task 16-01 Letter Report from the Federal Motor Carrier Safety Advisory Committee and Medical Review Board).

(b) Use the information to educate examinees, supervisors, and other stakeholders.

6.9. MEDICAL QUALIFICATION EXAMINATIONS FOR WORKERS ENROLLED IN CHEMICAL, BIOLOGICAL, OR NUCLEAR PRPS.

Employees enrolled in chemical, biological, or nuclear PRPs require special medical qualification examinations with an emphasis on mental and emotional stability, reliability, and suitability. Medical qualification and reporting requirements are components of PRPs. Guidance on PRP requirements and OM examinations for PRP employees are described in:

a. DoDI 5210.88, DoD Manual 6055.18, and AR 190-17 (for biological select agents and toxins).

b. DoDI 5210.65 and AR 50-6 (for chemical surety materials).

c. DoDI 5210.42, DoD Manual 5210.42, and AR 50-5 (for nuclear surety materials).

6.10. MEDICAL QUALIFICATION EXAMINATIONS FOR CHILD CARE AND YOUTH SERVICES WORKERS.

All child care and youth services workers must follow the requirements specified in DoDIs 6060.02 and 6060.04.

6.11. MEDICAL QUALIFICATION EXAMINATIONS FOR EOD PERSONNEL.

a. The purpose of EOD examinations is primarily for medical qualification and secondarily for medical surveillance. The medical history and physical examination should provide sufficient information to:

(1) Address whether EOD workers are medically cleared to wear special PPE.

(2) Review for any information indicating emotional instability.

(3) Screen for any condition that could cause or increase the risk of sudden incapacitation.

(4) Determine physical limitations or medical restrictions that would negatively impact carrying out the unique job duties demanded of the EOD career field.

b. EOD personnel, and other workers who routinely work with explosive materials, should receive the medical qualification examinations shown in Table 3.

6.12. MEDICAL QUALIFICATION FOR RESPIRATORY CLEARANCE.

a. A respiratory clearance medical qualification evaluation must be performed before the use of a respirator, in accordance with Section 1910.134 of Title 29, CFR. Commanders, supervisors or HR personnel, as applicable, must provide the examining OM provider with all information listed in Section 1910.134(e) of Title 29, CFR. Consultative support to the examining OM provider is available from the supporting IH and safety personnel.

b. The organ systems most likely to impact the use of a respirator are the respiratory system and cardiovascular system. Lung function is usually the most important factor as many respirators can result in increased airway resistance and increased dead space, which can make breathing with a respirator more difficult.

c. These are the common respirators, ranked from highest to lowest work required by user for breathing:

(1) Nonpowered Air-Purifying Respirators.

Nonpowered air-purifying respirators (e.g., gas masks) generally require the most work.

(2) Demand-Type Supplied Air Respirators.

Demand-type supplied air respirators provide a flow of air when inhalation begins.

(3) Powered Air-Purifying Respirators.

Powered air-purifying respirators generally provide a positive flow of air that reduces the work required.

(4) Supplied Air Respirators.

Supplied air respirators in which there is always positive air flow into the mask.

d. Any factor that increases work required by the user is likely to increase respiratory muscle fatigue.

(1) Workers tolerate pressure-demand and continuous-flow respirators better than air-purifying respirators.

(2) Self-contained breathing apparatus respirators present particular challenges—they are often heavy and add to the musculoskeletal and cardiovascular demands of the average worker. For an average worker, maximal exertion is estimated to be reduced by about 20 percent when performing work with this type of respiratory protection.

(3) Impermeable protective clothing, often worn in conjunction with respiratory protection, creates an additional heat burden that can increase cardiovascular demands.

APPENDIX 6A: OCCUPATIONAL MEDICAL EXAMINATION REQUIREMENTS FOR SELECT OCCUPATIONS

Table 3 summarizes the occupational medical examination requirements for some select occupations. This information supplements OPM requirements, where applicable. DoD Components may apply additional examination requirements as needed.

