

# FEDERAL INTERAGENCY WILDLAND FIREFIGHTER MEDICAL STANDARDS

## ARDUOUS DUTY WILDLAND FIREFIGHTER

Wildland Firefighter Medical Standards establish the levels of minimum medical fitness for arduous duty that the agencies have determined to be necessary for safe and efficient job performance based on *5 CFR Part 339 Medical Qualifications Determinations*. These medical standards demonstrate the interagency fire community's strong commitment to public and employee health and safety, while maintaining mission integrity.

The *Essential Functions and Work Conditions of a Wildland Firefighter* are identified on page 2. They are the basis for the interagency wildland firefighter medical standards and quantify the expectation that the firefighter can perform the full range of duties at any time and at any place, maintaining continuity of operations at all times.

Medical examinations are required for arduous duty wildland firefighters. Each of the medical standards listed in this document are subject to clinical interpretation by a designated physician. Listed with the standards are examples of medical conditions and/or physical impairments that may be found to be disqualifying. Assessments will be made on a case-by-case basis to determine the individual's ability to meet the medical standards.

### PSYCHIATRIC STANDARD

*The PSYCHIATRIC standard relates (A) the firefighter's need for judgment, mental functioning, and social/behavior skills with (B) the essential functions and work conditions of a wildland firefighter, including working on small and large teams, flying in helicopters and fixed wing aircraft, and rapid pull out to safety zones under conditions that may include isolated or remote sites, snakes, close quarters with large numbers of other workers, limited and disrupted sleep, and long work hours. Some psychiatric conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have judgment, mental functioning, and social interaction/behavior that will provide for the safe and efficient conduct of the requirements of the job. This may be demonstrated by:

- No evidence by physical examination and medical history of psychiatric conditions (including alcohol or substance abuse) likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 4).

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE,  
BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

(All diagnoses must be consistent with the diagnostic criteria as established by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, DSM-IV.)

1. **AMNESTIC** disorders
2. **DELIRIUM** (depending upon etiology and duration)
3. **DEMENTIAS** (depending upon etiology)
4. **DISSOCIATIVE DISORDERS**
5. **KLEPTOMANIA**
6. **PANIC DISORDER** and **OTHER ANXIETY DISORDERS** (depending upon etiology, duration and severity of clinical expression)
7. **PYROMANIA**
8. **SCHIZOPHRENIA** (Exceptions may be may in cases of a single episode of schizophrenic reactions associated with an acute illness capable of causing such reaction.)
9. **ANTISOCIAL PERSONALITY DISORDER**
10. **PARANOID PERSONALITY DISORDER**
11. **SCHIZOID PERSONALITY DISORDER**
12. **ORGANIC BRAIN SYNDROME**
13. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

### **PROSTHETICS, TRANSPLANTS, AND IMPLANTS STANDARD**

*The PROSTHETICS, TRANSPLANTS, AND IMPLANTS standard relates (A) the firefighter's need to work safely and efficiently despite medical conditions that have led to the need for a prosthesis, transplant or implant with (B) the essential functions and work conditions of a wildland firefighter, including using shovels or other hand tools to construct fire lines, using personal protective equipment, engaging in arduous exertion, carrying heavy loads, walking and climbing, kneeling and stooping, and pulling out rapidly to safety zones, and doing so under conditions that may include very steep terrain, rocky, loose or muddy surfaces, wet leaves and grasses, isolated and remote sites, and very long assignments. For individuals with transplants, prosthetics, or implanted pumps or electrical devices, the examinee will have to provide **for agency review** documentation from his/her surgeon or physician that the individual (and, if applicable, his/her prosthetic or implanted device) is considered to be fully cleared for the specified functional requirements of wildland fire fighting.*

The presence or history of organ transplantation or use of prosthetics or implants are not of themselves disqualifying. However, the applicant/incumbent must be able to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- No evidence by physical examination and medical history that the transplant, the prosthesis, the implant, or the conditions that led to the need for these treatments are likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

Note: For individuals with transplants, prosthetics, or implanted pumps or electrical devices, the examinee will have to provide ***for agency review*** documentation from his/her surgeon or physician that the individual (and, if applicable, his/her prosthetic or implanted device) is considered to be fully cleared for the specified functional requirements of wildland fire fighting.

