



Transportation  
Security  
Administration

# Medical Guidelines

## Transportation Security Specialist - Explosive Detection Canine Handler

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### Approval

Signed

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# Medical Guidelines

## for Transportation Security Administration Explosive Detection Canine Handlers

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### Authority:

The Aviation and Transportation Security Act established the authority of the TSA Administrator to determine physical and psychological requirements for the security-screening workforce.

### Mission Impact:

TSA developed medical guidelines for clinical evaluations and fitness for duty determinations to “ensure that Federal screeners are able to provide the best security possible.”

The evolution of security operations from process-driven procedural-based security to risk-based intelligence driven security affirms the need for a resilient screening workforce whose readiness and fitness is measurable, demonstrable, and enforceable.

### Purpose:

The medical guidelines provide a responsive connection between a medical condition and a predictable degree of job performance, conduct and mission readiness. The medical guidelines are designed to reflect the underlying correlation between recognized medical conditions and safe and effective job performance. The medical guidelines apply to Explosive Detection Canine Handlers.

### Medical Evaluation: (Applies to Applicants only)

The Medical Guidelines (Guidelines) are used to assess an applicant’s ability to perform job-related functions based on any medical/physical conditions presented by the applicant. It is recommended that an applicant review the Guidelines prior to taking the medical assessment. The applicant may discuss the Guidelines with his/her treating health care provider and provide related documentation at the time the medical assessment is scheduled. After the scheduled medical examination is completed, if TSA requires the applicant to undergo a specific follow-up medical examination at the post offer stage of the hiring process before determining whether the applicant is medically qualified for the position, TSA will pay for all costs associated with the examination.

If, after conducting an individualized assessment, the Agency determines that the applicant is medically disqualified, the applicant will be advised of the disqualification and that the application process has ended. The applicant may appeal this determination by notifying the evaluating physician and providing any documentation to support the appeal. The applicant will be considered for future employment in the event the appeal process results in a determination that the individual is medically cleared.

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## 1. Medical Guidelines

### 1.1. Eyes and vision

Distant visual acuity, corrected or uncorrected: 20/30 or better binocularly, 20/200 or better in the worse eye

Near visual acuity (at 12 inches), corrected or uncorrected: 20/40 or better binocularly

Field of vision: Provide restrictions if the horizontal meridian is less than 140 degrees binocularly or less than 60 degrees temporally in either eye

Provide restrictions for monocular vision

Provide restrictions for night blindness

Color vision: Provide restrictions if unable to distinguish colors red, green and yellow

Refractive surgery: Provide restrictions if any of the following criteria are present:

- significant haze (+2 or less is acceptable)
- glare, halos, starbursts, or ghosting
- microstriae that affect vision
- dryness that affects vision
- loose epithelium, diffuse lamellar keratitis, or active infection
- unstable refraction (more than ½ diopter of change between documented refractions at least 2 weeks apart)
- using steroid eye drops

### 1.2. Hearing

Provide restrictions if, on audiometric testing, the pure-tone threshold in the better ear is greater than an average of 40 dB over 500, 1,000, and 2000 Hz with or without a hearing aid

Additional testing with speech recognition in ambient noise is needed if a medical fitness for duty determination is requested based on inadequate hearing performance and the employee meets the hearing requirements

Hearing aids are acceptable if they allow localizing sound sources

### 1.3. Nose, pharynx, larynx and trachea

Provide restrictions for aphonia

Provide restrictions for tracheostomy if it limits the ability to communicate effectively

#### 1.4. Lung diseases

##### ***Asthma***

Provide restrictions if FEV<sub>1</sub> < 60% of predicted value

##### ***COPD***

Provide restrictions if FEV<sub>1</sub> < 60% of predicted value

##### ***Other conditions***

Provide restrictions for current pneumothorax

Provide restrictions for active hemoptysis

Provide restrictions for pulmonary hypertension

Provide restrictions for contagious tuberculosis

Provide restrictions if pulse oximetry < 90% on room air at rest

Provide restrictions if pulse oximetry < 90% on room air with exertion

#### 1.5. Cardiovascular diseases

##### ***Hypertension***

Provide restrictions for stage II hypertension (SBP 160-179 or DBP 100-109) or stage III hypertension (SBP > 180 or DBP > 110)