Table 3. Occupational Medical Examination Requirements for Firefighters, Police Officers, Security Guards, and EOD Personnel

EXAMINATION	FIREFIGHTERS		POLICE OFFICERS AND SECURITY GUARDS		EOD PERSONNEL	
	Purpose*	**Frequency****	**Purpose***	**Frequency****	**Purpose***	**Frequency****
Health history: Specifically evaluate: • Disorder, condition, diagnosis, or symptom: - Of sudden or subtle incapacitation. - That may impact the ability to perform position-specific essential functions. - Impacting night vision, visual acuity, visual fields, and depth perception, including the use of contacts other than for refractive errors; assess for current or recurrent diplopia. • Prescription and over-the-counter medication use, including vitamins and supplements. • Difficulty distinguishing basic colors (e.g., no history of difficulty distinguishing between reds, greens, browns and oranges, blue and purple, blue and yellow, violet and red, or blue and green). • Level of physical activity. Participation in sports activities may be a good indicator of cardiovascular and pulmonary fitness. • Cardiovascular, peripheral vascular, pulmonary; or metabolic disorder diagnosis, medical condition, or symptom. • Psychiatric or psychological diagnosis, condition, or symptom; medical diagnosis or condition that adversely impacts behavior.	B	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Workplace exposure summary	S	Baseline Annual Termination	S	Baseline Annual Termination	B	Baseline Annual (S) Termination

Table 3. Occupational Medical Examination Requirements for Firefighters, Police Officers, Security Guards, and EOD Personnel, Continued

EXAMINATION	FIREFIGHTERS		POLICE OFFICERS AND SECURITY GUARDS		EOD PERSONNEL	
	Purpose*	Frequency**	Purpose*	Frequency**	Purpose*	Frequency**
Vital signs: • Temperature, blood pressure, pulse. • Repeat the blood pressure on a subsequent day, if result falls outside of normal or expected range. A repeat result found outside normal or expected range that would lead to medical disqualification should prompt a discussion to inform the examinee that they may provide additional information.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual Termination
Head and general body appearance and form: Evaluate for body configuration, deformity, contractions, or spasms that could interfere with or prevent satisfactory performance of job functions, including the inability to wear PPE (e.g., body armor), as required by the position.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Ears, nose, throat, oral cavity, including teeth and gums.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Neck: Specifically evaluate range of motion (deficit could adversely impact targeting use of weapon), thyroid, presence of carotid bruits.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Heart, lungs, thorax, abdomen: See Paragraph 6.7.b. for further discussion. • Thorax: Heart sounds, lung auscultation. • Abdomen: Liver size and tenderness, ventral hernia, inguinal hernia.	B	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Skin: Specifically note peripheral vascular skin perfusion.	S	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Extremities and back: Range of motion and general strength, muscle mass and tone, pulses at wrist and feet.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination

Table 3. Occupational Medical Examination Requirements for Firefighters, Police Officers, Security Guards, and EOD Personnel, Continued

EXAMINATION	FIREFIGHTERS		POLICE OFFICERS AND SECURITY GUARDS		EOD PERSONNEL	
	Purpose*	Frequency**	Purpose*	Frequency**	Purpose*	Frequency**
Eyes and surrounding tissues: • Specifically examine eyelids, conjunctiva, cornea, and surrounding tissues. Evaluate for condition affecting function sufficient to interfere with vision or impair protection of the eye from exposures. • Visual field testing by confrontation. • Visual acuity testing with and without corrective lenses, if used. • Ability to distinguish basic colors tested using pseudo isochromatic plates or other accepted objective tool(s). • Fundoscopic evaluation to visualize blood vessels and assess peripheral vasculature for changes or abnormalities.	Q	Baseline Annual Termination	Q	Baseline Annual	Q	Baseline Every 5 Years Termination
Neuromuscular: Evaluate deep tendon reflexes, balance, and motor steadiness and strength of upper and lower extremities, including hand and foot. For those positions requiring the use of a weapon, both the dominant and non-dominant hands should have sufficient strength, control, and coordination to maintain possession of the duty issued weapon and to take possession of an adversary's weapon during a confrontation.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Ability to verbally communicate, including the ability to articulate understandably. Observe interaction during office visit.	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual (S) Termination
Emotional and mental stability: Observe behavior and interaction during office visit. Review mental health history and evaluate for signs of emotional or mental instability during the interview and the mini-mental status examination (e.g., the Teng Mini-Mental State Examination available at https://healthabc.nia.nih.gov/sites/default/files/mmse_0.pdf).[a]	Q	Baseline Annual Termination	Q	Baseline Annual	B	Baseline Annual Termination