### **IMMUNE SYSTEM/ALLERGIC DISORDERS STANDARD**

*The IMMUNE SYTEM/ALLERGIC DISORDERS standard relates (A) the firefighter's need to be free of infectious disease, immune system, or allergy conditions likely to present a safety risk to self or others with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, driving or riding for many hours, and providing rescue or evacuation assistance under conditions that may include isolated or remote sites, allergens, close quarters with large numbers of other workers, and long assignments. Some immune system/allergic conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must be free of communicable diseases, have a healthy immune system, and be free of significant allergic conditions in order to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A general physical exam of all major body systems that is within the range of normal variation, including:
  - no evidence of current communicable disease that would be expected to interfere with the safe and effective performance of the requirements of the job; and
  - no evidence of current communicable disease that would be expected to pose a threat to the health of any co-workers or the public; and
- Normal complete blood count, including white blood count and differential; and
- Current vaccination status for tetanus; and
- No evidence by physical examination and medical history of infectious disease, immune system, or allergy conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **HEREDITARY ANGIOEDEMA**
2. **GOODPASTURE'S SYNDROME**
3. **AUTOIMMUNE HEMOLYTIC ANEMIA**
4. **VASCULITIS**
5. **HASHIMOTO'S THYROIDITIS**
6. **MYASTHENIA GRAVIS**
7. **SYSTEMIC LUPUS ERYTHEMATOSUS**
8. **CHRONIC OR ACUTE ACTIVE HEPATITIS B OR HEPATITIS C** A finding of unexplained elevated liver transaminases may require additional diagnostic studies before a final medical recommendation is rendered.
9. **TUBERCULOSIS** A history of TB that has been appropriately treated for longer than 6 months is not disqualifying, provided that documentation supports the treatment history and the person has a current chest x-ray showing no active disease. A person with a positive PPD or Mantoux skin test will be required to have a chest X-ray and, if indicated, a sputum culture.
10. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

**MEDICATION STANDARD**

*The MEDICATION standard relates (A) the firefighter's need for full physical and mental function and attention and a low risk of sudden or subtle incapacitation with (B) the essential functions and work conditions of a wildland firefighter under conditions that may include open holes and drop offs, isolated and remote sites, irregular meals, dehydration, and long work assignments. Some medications may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The need for and use of prescribed or over-the-counter medications are not of themselves disqualifying. However, there must be no evidence by physical examination, laboratory tests, or medical history of any impairment of body function or mental function and attention due to medications that are likely to present a safety risk or to worsen as a result of carrying out the specified functional requirements. Each of the following points should be considered:

1. Medication(s) (type and dosage requirements)
2. Potential drug side effects

3. Drug-drug interactions
4. Adverse drug reactions
5. Drug toxicity or medical complications from long-term use
6. Drug-environmental interactions
7. Drug-food interactions
8. History of patient compliance

### **VISION STANDARD**

*The VISION standard relates (A) the firefighter's need to be able to see (including binocular vision, visual acuity, depth perception, peripheral vision, and color vision) with (B) the essential functions and work conditions of a wildland firefighter, including the ability to read maps and printed materials in variable lighting conditions, driving, walking, climbing, constructing fire lines, and rapid pull out to safety zones under conditions that may include very steep terrain, rocky, loose or muddy ground surfaces, open holes or drop offs, and dim light or darkness. The limit for uncorrected far vision is set at 20/100 binocular, consistent with the National Fire Protection Association's Standard on Medical Requirements for Fire Fighters (NFPA 1582, 1997 Edition), and with a field assessment by the medical standards team in which different levels of acuity were considered in an operational setting related to the need for rapid or emergency movement under the conditions noted above. Long-term users of soft contact lenses are not subject to the uncorrected far vision standard. Corrected far vision is set at 20/40, and the color vision requirement is for red/green/amber (yellow), consistent with Department of Transportation regulations for commercial driving and the need for safe and efficient function under expected firefighting conditions. Near visual acuity is set at reading printed material that is comparable to size 5 font, such as "This note is legal tender...public and private debts" found on all bills of American currency or other pre-printed material, with or without corrective lenses. Peripheral vision is set as 85° laterally, which is generally considered to be normal. Some vision conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must be able to see well enough to safely and efficiently carry out the requirements of the job. This requires binocular vision, far visual acuity, depth perception, peripheral vision, and color vision, which may be demonstrated by:

