

# INSTRUCTIONS TO THE MEDICAL EXAMINER

## FEDERAL MOTOR CARRIER SAFETY REGULATIONS

### (Advisory Criteria)

#### GENERAL INFORMATION

The purpose of this examination is to determine a driver's physical qualification to operate a commercial motor vehicle (CMV) in interstate commerce according to the requirements in 49 CFR 391.41-49. Therefore, the medical examiner must be knowledgeable of these requirements and guidelines developed by the FMCSA to assist the medical examiner in making the qualification determination. The medical examiner should be familiar with the driver's responsibilities and work environment and is referred to the section on the form, The Driver's Role.

In addition to reviewing the Health History section with the driver and conducting the physical examination, the medical examiner should discuss common prescriptions and over-the-counter medications relative to the side effects and hazards of these medications while driving. Educate driver to read warning labels on all medications. History of certain conditions may be cause for rejection, particularly if required by regulation, or may indicate the need for additional laboratory tests or more stringent examination perhaps by a medical specialist. These decisions are usually made by the medical examiner in light of the driver's job responsibilities, work schedule and potential for the condition to render the driver unsafe.

Medical conditions should be recorded even if they are not cause for denial, and they should be discussed with the driver to encourage appropriate remedial care. This advice is especially needed when a condition, if neglected, could develop into a serious illness that could affect driving.

If the medical examiner determines that the driver is fit to drive and is also able to perform non-driving responsibilities as may be required, the medical examiner signs the medical certificate which the driver must carry with his/her license. The certificate must be dated. Under current regulations, the certificate is valid for two years, unless the driver has a medical condition that does not prohibit driving but does require more frequent monitoring. In such situations, the medical certificate should be issued for a shorter length of time. The physical examination should be done carefully and at least as complete as is indicated by the attached form. Contact the FMCSA at (202) 366-1790 for further information (a vision exemption, qualifying drivers under 49 CFR 391.64, etc.).

#### INTERPRETATION OF MEDICAL STANDARDS

Since the issuance of the regulations for physical qualifications of commercial drivers, the Federal Motor Carrier Safety Administration (FMCSA) has published recommendations called Advisory Criteria to help medical examiners in determining whether a driver meets the physical qualifications for commercial driving. These recommendations have been condensed to provide information to medical examiners that (1) is directly relevant to the physical examination and (2) is not already included in the medical examination form. The specific regulation is printed in italics and its reference by section is highlighted.

##### **Loss of Limb:** **§ 391.41(b)(1)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no loss of a foot, leg, hand, or an arm, or has been granted a Skill Performance Evaluation (SPE) Certificate pursuant to Section 391.49.*

##### **Limb Impairment:** **§ 391.41(b)(2)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no impairment of: (i) A hand or finger which interferes with prehension or power grasping; or (ii) An arm,*

*foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or (iii) Any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or (iv) Has been granted a Skill Performance Evaluation Certificate pursuant to Section 391.49.*

A person who suffers loss of a foot, leg, hand or arm or whose limb impairment in any way interferes with the safe performance of normal tasks associated with operating a commercial motor vehicle is subject to the Skill Performance Evaluation (SPE) Certification Program pursuant to section 391.49, assuming the person is otherwise qualified.

With the advancement of technology, medical aids and equipment modifications have been developed to compensate for certain disabilities. The SPE Certification Program (formerly the Limb Waiver Program) was designed to allow persons with the loss of a foot or limb or with functional impairment to qualify under the Federal Motor Carrier Safety Regulations (FMCSRs) by use of prosthetic devices or equipment modifications which enable them to safely operate a commercial motor vehicle. Since there are no medical aids equivalent to the original body or limb, certain risks are still present, and thus restrictions may be included on individual SPE certificates when a State Director for the FMCSA determines they are necessary to be consistent with safety and public interest.

