Title 38

SECTION 4.96

4.96 Special provisions regarding evaluation of respiratory conditions.

§ 4.96 Special provisions regarding evaluation of respiratory conditions.
(a) *Rating coexisting respiratory conditions.* Ratings under diagnostic codes 6600 through 6817 and 6822 through 6847 will not be combined with each other. Where there is lung or pleural involvement, ratings under diagnostic codes 6819 and 6820 will not be combined with each other or with diagnostic codes 6600 through 6817 or 6822 through 6847. A single rating will be assigned under the diagnostic code which reflects the predominant disability with elevation to the next higher evaluation where the severity of the overall disability warrants such elevation. However, in cases protected by the provisions of Pub. L. 90-493, the graduated ratings of 50 and 30 percent for inactive tuberculosis will not be elevated.

(b) *Rating "protected" tuberculosis cases.* Public Law 90-493 repealed section 356 of title 38, United States Code which had provided graduated ratings for inactive tuberculosis. The repealed section, however, still applies to the case of any veteran who on August 19, 1968, was receiving or entitled to receive compensation for tuberculosis. The use of the protective provisions of Pub. L. 90-493 should be mentioned in the discussion portion of all ratings in which these provisions are applied. For application in rating cases in which the protective provisions of Pub. L. 90-493 apply the former evaluations pertaining to pulmonary tuberculosis are retained in § 4.97.

(c) *Special monthly compensation.* When evaluating any claim involving complete organic aphonia, refer to § 3.350 of this chapter to determine whether the veteran may be entitled to special monthly compensation. Footnotes in the schedule indicate conditions which potentially establish entitlement to special monthly compensation; however, there are other conditions in this section which under certain circumstances also establish entitlement to special monthly compensation.

(d) *Special provisions for the application of evaluation criteria for diagnostic codes 6600, 6603, 6604, 6825-6833, and 6840-6845.* (1) Pulmonary function tests (PFT's) are required to evaluate these conditions except:

(i) When the results of a maximum exercise capacity test are of record and are 20 ml/kg/min or less. If a maximum exercise capacity test is not of record, evaluate based on alternative criteria.

(ii) When pulmonary hypertension (documented by an echocardiogram or cardiac catheterization), cor pulmonale, or right ventricular hypertrophy has been diagnosed.

(iii) When there have been one or more episodes of acute respiratory failure.

(iv) When outpatient oxygen therapy is required.

(2) If the DLCO (SB) (Diffusion Capacity of the Lung for Carbon Monoxide by the Single Breath Method) test is not of record, evaluate based on alternative criteria as long as the examiner states why the test would not be useful or valid in a particular case.

(3) When the PFT's are not consistent with clinical findings, evaluate based on the PFT's unless the examiner states why they are not a valid indication of respiratory functional impairment in a particular case.

(4) Post-bronchodilator studies are required when PFT's are done for disability evaluation purposes except when the results of pre-bronchodilator pulmonary function tests are normal or when the examiner determines that post-bronchodilator studies should not be done and states why.

(5) When evaluating based on PFT's, use post-bronchodilator results in applying the evaluation criteria in the rating schedule unless the post-bronchodilator results were poorer than the pre-bronchodilator results. In those cases, use the pre-bronchodilator values for rating purposes.

(6) When there is a disparity between the results of different PFT's (FEV-1 (Forced Expiratory Volume in one second), FVC (Forced Vital Capacity), etc.), so that the level of evaluation would differ depending on which test result is used, use the test result that the examiner states most accurately reflects the level of disability.

(7) If the FEV-1 and the FVC are both greater than 100 percent, do not assign a compensable evaluation based on a decreased FEV-1/FVC ratio.