- Far visual acuity uncorrected of at least 20/100 in each eye for wearers of hard contacts or spectacles; and
- Far visual acuity of at least 20/40 in each eye corrected (if necessary) with contact lenses or spectacles; and
- Near visual acuity of the ability to read printed material that is comparable to size 5 font, such as "This note is legal tender...public and private debts" found on all bills of American currency or other pre-printed material, with or without corrective lenses; and

- Color vision sufficient to distinguish at least red, green, and amber (yellow); and
- Peripheral vision of at least 85° laterally in each eye; and
- Normal depth perception; and
- No ophthalmologic condition that would increase ophthalmic sensitivity to bright light, fumes, or airborne particulates, or susceptibility to sudden incapacitation.

Note: Contact lenses and spectacles are acceptable for correction of visual acuity, but the user must be able to demonstrate that the corrective device(s) can be worn safely and for extended periods of time without significant maintenance, as well as being worn with any necessary personal protective equipment. Successful users of long-wear soft contact lenses are not required to meet the “uncorrected” vision guideline.

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **CHRONIC CONJUNCTIVITIS**
2. **CORNEAL ULCERS** This condition must be treated and cleared by an Ophthalmologist before a medical clearance can be granted.
3. **RETINAL DETACHMENT**
4. **NIGHT BLINDNESS**
5. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

**HEAD, NOSE, MOUTH, THROAT AND NECK STANDARD**

*The HEAD, NOSE, MOUTH, THROAT AND NECK standard relates (A) the firefighter’s need to be able to move the head without restriction, breath freely, wear personal protective equipment, and communicate clearly with (B) the essential functions and work conditions of a wildland firefighter, including working on small and large teams, flying in helicopters and fixed wing aircraft, and fighting fire under conditions that may include high (and changing) altitudes, allergens, varied climates, and isolated and remote sites. Some head, nose, mouth, throat, and neck conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have structures and functions of the head, nose, mouth, throat, and neck that are sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the head, nose, mouth, throat, and neck that is within the range of normal variation, including:
  - normal flexion, extension, and rotation of the neck; and
  - open nasal and oral airways; and
  - unobstructed Eustachian tubes; and
  - no structural abnormalities that would prevent the normal use of a hard hat and protective eyewear; and
- Normal conversational speech; and
- No evidence by physical examination and medical history of head, nose, mouth, throat, or neck conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **MUTISM/APHONIA**
2. **NASAL POLYPS THAT SIGNIFICANTLY OBSTRUCT BREATHING**
3. **RESTRICTED RANGE OF MOTION IN THE NECK**
4. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

**HEARING STANDARD**

*The HEARING standard relates (A) the firefighter's need to hear verbal communications and both natural and manmade warning sounds with (B) the essential functions and work conditions of a wildland firefighter, including working on small and large teams, driving, rapid pull out to safety zones, and providing rescue or evacuation assistance under conditions that may include isolated and remote sites, falling rocks and trees, trucks and other large equipment. The hearing standard is set at an average threshold of no greater than 40 dB at 500, 1000, 2000, and 3,000 Hz in each ear, consistent with the DOT regulations for commercial drivers. This level is more lenient than that allowed by the NPFA 1582 standards (30 dB average threshold at these frequencies), or what is considered to be "normal" hearing (25 dB), but is felt to provide a reasonable hearing threshold level where louder than normal communications may be expected. Hearing aides are not permitted in meeting this standard, due both to the limitation in directional hearing afforded by hearing aids, and to the risk of dislodging of a hearing aid during critical or emergency periods when hearing must be acute. Some ear and hearing conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must be able to hear well enough to safely and efficiently carry out the requirements of the job. This requires binaural hearing (to localize sounds) and auditory acuity, which may be demonstrated by:

- A current pure tone, air conduction audiogram, using equipment and a test setting which meet the standards of the American National Standards Institute (see 29 CFR 1910.95); and
- Documentation of hearing thresholds of no greater than 40 dB at 500, 1000, 2000, and 3000 Hertz in each ear; and
- No evidence by physical examination and medical history of ear conditions (external, middle, or internal) likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job.

Note: The use of a hearing aid(s) to meet this standard is *not* permitted.

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **MENIERE’S DISEASE**
2. **ACOUSTIC NEUROMA**
3. **OTOSCLEROSIS**
4. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

**DERMATOLOGY STANDARD**

*The DERMATOLOGY standard relates (A) the firefighter’s need for intact and healthy skin with (B) the essential functions and work conditions of a wildland firefighter, including use of personal protective equipment, extensive walking and climbing, under conditions that may include highly variable climates, extreme ultraviolet light exposure, extreme heat, allergens, and isolated or remote sites. Some dermatologic conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have skin that is sufficient for the individual to safely and efficiently carry out the requirements of the function. This may be demonstrated by:

- A physical exam of the skin that is within the range of normal variation; and
- No evidence by physical examination and medical history of dermatologic conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).



**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

- 1. ALBINISM**
- 2. KAPOSI'S SARCOMA**
- 3. CHRONIC DERMATITIS**
4. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

**VASCULAR SYSTEM STANDARD**

*The VASCULAR SYSTEM standard relates (A) the firefighter's need for a healthy vascular system (including a lack of phlebitis, thrombosis, venous stasis, or arterial insufficiency) with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, driving or riding for extensive periods, flying in helicopters and fixed wing aircraft, and extensive walking and climbing under conditions that may include isolated or remote sites, and long work assignments. Some vascular conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have a vascular system that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the vasculature of the upper and lower extremities that is within the range of normal variation, including:
  - no evidence of phlebitis or thrombosis; and
  - no evidence of venous stasis; and
  - no evidence of arterial insufficiency; and
- No evidence by physical examination and medical history of peripheral vasculature conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

- 1. CHRONIC VENOUS INSUFFICIENCY**
- 2. DEEP VEIN THROMBOSIS**
- 3. CHRONIC THROMBOPHLEBITIS**
- 4. INTERMITTENT CLAUDICATION**

5. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

### **CARDIAC STANDARD**

*The CARDIAC standard relates (A) the firefighter's need for a healthy cardiovascular system and a low risk of sudden or subtle incapacitation with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, lifting and carrying heavy loads, extensive walking and climbing, and rapid pull out to safety zones under conditions that may include very steep terrain, isolated and remote sites, extreme heat, dehydration, and long work assignments. Some cardiac conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions. The standard for blood pressure was set at below 140/90 (with or without medication). At or above this level is considered to be hypertension (high blood pressure), a condition associated with increasing risk of cardiovascular morbidity and mortality.*

The applicant/incumbent must have a cardiovascular system that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the cardiovascular system that is within the range of normal variation, including:
  - blood pressure of less than 140 mmHg systolic and 90 mmHg diastolic; and
  - a normal baseline electrocardiogram (minor, asymptomatic arrhythmias may be acceptable); and
  - no pitting edema in the lower extremities, and
  - normal cardiac exam.
- No evidence by physical examination and medical history of cardiovascular conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

### **CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **PACEMAKERS or PROSTHETIC VALVES** may be disqualifying. Documentation from the individual's cardiologist, stating that the individual is stable and can safely carry out the specified requirements of the function, under the specified conditions, will be necessary before a clearance can be granted.
2. **CORONARY ARTERY DISEASE** A successful completion of an exercise stress test, or documentation from the individual's cardiologist acknowledging the requirements of the function and the work conditions, may allow a clearance despite this diagnosis.