Table 3. Occupational Medical Examination Requirements for Firefighters, Police Officers, Security Guards, and EOD Personnel, Continue

EXAMINATION	FIREFIGHTERS		POLICE OFFICERS AND SECURITY GUARDS		EOD PERSONNEL	
	Purpose*	Frequency**	Purpose*	Frequency**	Purpose*	Frequency**
Hearing and audiogram[a].	B	Baseline Annual Termination	B	Baseline Annual Termination	B	Baseline Annual Termination
Screening 12 lead EKG: Repeat the test on subsequent day, if result falls outside of normal or expected range. A repeat result found outside normal or expected range should prompt a request for additional information.	Q	Baseline As Indicated***	Q	Baseline As Indicated***	B	Baseline As Indicated***
Fasting blood sugar: Repeat the test on subsequent day, if result falls outside of normal or expected range. A repeat result found outside of normal or expected range should prompt a request for additional information.	Q	Baseline Annual As Indicated***	Q	Baseline As Indicated		
Respirator questionnaire[b].	B	Baseline As Needed	B	As Indicated	B	As Indicated
Occupational spirometry.	B	Baseline Annual Termination	B	Baseline As Indicated		
Urinalysis: Check pH, specific gravity, protein, glucose, ketones, blood, RBCs, and white blood cells.	B	Baseline Annual Termination	Q	As Indicated	B	Baseline Annual
Tetanus and diphtheria vaccines.	S	Check status at baseline; verify status annually				
Hepatitis B vaccine and titers (based on position duties)[c].	S	Baseline As Needed				
Chest x-ray.	S	Baseline Termination			S	Baseline If Indicated***
Hepatitis A vaccine (based on position duties)[d].	S	Baseline As Needed				

Table 3. Occupational Medical Examination Requirements for Firefighters, Police Officers, Security Guards, and EOD Personnel, Continued

* Purpose of exam: Q = medical qualification; S = medical surveillance (dependent on an examinee's identified exposures an element may also be for surveillance); B = both qualification and surveillance. ** Depending on an examinee's identified exposures and enrollment in medical surveillance, a focused termination examination may be required. *** If medical history or testing results fall outside of the normal range and at the discretion of the examining OM provider. [a] Firefighters, police officers, security guards, and EOD personnel should be enrolled in the HCP and audiometry must be performed in accordance with DoDI 6055.12. [b] Firefighters should be enrolled in the Respiratory Protection (Respirator User) Program. [c] Based on risk of exposure, firefighters should generally be enrolled in the Bloodborne Pathogens (Blood and Body Fluids) Program. Follow current Service-specific guidelines (or Centers for Disease Control and Prevention guidelines, if no Service-specific guidelines exist) for offering Hepatitis B immunization and follow-up titers. [d] Hepatitis A vaccination may be indicated for firefighters, unless specifically designated as "not available for search and rescue" in the event of disaster. Current Service-specific or Centers for Disease Control and Prevention guidelines for Hepatitis A immunization should be followed.