(Authority: 38 U.S.C. 1155) [34 FR 5062, Mar. 11, 1969, as amended at 61 FR 46727, Sept. 5, 1996; 71 FR 52459, Sept. 6, 2006]

FACT SHEET
Particulate Matter throughout Iraq and Afghanistan

NOTICE TO VA EXAMINERS
VA Considers this Veteran Exposed to High Levels of Particulate Matter

"Particulate matter" (PM), is a complex mixture of extremely small particles and liquid droplets made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The PM levels in Southwest Asia are naturally higher than most of the world and may present a health risk to service members. There are two sizes of particles in the air that are a health concern—particles with a 10-micron (PM_{10}) diameter or smaller, and those 2.5 microns ($PM_{2.5}$) and smaller. The size is directly linked to potential for causing health problems. Once inhaled, 10-micron sized particles or smaller can affect the heart and lungs and cause serious health effects.

Primary sources of PM in Southwest Asia include dust storms and emissions from local industries. The DoD conducted a year-long sampling survey to characterize the chemistry and mineralogy of the PM at 15 sites in OIF and OEF. These results were published by the Desert Research Institute in 2008 and are being reviewed by the National Academy of Sciences Committee on Toxicology. DoD stated in their 2008 Balad assessment, that emission from burns pits, among other things, "may increase localized concentration of 2.5 micrometer PM and other potentially toxic air pollutants."

Most studies relate PM exposure data to respiratory and cardiopulmonary health effects in specific susceptible general population subgroups to include young children, the elderly, and especially those with existing asthma or cardiopulmonary disease. Many variables influence the probability of health outcomes. The key variables are the size-fraction and chemical make up of the PM, the concentration levels, the duration of exposures, and various human factors to include age, health status, existing medical conditions, and genetics. These variables combined with scientific data gaps limit the medical community's ability to estimate health impacts to relatively healthy troops. Another key factor is that most studies have been on older or less healthy groups. Several studies to determine potential health effects/outcomes are currently underway.

DoD collected approximately 60 air samples at Balad from January to April 2007 and assessed for PM. The samples were taken from five different locations around Balad. The heaviest measured concentration of PM was taken in April 2007—the concentration level was 299 ug/m3 of PM10 sized particles. In total, 50 of the 60 samples registered above the military exposure guidelines.

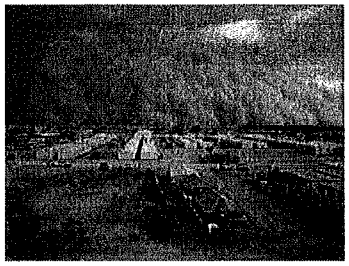
This information is not meant to influence examiners rendering opinions concerning the etiology of any particular disability; but rather to ensure that such opinions are fully informed based on all known objective facts. Therefore, when rendering opinions requested by rating authorities for a disability potentially related to such exposure, please utilize this information objectively and together with the remaining evidence, including lay evidence, in the Veteran's record.

USAPHC

Particulate Matter (PM) Air Pollution Exposures During Military Deployments

FACT SHEET 64-009-0414

Background. Particulate matter (PM) air pollutants are a complex mixture of extremely small solid particles and liquid droplets in the air. When breathed in, these particles can reach deep into the lungs and cause various health effects. There are generally two size ranges of particles in the air that are of health concern. These include: 1) particles with a diameter less than or equal to 10 microns (PM_{10}), and 2) even smaller particles [less than a diameter of 2.5 microns ($PM_{2.5}$)]. The smaller particles ($PM_{2.5}$) have recently become an increasing concern since medical research shows that particles of this size are most likely responsible for the harmful health effects attributed to PM. Many variables influence the nature and probability of health outcomes. The key variables are the size-fraction and chemical-make up of the PM, the concentration levels, the duration of exposures, and various human factors to include age, health status and existing medical conditions, and genetics. These variables combined with scientific data gaps limit the medical community's ability to estimate health impacts to relatively healthy troops, especially as most studies have been on older or less healthy groups.