3. **HYPERTENSION** that cannot be controlled to a level less than 140/90 or requires the use of any medication that affects the ability of the individual to safely and effectively carry out the requirements of the function, may be disqualifying.
4. **LEFT BUNDLE BRANCH BLOCK.**
5. **MYOCARDITIS/ ENDOCARDITIS/ PERICARDITIS** (Active or recently resolved cases).
6. History of **MYOCARDIAL INFARCTION**. Documentation from the individual's cardiologist, stating that the individual is stable and can safely carry out the specified requirements of the function, under the specified conditions, will be necessary before a clearance can be considered.
7. **VALVULAR HEART DISEASE** such as mitral valve stenosis, symptomatic mitral valve regurgitation, aortic stenosis etc. Exceptions may be granted depending upon the current clinical findings and diagnostic studies.
8. **DYSRHYTHMIAS**: such as ventricular tachycardia or fibrillation, Wolff-Parkinson-White syndrome, and Paroxysmal Atrial Tachycardia, with or without block.
9. **ANGINA PECTORIS** or chest pain of unknown etiology.
10. **CARDIOMYOPATHY** from any cause.
11. **CONGESTIVE HEART FAILURE**
12. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

### **CHEST AND RESPIRATORY SYSTEM STANDARD**

*The CHEST AND RESPIRATORY SYSTEM standard relates (A) the firefighter's need for a healthy respiratory system and residual aerobic capacity with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, carrying heavy loads, and extensive walking and climbing under conditions that may include very steep terrain, high altitudes, airborne particulates, and allergens. Some chest and respiratory conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions. The stated standards of 70% of predicted values for forced vital capacity (FVC), forced expiratory volume at 1 second (FEV<sub>1</sub>), and the ratio of FEV<sub>1</sub>/FVC are intended as screens for further evaluation, not mandatory values. The requirement for agency review when inhalers are used is based on both the general incompatibility of inhalers and high heat or fire (according to guidance from inhaler manufacturers) and concern regarding the degree of respiratory sensitivity an individual may bring to a setting of high irritant exposure.*

The applicant/incumbent must have a respiratory system that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the respiratory system that is within the range of normal variation; and
- A pulmonary function test (baseline exam) showing:
  - forced vital capacity (FVC) of at least 70% of the predicted value; and
  - forced expiratory volume at 1 second (FEV1) of at least 70% of the predicted value; and
  - the ratio FEV1/FVC of at least 70%; and
  - No evidence by physical examination and medical history of respiratory conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

Note: The requirement to use an inhaler (such as for asthma) requires agency review.

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **SIGNIFICANT OBSTRUCTIVE OR RESTRICTIVE PULMONARY DISEASE.**
2. **ASTHMA** must be considered on a case-by-case basis.
3. **ACTIVE PULMONARY TUBERCULOSIS (TB):** A history of confirmed TB that has been treated for longer than 6 months is acceptable provided that documentation supports the treatment history.
4. **HISTORY OF CHRONIC BRONCHITIS ASSOCIATED WITH DECREASED PULMONARY FUNCTION**
5. **LUNG ABSCESS**
6. **SPONTANEOUS PNEUMOTHORAX** (if recurrent)
7. **EMPHYSEMA** (if associated with impaired pulmonary function test results)
8. **SARCOIDOSIS** (if associated with an impaired pulmonary function test results)
9. **PULMONARY EMBOLISM**
10. **PULMONARY INFARCTION**
11. **PNEUMONECTOMY** (if associated with impaired pulmonary function)
12. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

## **ENDOCRINE AND METABOLIC SYSTEM STANDARD**

*The ENDOCRINE AND METABOLIC SYSTEM standard relates (A) the firefighter's need for normal body function and maintenance and a low risk of sudden or subtle incapacitation with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion under conditions that may include isolated and remote sites, hunger and irregular meals, dehydration, irregular hours, and long assignments. Some endocrine and metabolic conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