Provide restriction for any end-organ damage caused by hypertension (including stroke, coronary artery disease, left ventricular hypertrophy, atrial fibrillation, heart failure, nephropathy, retinopathy or aortic aneurysm), unless a normal exercise stress test is obtained at a level of at least 7.5 METs

Provide restrictions if the 10-year risk of ASCVD (atherosclerotic cardiovascular disease) is 10% or more on the American Heart Association ASCVD calculator (available at <http://tools.acc.org/ASCVD-Risk-Estimator>), unless a normal exercise stress test is obtained at a level of at least 7.5 METs

Evaluate, on an annual basis over the age of 40, the 10-year risk of ASCVD (atherosclerotic cardiovascular disease) using the American Heart Association ASCVD calculator (available at <http://tools.acc.org/ASCVD-Risk-Estimator>)

##### ***Coronary artery disease***

Provide restrictions for coronary artery disease (including myocardial infarction) unless all the following conditions are met:

- No angina
- Left ventricle ejection fraction of 40% or more

- No ischemia on imaging stress test that reaches a level of at least 7.5 METs
- Stable regimen of cardiovascular medications for the past 30 days
- Treatment of modifiable risk factors
- Recovery period: one month after percutaneous coronary intervention, 3 months after myocardial infarction, 3 months after coronary artery bypass graft surgery
- Compliance with treatment

### ***Heart failure***

Provide restrictions for heart failure unless all the following conditions are met:

- Compliance with treatment
- Left ventricle ejection fraction of 40% or more
- No ischemia on imaging stress test that reaches a level of at least 7.5 METs
- NYHA Functional Classification of I

### ***Hypertrophic cardiomyopathy***

Provide restrictions for hypertrophic cardiomyopathy unless all the following conditions are met:

- Maximal left ventricle wall thickness < 30 mm
- No history of unexplained syncope
- No history of cardiac arrest
- No history of sustained or non-sustained ventricular tachycardia
- Left ventricle ejection fraction of 40% or more
- No abnormal exercise systolic blood pressure during exercise stress test [defined as either a failure to increase by at least 20 mm Hg or a drop of at least 20 mm Hg during effort]

### ***Dilated cardiomyopathy***

Provide restrictions for dilated cardiomyopathy unless all the following conditions are met:

- No symptoms of heart failure
- Left ventricle ejection fraction of 40% or more
- No ischemia on imaging stress test that reaches a level of at least 7.5 METs
- No history of unexplained syncope
- No history of cardiac arrest
- No history of spontaneous ventricular tachycardia

## ***Arrhythmias***

Provide restrictions for atrial fibrillation or atrial flutter unless all the following conditions are met:

- Reversible conditions (such as hyperthyroidism) have been ruled out
- No structural heart disease on echocardiogram
- Left ventricle ejection fraction of 40% or more
- No ischemia on imaging stress test that reaches a level of at least 7.5 METs
- Appropriate rate control

After an ablation for atrial fibrillation or atrial flutter: Return to unrestricted duty 4 weeks after ablation if asymptomatic

Provide restrictions for supraventricular tachycardia unless all the following conditions are met:

- Reversible conditions (such as hyperthyroidism) have been ruled out
- No structural heart disease on echocardiogram
- Left ventricle ejection fraction of 40% or more
- Episodes last less than 10 seconds after successful ablation

After an ablation for supraventricular tachycardia: Return to unrestricted duty 4 weeks after ablation if asymptomatic

Provide restrictions for Wolff-Parkinson-White Syndrome unless all the following conditions are met:

- Appropriate rate control
- No structural heart disease on echocardiogram
- Left ventricle ejection fraction of 40% or more

Provide restrictions for ventricular tachycardia except in the following cases:

- Successful ablation to treat the ventricular tachycardia (return to unrestricted duty after 4 weeks, with normal electrophysiological study)
- Non-sustained monomorphic ventricular tachycardia with rate less than 150 beats per minute and no symptoms

Provide restrictions for history of ventricular fibrillation

## ***Valvular heart disease***

Provide restrictions for valvular diseases unless all the following conditions are met:

- No symptoms of heart failure
- No angina

- No syncope
- Left ventricle ejection fraction of 40% or more
- No signs or symptoms of arterial emboli
- Compliance with treatment

### ***Other conditions***

Provide restrictions for arrhythmogenic right ventricular cardiomyopathy until electrophysiology consultation has been obtained

Provide restrictions for Brugada syndrome until electrophysiology consultation has been obtained

Provide restrictions for long QT syndrome until electrophysiology consultation has been obtained

Provide restrictions for treatment with an automatic implantable cardiac defibrillator

Provide restrictions for peripheral vascular disease resulting in symptomatic claudication

Provide restrictions for thoracic aortic aneurysm > 3.5 cm unless all the following conditions are met:

- Surgical consultation has been obtained
- Compliance with treatment

Provide restrictions for abdominal aortic aneurysm > 4 cm unless all the following conditions are met:

- Surgical consultation has been obtained
- Compliance with treatment

Provide restrictions for carotid artery stenosis > 60%

Provide restrictions for syncope within the past 6 months unless a specific cause has been found and successfully treated

An individual does not need restrictions for treatment with a pacemaker

### **1.6. Abdominal organs**

Provide restrictions for symptomatic ventral, inguinal or femoral hernia unless all the following conditions are met:

- Surgical consultation has been obtained
- Compliance with treatment
- Employee is cleared by the surgeon to perform the essential job functions (e.g., lifting 80 pounds)

### **1.7. Renal diseases**

Provide restrictions if treatment with hemodialysis or peritoneal dialysis

Provide restrictions if stage 5 or stage 4 chronic kidney disease (GFR < 30 ml/min)

## 1.8. Musculoskeletal diseases

### ***Amputations***

Provide restrictions for amputation of an upper extremity proximal to the metacarpals

Assess amputations and prostheses to ensure performance of essential job functions

### ***Upper extremity conditions***

Provide restrictions for upper extremity conditions unless all the essential job functions can be performed. Specifically, lifting and reaching overhead should be assessed

Provide restrictions for a minimum of 3 months after joint replacement surgery

Provide restrictions after surgery unless performance of essential job functions can be demonstrated during therapy

### ***Lower extremity conditions***

Provide restrictions for lower extremity conditions unless all the essential job functions can be performed. Specifically, lifting, squatting and bending should be assessed

Provide restrictions for a minimum of 3 months after joint replacement surgery

Provide restrictions after surgery unless performance of essential job functions can be demonstrated during therapy

### ***Spine***

Provide restrictions for spine conditions causing motor deficit that interferes with essential job functions

Provide restrictions for spine conditions causing sensory deficit that interferes with essential job functions

Provide restrictions for spine conditions leading to limited range of motion that interferes with essential job functions

Provide restrictions for a minimum of 3 months after lumbar fusion surgery

Provide restrictions after surgery unless performance of essential job functions can be demonstrated during therapy

### ***Other issues***

Provide restrictions if an assistive device, such as a cane or a walker, is required to stand or walk

Braces and splints are allowed if all the essential job functions can be performed

## 1.9. Neurological disorders

### ***1.9.1. Cerebrovascular accidents***

Provide restrictions for 12 months after transient ischemic attack

Provide restrictions for 12 months after ischemic stroke (longer restrictions if risk of seizure recurrence is above 1% per year or if physical or cognitive inability to perform essential job functions)

Provide restrictions for 12 months after subarachnoid hemorrhage (longer restrictions if risk of seizure recurrence is above 1% per year or if physical or cognitive inability to perform essential job functions)