If the driver is found otherwise medically qualified (391.41(b)(3) through (13)), the medical examiner must check on the medical certificate that the driver is qualified only if accompanied by a SPE certificate. The driver and the employing motor carrier are subject to appropriate penalty if the driver operates a motor vehicle in interstate or foreign commerce without a current SPE certificate for his/her physical disability.

##### **Diabetes:** **§ 391.41(b)(3)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control.*

Diabetes mellitus is a disease which, on occasion, can result in a loss of consciousness or disorientation in time and space. Individuals who require insulin for control have conditions which can get out of control by the use of too much or too little insulin, or food intake not consistent with the insulin dosage. Incapacitation may occur from symptoms of hyperglycemic or hypoglycemic reactions (drowsiness, semiconsciousness, diabetic coma, or insulin shock).

The administration of insulin is, within itself, a complicated process requiring insulin, syringe, needle, alcohol sponge and a sterile technique. Factors related to long-haul commercial motor vehicle operations, such as fatigue, lack of sleep, poor diet, emotional conditions, stress, and concomitant illness, compound the diabetic problem. Thus, because of these inherent dangers, the FMCSA has consistently held that a diabetic who uses insulin for control does not meet the minimum physical requirements of the FMCSRs.

Hypoglycemic drugs, taken orally, are sometimes prescribed for diabetic individuals to help stimulate natural body production of insulin. If the condition can be controlled by the use of oral medication and diet, then an individual may be qualified under the present rule.

(See Conference Report on Diabetic Disorders and Commercial Drivers and Insulin-Using Commercial Motor Vehicle Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

##### **Cardiovascular Condition:** **§ 391.41(b)(4)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety known*

*to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure.*

The term "has no current clinical diagnosis of" is specifically designed to encompass: "a clinical diagnosis of" (1) a current cardiovascular condition, or (2) a cardiovascular condition which has not fully stabilized regardless of the time limit. The term "known to be accompanied by" is defined to include: a clinical diagnosis of a cardiovascular disease (1) which is accompanied by symptoms of syncope, dyspnea, collapse, or congestive cardiac failure; and/or (2) which is likely to cause syncope, dyspnea, collapse, or congestive cardiac failure.

It is the intent of the FMCSRs to render unqualified a driver who has a current cardiovascular disease which is accompanied by and/or likely to cause symptoms of syncope, dyspnea, collapse, or congestive cardiac failure. However, the subjective decision of whether the nature and severity of an individual's condition will likely cause symptoms of cardiovascular insufficiency is on an individual basis and qualification rests with the medical examiner and the motor carrier. In those cases where there is an occurrence of cardiovascular insufficiency (myocardial infarction, thrombosis, etc.), it is suggested before a driver is certified that he or she have a normal resting and stress electrocardiogram (ECG), no residual complications and no physical limitations, and is taking no medication likely to interfere with safe driving.

Coronary artery bypass surgery and pacemaker implantation are remedial procedures and thus not unqualifying. Coumadin is a medical treatment which can improve the health and safety of the driver and should not, by its use, medically disqualify the commercial driver. The emphasis should be on the underlying medical condition(s) which require treatment and the general health of the driver. The FMCSA should be contacted at (202) 366-1790 for additional recommendations regarding the physical qualification of drivers on coumadin.

(See Conference on Cardiac Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

##### **Respiratory Dysfunction:** **§ 391.41(b)(5)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with ability to control and drive a commercial motor vehicle safely.*

Since a driver must be alert at all times, any change in his or her mental state is in direct conflict with highway safety. Even the slightest impairment in respiratory function under emergency conditions (when greater oxygen supply is necessary for performance) may be detrimental to safe driving.

There are many conditions that interfere with oxygen exchange and may result in incapacitation, including emphysema, chronic asthma, carcinoma, tuberculosis, chronic bronchitis and sleep apnea. If the medical examiner detects a respiratory dysfunction, that in any way is likely to interfere with the driver's ability to safely control and drive a commercial motor vehicle, the driver must be referred to a specialist for further evaluation and therapy. Anticoagulation therapy for deep vein thrombosis and/or pulmonary thromboembolism is not unqualifying once optimum dose is achieved, provided lower extremity venous examinations remain normal and the treating physician gives a favorable recommendation.