Any excess or deficiency in hormonal production can produce metabolic disturbances affecting weight, stress adaptation, energy production, and a variety of symptoms or pathology such as elevated blood pressure, weakness, fatigue and collapse. The applicant/incumbent must have endocrine and metabolic functions that are sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the skin, thyroid, and eyes that is within the range of normal variation; and
- Normal fasting blood sugar level; and
- Normal blood chemistry results; and
- No evidence by physical examination (including laboratory testing) and history of endocrine/metabolic conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

### **CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **ADRENAL DYSFUNCTION** (in the form of Addison's Disease or Cushing's Syndrome).
2. **THYROID DISEASE** (uncontrolled or associated with current complications).
3. **PITUITARY DYSFUNCTION**
4. **INSULIN DEPENDENT DIABETES MELLITUS**
5. **HYPERGLYCEMIA** without a history of diabetes will require additional tests, including, but not limited to a glycohemoglobin (or hemoglobin A<sub>1</sub>C) and fasting glucose before a final medical determination is made.
6. **DIABETES INSIPIDUS.**
7. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

## **THE CONDITION OF PREGNANCY**

*The CONDITION OF PREGNANCY does not become an issue under most circumstances since the condition is not a disability and is a time-limited condition. If a female applicant or incumbent raises the issue of pregnancy as the basis for a request for a special benefit, a change in duty status, or job restrictions, then justification and clarifying information for that request must be provided by the woman's obstetrician or primary care physician, along with the estimated time period the special conditions are expected to apply.*

If a female applicant or incumbent raises the issue of pregnancy as the basis for a request for a special benefit, a change in duty status, or job restrictions, then justification and clarifying information for that request must be provided by the woman's obstetrician or primary care physician, along with the estimated time period the special conditions are expected to apply.

## **HEMATOPOIETIC SYSTEM STANDARD**

*The HEMATOPOIETIC SYSTEM standard relates (A) the firefighter's need for a healthy blood and blood producing system and a low risk of sudden or subtle incapacitation with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion under conditions that may include high altitudes, isolated and remote sites, extreme heat, close quarters with large numbers of other workers, dehydration, and long assignments. Some blood and blood producing conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have a hematopoietic (blood and blood-producing) system that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the skin that is within the range of normal variation; and
- A complete blood count (including hemoglobin, hematocrit, platelets, and white blood count, with differential) that is within the normal range; and
- No evidence by physical examination (including laboratory testing) and medical history of hematopoietic conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

### **CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

#### **1. ANEMIA – Generally considered as:**

- hematocrit of less than 39% and a hemoglobin of less than 13.6 gm/dl for males
- hematocrit of less than 33% and a hemoglobin of 12 gm/dl for females

- (If anemia does exist but physical performance levels and pulmonary function are normal, this condition may be acceptable.)

2. **HEMOPHILIA**

3. **CHRONIC LYMPHANGITIS**

4. **THROMBOCYTOPENIA OR CLOTTING DISORDER**

5. **SICKLE CELL ANEMIA**

6. **SPLENOMEGALY**

7. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

**MUSCULOSKELETAL SYSTEM STANDARD**

*The MUSCULOSKELETAL SYSTEM standard relates (A) the firefighter's need for strength, flexibility, range of motion, and joint stability with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, extensive walking and climbing, kneeling and stooping, lifting and carrying heavy loads, and rapid pull out to safety zones under conditions that may include rocky, loose, or muddy ground surfaces, thick vegetation, wet leaves and grass, and falling rocks and trees. Some musculoskeletal conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have a musculoskeletal system that is sufficient for the individual to safely and efficiently carry out the functional requirements of the job. This may be demonstrated by:

- A physical exam of the upper and lower extremities, neck, and back that is within the range of normal variation for strength, flexibility, range of motion, and joint stability; and
- No evidence by physical examination and medical history of musculoskeletal conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

Note: For individuals who require the use of a prosthetic device, the examinee will have to provide ***for agency review*** documentation from his/her surgeon or physician that the individual (and, if applicable, his/her prosthetic device) is considered to be fully cleared for the essential functions of the job.