Sources of Particulate Matter Air Pollution

PM emissions are from natural and manmade sources. These sources include windblown dusts, fires, construction activities, factories, power plants, incinerators, and automobiles. In the U.S., the European Union, and certain other industrialized regions of the world, fossil fuel combustion and vehicle emissions are the primary sources of these pollutants. In some deployment regions, notably Southwest Asia, the PM levels are higher and the sources of PM are different:

- Primary sources are short-term dust storms and dust from motor vehicle disturbance of the desert floor.
- Dust storm levels often exceed typical levels in the U.S. (as much as 10 times higher than at U.S. sites).
- Distribution of particle size and $PM_{10}/_{2.5}$ ratio differs with location, though typically the PM_{10} is higher.
- Emissions from local industries (e.g., brick factories) near base camps and military operations (e.g., burn pits, vehicles) may increase localized concentration of $PM_{2.5}$ and other potentially toxic air pollutants.

Health Effects to Deployed Soldiers and Current Military Exposure Guidelines (MEGs)

Most studies relate PM exposure data to respiratory and cardiopulmonary health effects in specific susceptible general population subgroups to include young children, the elderly, and especially those with existing asthma or cardiopulmonary disease. In addition, studies of PM-related health effects have been based/conducted primarily in U.S. and Europe urban settings where the PM particle size and composition tends to be substantially different from that in deployment settings in Southwest Asia. PM from these deployment settings is generally less influenced by combustion products, acid aerosols, and other potentially toxic pollutant PM components that come from the industrial-sources and vehicle emissions in highly urbanized areas. As a result, direct use of the available data to estimate health effects to troops in Southwest Asia has been problematic. Several ongoing studies will increase our knowledge regarding the potential relationship between PM exposures to deployed troops and health effects/outcomes. In the interim, USAPHC recommends the use of the Military Exposure Guidelines (MEGs) described in Tables 1 and 2 below to assess the severity of potential short term (acute) and long term (chronic) effects. These MEGs are based on criteria from the U.S. Environmental Protection Agency (EPA) National Ambient Air Quality Standards (NAAQS) and the EPA Air Quality Index (AQI) reporting system (adjusted to reflect the generally health military population). The MEGs are based on professional judgment reflecting the current consensus opinion of USAPHC subject matter experts. Due to the substantial scientific

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uncertainty in estimating acute and especially chronic health outcomes amongst relatively healthy troops to exposures involving very unique PM compositions, these MEGs are protective estimates for which there is relatively low confidence. This should be reflected in PM exposure health effects risk estimates.

Table 1. Short-Term (24-hour) Particulate Matter Air-MEGs*

Hazard Severity	$PM_{2.5}$	PM_{10}	Description of Military Health and Operational Effects
Critical	500 $\mu g/m^3$	600 $\mu g/m^3$	Above these levels, most if not all personnel are expected to experience very notable eye, nose, and throat irritation and respiratory effects. Visual acuity is impaired, as is overall aerobic capacity. Significant aerobic activity will increase risk. Some personnel will not be able to perform assigned duties. Lost duty days are expected at this concentration and potentially more as concentrations increase. Those with a history of asthma or cardiovascular disease will experience more severe symptoms.* Conditions may also result in adverse, non-health related materiel/logistical impacts (e.g., vehicles, equipment).
Marginal	250 $\mu g/m^3$	420 $\mu g/m^3$	Above these levels up to the Critical level, many personnel are expected to experience notable eye, nose, and throat irritation and some respiratory effects. Some lost duty days are expected. Significant aerobic activity will increase risk. Those with a history of asthma or cardiovascular disease are expected to experience increased symptoms.**
Negligible	65 $\mu g/m^3$	250 $\mu g/m^3$	Above these levels up to the Marginal level, a few personnel may experience notable mild eye, nose, or throat irritation; most personnel will experience only mild effects. Pre-existing health conditions (e.g., asthma, or cardiovascular diseases) may be exacerbated.*

* MEG values are low-confidence effects range estimates considered protective bounds of the hazard severity concentration ranges
** A diagnosis of some pulmonary or cardiovascular disease may prevent deployment but individuals may have mild or undiagnosed conditions. A small percentage of deployed personnel fall into this sensitive group.