(See Conference on Pulmonary/Respiratory Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

##### **Hypertension:** **§ 391.41(b)(6)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no current clinical diagnosis of high blood pressure likely to interfere with ability to operate a commercial motor vehicle safely.*

Hypertension alone is unlikely to cause sudden collapse; however, the likelihood increases when target

organ damage, particularly cerebral vascular disease, is present. This regulatory criteria is based on FMCSA's Cardiac Conference recommendations, which used the report of the 1984 Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure.

A blood pressure of 161-180 and/or 91-104 diastolic is considered mild hypertension, and the driver is given a 3-month period to reduce his or her blood pressure to less than or equal to 160/90; the certifying physician should state on the medical certificate that it is only valid for that 3-month period. If the driver is subsequently found qualified with a blood pressure less than or equal to 160/90, the certifying physician may issue a medical certificate for a 1-year period, but should confirm blood pressure control in the third month of this 1-year period. The individual should be certified annually thereafter. The expiration date must be stated on the medical certificate.

A blood pressure of greater than 180 systolic and/or greater than 104 diastolic is considered moderate to severe. The driver may not be qualified, even temporarily, until his or her blood pressure has been reduced to less than 181/105. The examining physician may temporarily certify the individual once the individual's blood pressure is below 181 and/or 105. For blood pressure greater than 180 and/or 104, documentation of continued control should be made every 6 months. The individual should be certified biannually thereafter. The expiration date must be stated on the medical certificate. Commercial drivers who present for certification with normal blood pressures but are taking medication(s) for hypertension should be certified on the same basis as individuals who present with blood pressures in the mild or moderate to severe range. Annual recertification is recommended if the medical examiner is unable to establish the blood pressure at the time of diagnosis.

An elevated blood pressure finding should be confirmed by at least two subsequent measurements on different days. Inquiry should be made regarding smoking, cardiovascular disease in relatives, and immoderate use of alcohol. An electrocardiogram (ECG) and blood profile, including glucose, cholesterol, HDL cholesterol, creatinine and potassium, should be made. An echocardiogram and chest x-ray are desirable in subjects with moderate or severe hypertension.

Since the presence of target damage increases the risk of sudden collapse, group 3 or 4 hypertensive retinopathy, left ventricular hypertrophy not otherwise explained (echocardiography or ECG by Estes criteria), evidence of severely reduced left ventricular function, or serum creatinine of greater than 2.5 warrants the driver being found unqualified to operate a commercial motor vehicle in interstate commerce.

Treatment includes nonpharmacologic and pharmacological modalities as well as counseling to reduce other risk factors. Most antihypertensive medications also have side effects, the importance of which must be judged on an individual basis. Individuals must be alerted to the hazards of these medications while driving. Side effects of somnolence or syncope are particularly undesirable in commercial drivers.

A commercial driver who has normal blood pressure 3 or more months after a successful operation for pheochromocytoma, primary aldosteronism (unless bilateral adrenalectomy has been performed), renovascular disease, or unilateral renal parenchymal disease, and who shows no evidence of target organ may be qualified. Hypertension that persists despite surgical intervention with no target organ disease should be evaluated and treated following the guidelines set forth above.

(See Conference on Cardiac Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

#### **Rheumatic, Arthritic, Orthopedic, Muscular, Neuromuscular or Vascular Disease:**

##### **§ 391.41(b)(7)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no established medical history or clinical diagnosis of a rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease which interferes with ability to control and operate a commercial motor vehicle safely.*

Certain diseases are known to have acute episodes of transient muscle weakness, poor muscular coordination (ataxia), abnormal sensations (paresthesia), decreased

muscular tone (hypotonia), visual disturbances and pain which may be suddenly incapacitating. With each recurring episode, these symptoms may become more pronounced and remain for longer periods of time. Other diseases have more insidious onsets and display symptoms of muscle wasting (atrophy), swelling and paresthesia which may not suddenly incapacitate a person but may restrict his/her movements and eventually interfere with the ability to safely operate a motor vehicle. In many instances these diseases are degenerative in nature or may result in deterioration of the involved area.