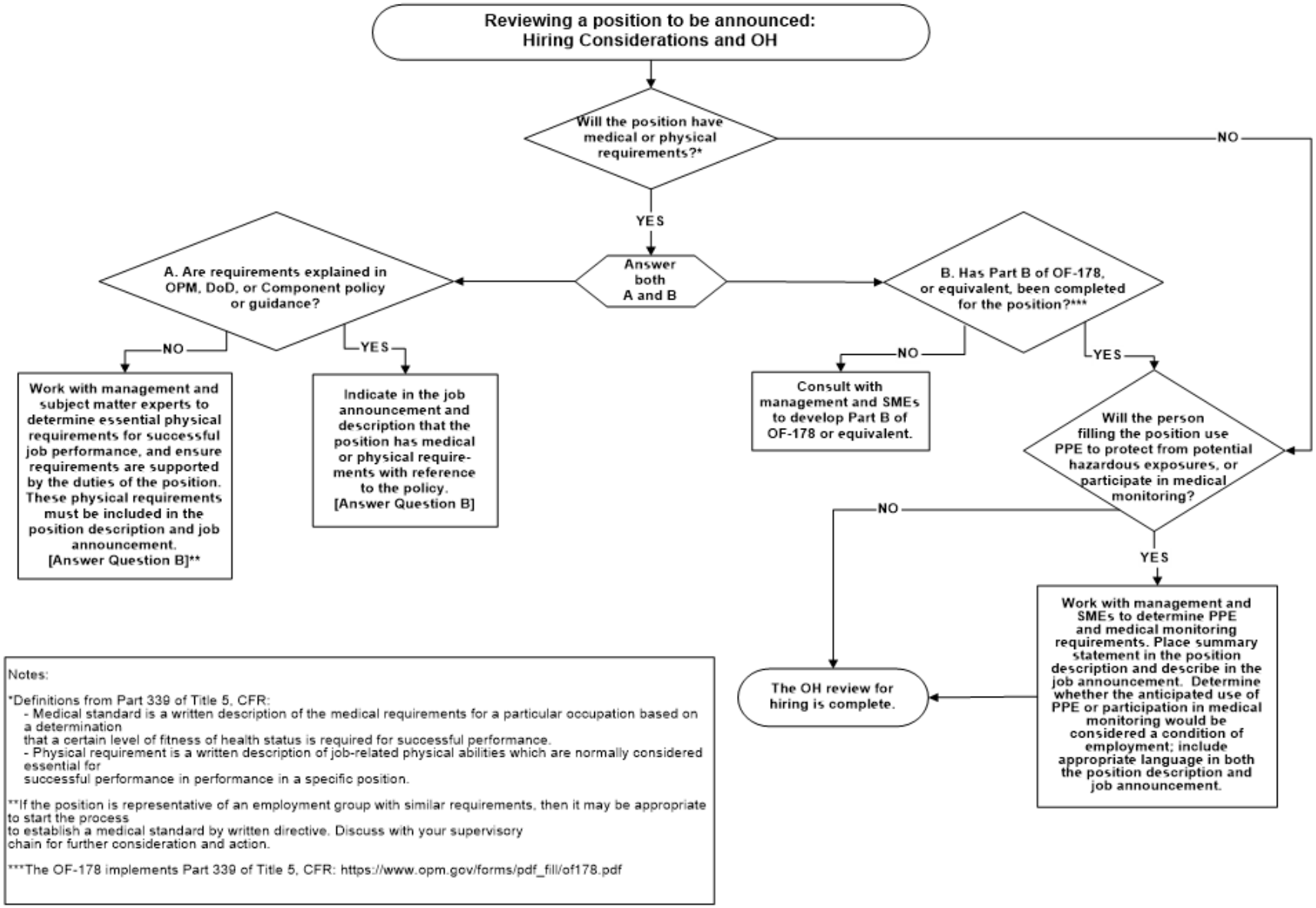
SECTION 7: OCCUPATIONAL MEDICAL EXAMINATION CONSIDERATIONS

a. The required steps before a civilian employee receives an OM examination are shown in Figure 1. Gaps in these administrative preparatory steps, which are performed by HR or supervisor personnel may hamper delivery of OM examinations or could adversely impact an individual's employment status.

b. The flow chart in Figure 1 will assist OM personnel when discussing OM examinations with HR or line management personnel.

c. The steps listed in Figure 1 may also pertain to NAF employee positions.

Figure 1. Necessary HR or Supervisor Actions Before OM Examination



GLOSSARY

G.1. ACRONYMS.

ACRONYM	MEANING
AFI	Air Force instruction
AL	action level
APF	appropriated fund
AR	Army regulation
BLL	blood lead level
CFR	Code of Federal Regulations
CMV	commercial motor vehicle
COPD	chronic obstructive pulmonary disease
DA PAM	Department of the Army pamphlet
DoDI	DoD instruction
DOT	Department of Transportation
EKG	electrocardiogram
EOD	explosive ordnance disposal
FEV_1	forced expiratory volume in the first second
FMCSA	Federal Motor Carrier Safety Administration
FVC	forced vital capacity
HCP	hearing conservation program
HR	human resources
IH	industrial hygiene
µg/dL	micrograms per deciliter
$\mu g/m^3$	micrograms per cubic meter
NAF	nonappropriated fund
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NRCME	National Registry of Certified Medical Examiners
OF	optional form
OH	occupational health
OM	occupational medicine
OPM	Office of Personnel Management

ACRONYM	MEANING
OSHA	Occupational Safety and Health Administration
PFAS	per- and polyfluoroalkyl substances
pH	power of hydrogen
PPE	personal protective equipment
PRP	personnel reliability program
RBC	red blood cell
SEG	similar exposure group
SME	subject matter expert
TM	technical manual
VA	Department of Veterans Affairs

G.2. DEFINITIONS.