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **ARTHRITIS** (any etiology) if there is a limitation of major joint motion, and/or pain that prevents the full range of required performance activities.

2. **AMPUTATIONS OF AN EXTREMITY OR DIGITS** will be evaluated on a case-by-case basis.
3. **ANKYLOSING SPONDYLITIS.**
4. **MUSCULAR DYSTROPHY**
5. **LUMBOSACRAL INSTABILITY:** pain or limitations of flexibility and strength causing an inability to stand, bend, stoop, carry heavy objects or sit for long periods of time.
6. **SCIATICA OR OTHER NEUROPATHIES**
7. **CHRONIC LOW BACK PAIN** (by medical history) without demonstrable pathology must be considered on a case-by-case basis. Each case will be reviewed in context of the original history or etiology, the response to therapeutic regimes, frequency of recurrence, exacerbating factors, and lengths of disability associated with the recurrences combined with the current clinical presentation.
8. A history of a **CHRONIC SPRAIN OR STRAIN OF THE NECK** limiting mobility or causing recurring cephalgia (headaches).
9. Any evidence of a **CERVICAL NEUROPATHY**, including numbness, tingling or loss of motor strength in the upper extremities.
10. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

### **CENTRAL AND PERIPHERAL NERVOUS SYSTEM AND VESTIBULAR SYSTEM STANDARD**

*The CENTRAL AND PERIPHERAL NERVOUS SYSTEM and VESTIBULAR SYSTEM standards relate (A) the firefighter's need for balance, sensation of surroundings and self, and a low risk of sudden or subtle incapacitation with (B) the essential functions and work conditions of a wildland firefighter, including use of hand and power tools, flying in helicopters and fixed wing aircraft, and extensive walking and climbing under conditions that may include isolated and remote sites, very steep terrain, rocky, loose, or muddy ground surfaces, wet leaves and grass, heights, open holes and drop offs, falling rocks and trees, trucks and other large equipment, and high heat. Some sensory conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have a nervous system that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam of the cranial and peripheral nerves and the vestibular and cerebellar system that is within the range of normal variation, including:



- intact cranial nerves, I-XII; and
- normal vibratory sense in the hands and feet; and
- normal proprioception of the major joints; and
- normal sensation of hot and cold in the hands and feet; and
- normal sense of touch in the hands and feet; and
- normal reflexes of the upper and lower extremities; and
- normal balance (e.g., heel-toe walk; Romberg; balance on one foot); and
- Normal basic mental status evaluation (e.g., person, place, time, current events); and
- No evidence by physical examination and medical history of nervous, cerebellar, or vestibular system conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **ATAXIA** from any etiology
2. **VESTIBULAR NEURONITIS**
3. **VERTIGO & PAROXYSMAL FUNCTIONAL VERTIGO**
4. **EPILEPSY\***
5. **MULTIPLE SCLEROSIS**
6. **MUSCULAR DYSTROPHY**
7. **NARCOLEPSY**
8. **NEUROFIBROMATOSIS**
9. **PARKINSON'S DISEASE**
10. **CEREBROVASCULAR ACCIDENT (STROKE)**
11. **TRANSIENT ISCHEMIC ATTACKS**
12. **SENSORY DYSFUNCTION** (smell, touch, taste, proprioception)
13. **MIGRAINE**

#### 14. CEPHALGIA

#### 15. SEIZURE DISORDERS\*

16. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

\* In order to be considered for a medical clearance to perform arduous duty wildland firefighting, an individual with a history of one or more seizures must provide the following written information from a physician who is board certified in neurology. This information is to be provided on the physician's own letterhead, and must include:

1. the physician's printed or typed name (i.e., legible), signature, and date;
2. confirmation that the physician has reviewed and is familiar with the Essential Functions and Work Conditions of a Wildland Firefighter (the job table developed for arduous duty wildland firefighters);
3. a summary of all current medications, along with any known side effects experienced or expected to be experienced by the firefighter;
4. the known or suspected triggers or factors that may lead to seizure activity for the firefighter;
5. the results of the most recent diagnostic testing, such as an EEG,
6. the firefighter's overall medical prognosis, related to his/her seizure disorder; and
7. the estimated risk or likelihood of future seizure activity the firefighter might experience, of any degree of severity.