Provide restrictions for 12 months after hemorrhagic stroke (longer restrictions if risk of seizure recurrence is above 1% per year or if physical or cognitive inability to perform essential job functions)

Provide restrictions for decreased sensation or weakness that interferes with essential job functions after a cerebrovascular accident

### **1.9.2. Seizure disorders**

Provide restrictions after single unprovoked seizure unless all the following conditions are met:

- Evaluation by neurologist
- Normal brain MRI
- Normal EEG
- Seizure-free for the most recent consecutive 5 years

Provide restrictions after provoked seizure unless all the following conditions are met:

- The cause of the seizure has been successfully treated
- The risk of recurrence is low (i.e., not higher than the risk of seizure in the general population)
- Evaluation by neurologist

Provide restrictions for epilepsy or after provoked seizure with high risk of recurrence unless all the following conditions are met:

- Evaluation by neurologist with brain MRI and EEG
- Seizure-free for the most recent consecutive 10 years
- Currently on anti-seizure medications or not on anti-seizure medications for the most recent 5 consecutive years

### **1.9.3. Other neurological disorders**

Provide restrictions for 12 months after surgery of the central nervous system (longer restrictions if risk of seizure recurrence is above 1% per year or if physical or cognitive inability to perform essential job functions)

Provide restrictions for vertigo within the past 30 days

Provide restrictions for Meniere's disease

Provide restrictions for current ataxia

Provide restrictions for paralysis of a limb

Provide restrictions for cognitive impairment

Provide restrictions for dementia

Provide restrictions for malignancies of the central nervous system

Provide restrictions for amyotrophic lateral sclerosis

Provide restrictions for multiple sclerosis unless all the following conditions are met:

- No relapse within previous 3 years
- No evidence of chronic progression
- No cognitive impairment
- No mood disorder
- Vision guidelines are met

Provide restrictions for Parkinson’s disease unless all the following conditions are met:

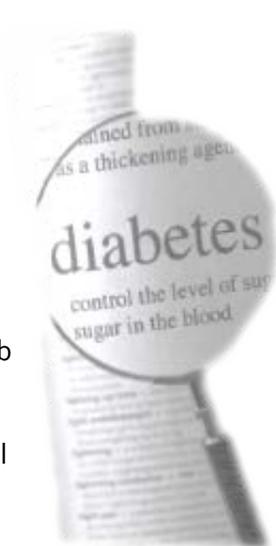
- Stage 1 Parkinson’s disease
- Tremors and muscle rigidity are not interfering with performance of essential job functions
- No cognitive impairment
- No mood disorder
- No orthostatic hypotension
- No disqualifying side effects from treatment

### **1.10. Diabetes**

Provide restrictions for diabetes unless all the following conditions are met:

- Compliance with treatment
- No episode of severe hypoglycemia (defined as an event requiring the assistance of others) in the past 12 months

- No more than 2 episode of severe hypoglycemia in the past 3 years
- Completion of diabetes education
- Evidence of ongoing self-monitoring of blood glucose
- No blood glucose of less than 40 mg/dl within the past 14 days
- No symptomatic orthostatic hypotension
- No peripheral neuropathy that interferes with performance of essential job functions
- No chronic kidney disease with a GFR less than 45 ml/min, unless a normal exercise stress test is obtained at a level of at least 7.5 METs
- Regular dilated eye exam (every other year without retinopathy, at least every year after diagnosis of retinopathy)
- 10-year risk of ASCVD (atherosclerotic cardiovascular disease) is less than 10% on the American Heart Association ASCVD calculator (available at <http://tools.acc.org/ASCVD-Risk-Estimator/>)
- Annual ASCVD risk assessment using the American Heart Association ASCVD calculator



Provide restrictions for type 1 diabetes unless on a stable basal/bolus regimen or insulin pump for the past 6 months

Provide restrictions for type 2 diabetes with insulin treatment unless on a stable insulin regimen for the past 3 months

Provide restrictions for type 2 diabetes without insulin treatment unless on a stable medication regimen for the past 30 days