Table 2. Long-Term (1-year) Particulate Matter Air-MEGs*

Hazard Severity	$PM_{2.5}$	PM_{10}	Description of Military Health and Operational Effects
Marginal	65 $\mu g/m^3$	**Not defined	With repeated exposures above this level it is increasingly plausible that some personnel may be at increased risk for developing chronic health conditions such as reduced lung function or exacerbated chronic bronchitis, chronic obstructive pulmonary disease (COPD), asthma, atherosclerosis, or other cardiopulmonary diseases. Those with a history of asthma or cardiopulmonary disease are considered to be at more notable risk.
Negligible	15 $\mu g/m^3$	**Not defined	With repeated exposures above this level up to the Marginal level, it is considered possible that a small percentage of susceptible personnel *may* be at increased risk for developing chronic conditions such as reduced lung function or exacerbated chronic bronchitis, COPD, asthma, atherosclerosis, or other cardiopulmonary diseases. Those with a history of asthma or cardiopulmonary disease are considered to be at more notable risk. Exposures below this level are not expected to result in chronic health conditions in generally healthy troops.

* MEG values are low-confidence effects range estimates considered protective bounds of the hazard severity concentration ranges
** No long term health effects can be estimated from data – the EPA has retracted its long-term standard (NAAQS) for PM_{10}.

Preventive Medicine and Surveillance Recommendations.

While specific individual assessments cannot be determined given current data gaps, the USAPHC is currently documenting/archiving site-specific PM exposure data for future research and medical surveillance purposes. Other than the sampling and documentation of the population-based exposure data, there are limited preventive measures to mitigate PM exposures. The primary measure is to limit outdoor activity during periods of high PM levels; especially limit physical exertion since higher breathing rates increase the amount of inhaled PM. Minimize PM from outside sources by shutting windows, doors, and closing tent flaps. Some limited exposure may be mitigated through the use of cravats/handkerchiefs, though this is not likely to provide substantial reduction, particularly for $PM_{2.5}$ exposures. If continued exposures to very high levels cannot be avoided, use of N-95 filtering facepieces may be considered but requires a respiratory protection program, appropriate fit testing and handling of masks, and may not be feasible for extended periods due to mask clogging, discomfort, and interference with operations.

Title 38

§ 3.320 Claims based on exposure to particulate matter.

(a) ***Service connection based on presumed exposure to particulate matter*** -

(1) ***General.*** Except as provided in paragraph (b) of this section, a disease listed in paragraph (a)(2) of this section shall be service connected even though there is no evidence of such disease during the period of service if it becomes manifest to any degree (including non-compensable) within 10 years from the date of separation from military service that includes a qualifying period of service as defined in paragraph (a)(4) of this section.

(2) ***Chronic diseases associated with exposure to particulate matter.*** The chronic diseases referred to in paragraph (a)(1) of this section are the following:

(i) Asthma.

(ii) Rhinitis.

(iii) Sinusitis, to include rhinosinusitis.

(3) ***Presumption of exposure.*** A veteran who has a qualifying period of service as defined in paragraph (a)(4) of this section shall be presumed to have been exposed to fine, particulate matter during such service, unless there is affirmative evidence to establish that the veteran was not exposed to fine, particulate matter during that service.

(4) ***Qualifying period of service.*** The term *qualifying period of service* means any period of active military, naval, or air service in:

(i) The Southwest Asia theater of operations, as defined in § 3.317(e)(2), during the Persian Gulf War as defined in § 3.2(i).

(ii) Afghanistan, Syria, Djibouti, or Uzbekistan on or after September 19, 2001 during the Persian Gulf War as defined in § 3.2(i).