#### **GASTROINTESTINAL SYSTEM STANDARD**

*The GASTROINTESTINAL SYSTEM standard relates (A) the firefighter's need to be able to consume adequate nutrition and calories, and to have a low risk of sudden or subtle incapacitation, with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, driving or riding for many hours, and flying in helicopters and fixed wing aircraft under conditions that may include isolated or remote sites, close quarters with large number of other workers, hunger and irregular meals, and long assignments. Some gastrointestinal conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have a gastrointestinal tract that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A physical exam and evaluation of the gastrointestinal tract that is within the range of normal variation; and
- Normal liver function and blood chemistry laboratory tests; and
- No evidence by physical examination (including laboratory testing) and medical history of gastrointestinal conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

**CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **ACUTE AND CHRONIC ACTIVE HEPATITIS**
2. **ACUTE VIRAL HEPATITIS** (after being asymptomatic for three (3) months an applicant may be re-evaluated).
3. **CROHN'S DISEASE / ULCERATIVE COLITIS / REGIONAL ENTERITIS/SPRUE or IRRITABLE BOWEL SYNDROME** (these conditions, controlled with surgical and/or medication treatments, will be reviewed on a case-by-case basis).
4. **COLOSTOMIES**, unless the precipitating condition has stabilized and the applicant/incumbent demonstrates successful management of the colostomy, considering the requirements of the function and the work conditions.
5. **ILEITIS**, either recurrent or chronic.
6. **CHOLECYSTITIS** (chronic or recurring).
7. **DIVERTICULITIS** (symptomatic).
8. **CIRRHOSIS OF THE LIVER** (depending upon the degree of severity and the etiology).
9. **INTESTINAL OBSTRUCTION** from any cause.
10. **ESOPHAGEAL VARICES**
11. **PANCREATITIS**
12. **UNTREATED (OR UNSUCCESSFULLY TREATED) INGUINAL, INCISIONAL OR VENTRAL HERNIA** that is associated with symptoms
13. **ACTIVE GASTRIC OR DUODENAL ULCER**

14. **GASTRIC OR BOWEL RESECTION**, if there is any evidence (historical or physical) of pain, hemorrhage, fainting episodes or dietary restrictions that could interfere with the performance of the job.

15. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.

### **GENITOURINARY SYSTEM STANDARD**

*The GENITOURINARY SYSTEM standard relates (A) the firefighter's need for a healthy genitourinary system and a low risk of sudden or subtle incapacitation with (B) the essential functions and work conditions of a wildland firefighter, including arduous exertion, driving or riding for long periods, and flying in helicopters and fixed wing aircraft under conditions that may include isolated or remote sites, hunger and irregular meals, dehydration, and long assignments. Some genitourinary conditions, including those listed in the standards, may not be compatible with safe and efficient performance of wildland firefighter duties under these conditions.*

The applicant/incumbent must have a genitourinary system that is sufficient for the individual to safely and efficiently carry out the requirements of the job. This may be demonstrated by:

- A normal clean catch urinalysis; and
- No evidence by physical examination and medical history of genitourinary conditions likely to present a safety risk or to worsen as a result of carrying out the essential functions of the job (see page 2).

### **CONDITIONS WHICH MAY RESULT IN DISQUALIFICATION INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING EXAMPLES:**

1. **POLYCYSTIC KIDNEY DISEASE**
2. **ACUTE or CHRONIC RENAL FAILURE**
3. **NEPHROTIC SYNDROME**
4. **SYMPTOMATIC URINARY CALCULI**
5. **NEUROGENIC BLADDER**
6. **HISTORY OF RENAL VEIN THROMBOSIS**
7. **UNCORRECTED OBSTRUCTIVE UROPATHIES**
8. **RENAL TOXICITY FROM ANY CAUSE**
9. Any other condition not otherwise listed that may adversely affect safe and efficient job performance will be evaluated on a case-by-case basis.