### 1.11. Sleep disorders

#### 1.11.1. Idiopathic hypersomnia

Provide restrictions for idiopathic hypersomnia with persistent excessive daytime sleepiness despite medical treatment

#### 1.11.2. Narcolepsy

Provide restrictions for narcolepsy with persistent excessive daytime sleepiness despite medical treatment

Provide restrictions for narcolepsy with cataplexy

#### 1.11.3. Obstructive sleep apnea

Provide restrictions for obstructive sleep apnea if one of the following criteria is present:

- Excessive daytime sleepiness
- Observed performance impairment suspected to be due to somnolence

Restrictions for obstructive sleep apnea can be removed if all the following criteria are met:

- Successful treatment
- Documentation of compliance with CPAP treatment (defined as at least 4 hours per sleep session, 70% of sleep sessions) on an annual basis, or documentation of follow up sleep study with an oral appliance, or documentation of follow up sleep study after surgery
- No excessive daytime sleepiness

#### **1.11.4. Shift work disorder**

Provide restriction for shift work disorder (confirmed by a physician formally credentialed in sleep medicine) not adequately responding to medical management

### **1.12. Psychiatric disorders (DSM 5 terminology and criteria are used in these standards)**

#### **1.12.1. Anxiety disorder**

Provide restrictions for any anxiety disorder unless all the following conditions are met:

- No functional impairment in the past 2 months
- Compliance with treatment
- No disqualifying side effects from treatment
- Appropriate judgment and attention
- Treatment of comorbidities (including substance abuse and sleep disorders)
- No irritability
- No difficulty concentrating
- No phobia, unless successfully treated
- No social anxiety disorder, unless successfully treated
- No panic disorder, unless successfully treated

#### **1.12.2. Attention-deficit/hyperactivity disorder**

Provide restrictions for attention-deficit/hyperactivity disorder unless all the following conditions are met:

- No functional impairment in the past 2 months
- Compliance with treatment
- No disqualifying side effects from treatment
- Appropriate judgment and attention
- Treatment of comorbidities (including substance abuse and sleep disorders)

- No inattention, unless successfully treated

### **1.12.3. Bipolar disorder**

Provide restrictions for bipolar I disorder

Provide restrictions for any other bipolar disorder (including bipolar II disorder, cyclothymic disorder and unspecified bipolar disorder) unless all the following conditions are met:

- DSM-5 criteria for full remission are met
- No functional impairment in the past 2 months
- Compliance with treatment
- No disqualifying side effects from treatment
- Evaluation by a psychiatrist or by a licensed doctoral-level psychologist is required before return to work
- No cognitive impairment
- Appropriate judgment and attention
- Treatment of comorbidities (including substance abuse and sleep disorders)
- No personality disorder
- No psychotic features
- No hypomanic episode in the past 6 months
- No suicide attempt in the past 24 months
- No electroconvulsive therapy in the past 6 months
- No history of manic episode

### **1.12.4. Depressive disorder**

Provide restrictions for any depressive disorder unless all the following conditions are met:

- DSM-5 criteria for full remission are met
- No functional impairment in the past 2 months
- Compliance with treatment
- No disqualifying side effects from treatment
- Appropriate judgment and attention
- Treatment of comorbidities (including substance abuse and sleep disorders)
- No personality disorder

- No psychotic features
- No suicide attempt in the past 24 months
- No electroconvulsive therapy in the past 6 months

#### **1.12.5. Personality disorders**

Provide restrictions for antisocial personality disorder

Provide restrictions for borderline personality disorder

Provide restrictions for narcissistic personality disorder

#### **1.12.6. Posttraumatic stress disorder**

Provide restrictions for post-traumatic stress disorder unless all the following conditions are met:

- No functional impairment in the past 2 months
- Compliance with treatment
- No disqualifying side effects from treatment
- Appropriate judgment and attention
- Treatment of comorbidities (including substance abuse and sleep disorders)
- No irritable or aggressive behavior
- No reckless or self-destructive behavior
- No difficulty concentrating