(b) ***Exceptions.*** A disease listed in paragraph (a)(1) of this section shall not be presumed service connected if there is affirmative evidence that:

(1) The disease was not incurred during or aggravated by a qualifying period of service; or

(2) The disease was caused by a supervening condition or event that occurred between the veteran's most recent departure from a qualifying period of service and the onset of the disease; or

(3) The disease is the result of the veteran's own willful misconduct.

[86 FR 42732, Aug. 5, 2021]

[1]

Cross References:

Permanent and total disability ratings for pension purposes. See § 3.342. Special monthly dependency and indemnity compensation, death compensation and pension ratings. See § 3.351. Determination of permanent need for regular aid and attendance and "permanently bedridden." See § 3.352. Conditions which determine permanent incapacity for self-support. See § 3.356.

FOOTNOTES - 3.320

[1] 39 FR 5315, Feb. 12, 1974.

Exercises

1. Avery Monty served in the Air Force from January 2, 2004 to June 2, 2014. Her personnel file notes a deployment to Uzbekistan from April 2005 to November 2005. She is claiming service connection for sinus issues, with VA Form 21-526EZ noting a reported onset in July 2018. There is no evidence of sinus problems during active duty.

   Should this be service connected? Why?

2. Marty Bain served in the Marine Corps from November 20, 2015, to November 20, 2020. His DD Form 214 notes service in Saudi Arabia from March 2017 tonSeptember 2017. He is claiming service connection for shortness of breath and coughing, which he alleges began in January 2021. Service treatment records are silent for respiratory complaints during active duty.

   Should this be service connected? Why?

3. Service connection is being granted for asthma due to particulate matter. The claim was received on May 1, 2021, five years after separation from active military service. An initial date of asthma was documented in January 2021.

   What date should service connection be granted?

4. Bob Smith, an Air Force Reservist, states he was on Title 10 orders in November 1985, at Lockbourne/Rickenbacker Air Force Base. He has now been diagnosed with bladder cancer.

   Is he eligible for service connection? What is required?

5. Jane Doe served in Syria with US Army in July 2001. She was diagnosed with rhinosinusitis in July 2005.

   Is she eligible for rhinosinusitis on a presumptive basis?

Presumptive Exercises Answer Key

1. Avery Monty served in the Air Force from January 2, 2004 to June 2, 2014. Her personnel file notes a deployment to Uzbekistan from April 2005 to November 2005. She is claiming service connection for sinus issues, with VA Form 21-526EZ noting a reported onset in July 2018. There is no evidence of sinus problems during active duty.

   Should this be service connected? Why?
   Yes, based on presumptive theory of service
   Connection due to particulate matter is raised by the evidence – diagnosed within 10 years

2. Marty Bain served in the Marine Corps from November 20, 2015, to November 20, 2020. His DD Form 214 notes service in Saudi Arabia from March 2017 tonSeptember 2017. He is claiming service connection for shortness of breath and coughing, which he alleges began in January 2021. Service treatment records are silent for respiratory complaints during active duty.

   Should this be service connected? Why?
   Yes, based on presumptive theory of service
   Connection due to particulate matter is raised by the evidence – diagnosed within 10 years

3. Service connection is being granted for asthma due to particulate matter. The claim was received on May 1, 2021, five years after separation from active military service. An initial date of asthma was documented in January 2021.

   What date should service connection be granted?
   August 5, 2021 date of law change under 38 CFR 3.114

4. Bob Smith, an Air Force Reservist, states he was on Title 10 orders in November 1985, at Lockbourne/Rickenbacker Air Force Base. He has now been diagnosed with bladder cancer. Is he eligible for service connection? What is required?

   Current diagnosis, qualifying service, theory of presumption . Slide 46

5. Jane Doe served in Syria with US Army in July 2001. She was diagnosed with rhinosinusitis in July 2005. Is she eligible for rhinosinusitis on a presumptive basis?

   No. Presumptive for Syria began on or after September 19, 2001. 38 CFR 3.2(i)