Unless otherwise noted, these terms and their definitions are for the purpose of this issuance.

TERM	DEFINITION
administrative controls	Measures usually used in conjunction with direct controls that are aimed at reducing employee exposure to hazards. These measures include additional relief works, exercise breaks, and rotation of workers.
AL	That level of worker exposure determined by workplace sampling at or above which occupational medical surveillance examinations must be performed. With substances with a permissible exposure limit, the AL is defined and is usually one-half of the permissible exposure limit. For other exposures not regulated by OSHA, other consensus standards may be used for an AL. One such consensus standard is use of one-half of the threshold limit value as an AL.
ancillary tests	Clinical tests and measurements used to characterize the status of specific organ systems and physiologic functions.
Defense Occupational and Environmental Health Readiness System-IH	The DoD's authoritative information management system to record and store workplace hazard and hazardous exposure information.

TERM	DEFINITION
biological monitoring	Analysis of chemical or other markers in biological media (usually urine and blood) as an aid to the assessment of exposure to hazardous substances.
employee	Unless otherwise specified, "employee" applies to military and civilian personnel under the jurisdiction of the DoD.
employee OH record	Clinical OH information retained in a recordkeeping system for any DoD civilian employee includes the: Service Treatment Record and OH Civilian Employee Record from DoDI 6040.45. Civilian Employee Medical Record from Part 339 of Title 5, CFR. Unique terms for clinical OH records identified in other issuances or regulations that are applicable to DoD employees. Also commonly referred to as the "employee medical folder."
hazardous laser environment	An area where work is performed during the active operation of Class 3b or Class 4 lasers.
incidental abnormal finding	A finding noted by the OM provider during an examination, but not related to the purpose of medical surveillance (e.g., an example of an incidental abnormal finding is noting a skin lesion while performing an HCP audiometric examination).
incidental laser workers	Individuals who, in the performance of their duties, make it possible, but unlikely, that they will be exposed to hazardous laser energy from Class 3b and Class 4 laser systems. Incidental laser workers do not work in an active hazardous laser environment and are unlikely to experience exposure to hazardous laser energy (e.g., custodial staff, security staff, visitors).
laser workers	Individuals who, in the performance of their duties, work in a hazardous laser environment and have a significant risk of hazardous exposure.

TERM	DEFINITION
medical history	Information regarding an individual's medical background, including work history, specific occupational exposures, work practices, and work-related health problems. This augments the basic medical history to assist the practitioner in determining whether a worker has, or is at risk of developing, work-caused or aggravated health problems.
normal muscle balance	The lack of strabismus (greater than 15 diopters), nystagmus, and diplopia.
occupational medical examinations	Medical examinations performed to prevent work-related health problems by: Assessing the health status of individuals in relation to their work. Making medical recommendations regarding worker placement and exposure controls.
OM provider	A licensed, qualified, and credentialed person who provides occupational medical services (e.g., physician, nurse practitioner, physician's assistant).
permissible exposure limit	The worker's statutorily permitted exposure to any material listed in Tables Z-1, Z-2, or Z-3, pursuant to Section 1910.1000 of Title 29, CFR.
physical ability test	A test that measures: The physical ability to perform a particular task; The strength of specific muscle groups; or Strength and stamina, in general. Also referred to as the "physical capacity evaluation."
physical examination	The actions of a health professional using their senses to inspect, test, or detect the presence or absence of disease.
respirator	PPE that reduces the hazardous exposure of toxins via the inhalational route of exposure.

TERM	DEFINITION
SEG	Defined in DoDI 6055.05.
subtle incapacitation	Defined in Section 339.104 of Title 5, CFR.
sudden incapacitation	Defined in Section 339.104 of Title 5, CFR.
threshold limit value	Airborne concentrations of substances that represent conditions where nearly all workers may be repeatedly exposed, on a daily basis, without adverse health effects. Threshold limit values are recommendations of the American Conference of Governmental Industrial Hygienists.
time-weighted average	Concentrations of stressors or hazards that have been weighted for the time duration of the sample. Most commonly expressed as an average concentration for a normal 8-hour workday or 40-hour work week.
workplace	Defined in DoDI 6055.01.

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