#### **1.12.7. Psychosis**

Provide restrictions for brief psychotic disorder

Provide restrictions for delusional disorder

Provide restrictions for schizophreniform disorder

Provide restrictions for schizophrenia

Provide restrictions for schizoaffective disorder

Provide restrictions for psychotic disorder due to another medical condition or substance-induced unless all the following conditions are met:

- The psychotic symptoms have resolved
- The cause of the psychotic disorder has been successfully treated
- The risk of recurrence is low (i.e., not higher than the risk in the general population)
- Evaluation by a psychiatrist or by a licensed doctoral-level psychologist

### 1.12.8. Substance use disorder

Provide restrictions for substance use disorder unless all the following conditions are met:

- DSM-5 criteria for early remission are met
- Documented abstinence for a minimum of 3 months
- Completion of a substance use disorder treatment program
- Compliance with treatment
- No disqualifying side effects from treatment
- Evaluation and treatment by a substance abuse professional is required before return to work
- Appropriate judgment and attention
- Treatment of comorbidities
- No personality disorder

### 1.13. Medications

Provide restrictions if taking medications causing sedation, drowsiness, vision changes, or behavioral changes

Provide restrictions if taking barbiturates, benzodiazepines, opioids, or dronabinol

### 1.14. Miscellaneous issues

Provide restrictions if the annual risk of sudden incapacitation is 1% or more

Provide restrictions if an employee is not able to perform any of the essential job functions

## 2. Essential Job Functions

### 2.1. Physical tasks

Lift and carry up to 80 pounds for a continuous distance of 100 feet without assistance (to transport an injured canine) at waist or chest level

Push/pull 50 pounds

Control dog on leash

Walk continuously a minimum of 1.5 hours without a break

Stand continuously a minimum of 1.5 hours without a break

Walk for up to 8 hours per shift

Stand for up to 8 hours per shift

Sit continuously for up to 2 hours (driving, writing report, attend training)

Bend and touch the ground

Kneel and squat

Run (to follow assigned canine)

Ascend and descend steep stairs with canine

Ascend and descend ladders

Safely operate issued vehicle, under adverse weather conditions

Drive at night

Drive on air operations areas

Climb into/out of issued vehicle

Walk backwards on uneven terrain while controlling dog on leash

Look over the shoulder when walking backwards

Reach overhead

Work outdoors, under adverse weather conditions, including hot, warm and cold environments.

Work on raised platforms

Work near moving vehicles and aircraft

Handle explosives

Carry explosives in issued vehicle

Assist canine in medical emergency situations and administer first aid to canine

Feed, groom and exercise assigned canine

Clean kennel of assigned canine

Feel and manipulate small objects with hands (to unbuckle canine harness)

Throw canine reward and retrieve from canine

Move training aids

Maintain alertness and cognitive ability throughout the shift

Make decisions effectively in both crisis and routine situations

Maintain focus and awareness during an entire shift

Shift work: Work shifts lasting up to 12 hours and work different shifts (including night shift)



## 2.2. Communication tasks

Ability to vary voice in high and low pitch (to praise and correct canine)

Effectively communicate and interact with individuals

Comprehend written and oral instructions

Communicate by radio

Communicate by cell phone (voice call)

Write detailed incident reports

Take detailed field notes so reports can be completed

Write reports clearly and concisely to convey intended ideas in brief fashion

Write reports using correct grammar and spelling so documents are understandable and professional

Read and comprehend Standard Operating Procedures (SOP) and other program documents

Give oral presentations

Deliver training

Issue quick, clear, and accurate directions to other personnel in an emergency situation

## 2.3. Sensory tasks

Localize sounds

Hear conversation spoken in a normal tone from a distance of 5 to 20 feet

Communicate with individuals over background noise

Identify hazards and evidence using vision, hearing and touch

## 2.4. Equipment operation

Operate a computer

Operate a radio

Operate a cellular phone

Operate a video camera