Once the individual has been diagnosed as having a rheumatic, arthritic, orthopedic, muscular, neuromuscular or vascular disease, then he/she has an established history of that disease. The physician, when examining an individual, should consider the following: (1) the nature and severity of the individual's condition (such as sensory loss or loss of strength); (2) the degree of limitation present (such as range of motion); (3) the likelihood of progressive limitation (not always present initially but may manifest itself over time); and (4) the likelihood of sudden incapacitation. If severe functional impairment exists, the driver does not qualify. In cases where more frequent monitoring is required, a certificate for a shorter time period may be issued.

(See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

#### **Epilepsy:**

##### **§ 391.41(b)(8)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause the loss of consciousness or any loss of ability to control a motor vehicle.*

Epilepsy is a chronic functional disease characterized by seizures or episodes that occur without warning, resulting in loss of voluntary control which may lead to loss of consciousness and/or seizures. Therefore, the following drivers cannot be qualified: (1) a driver who has a medical history of epilepsy; (2) a driver who has a current clinical diagnosis of epilepsy; or (3) a driver who is taking antiseizure medication.

If an individual has had a sudden episode of a non epileptic seizure or loss of consciousness of unknown cause which did not require antiseizure medication, the decision as to whether that person's condition will likely cause loss of consciousness or loss of ability to control a motor vehicle is made on an individual basis by the medical examiner in consultation with the treating physician. Before certification is considered, it is suggested that a 6-month waiting period elapse from the time of the episode. Following the waiting period, it is suggested that the individual have a complete neurological examination. If the results of the examination are negative and antiseizure medication is not required, then the driver may be qualified.

In those individual cases where a driver has a seizure or an episode of loss of consciousness that resulted from a known medical condition (e.g., drug reaction, high temperature, acute infectious disease, dehydration, or acute metabolic disturbance), certification should be deferred until the driver has fully recovered from that condition and has no existing residual complications, and not taking antiseizure medication.

(See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

#### **Mental Disorders:**

##### **§ 391.41(b)(9)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with ability to drive a commercial motor vehicle safely.*

Emotional or adjustment problems contribute directly to an individual's level of memory, reasoning, attention, and judgment. These problems often underlie physical disorders. A variety of functional disorders can cause drowsiness, dizziness, confusion, weakness, or paralysis that may lead to incoordination, inattention, loss of functional control and susceptibility to accidents while driving. Physical fatigue, headache, impaired coordination, recurring physical ailments, and chronic "nagging" pain may be

present to such a degree that certification for commercial driving is inadvisable. Somatic and psychosomatic complaints should be thoroughly examined when determining an individual's overall fitness to drive. Disorders of a periodically incapacitating nature, even in the early stages of development, may warrant disqualification.

Many bus and truck drivers have documented that "nervous trouble" related to neurotic, personality, emotional or adjustment problems is responsible for a significant fraction of their preventable accidents. The degree to which an individual is able to appreciate, evaluate and adequately respond to environmental strain and emotional stress is critical when assessing an individual's mental alertness and flexibility to cope with the stresses of commercial motor vehicle driving.

When examining the driver, it should be kept in mind that individuals who live under chronic emotional upsets may have deeply ingrained maladaptive or erratic behavior patterns. Excessively antagonistic, instinctive, impulsive, openly aggressive, paranoid or severely depressed behavior greatly interfere with the driver's ability to drive safely. Those individuals who are highly susceptible to frequent states of emotional instability (schizophrenia, affective psychoses, paranoia, anxiety or depressive neuroses) may warrant disqualification. Careful consideration should be given to the side effects and interactions of medications in the overall qualification determination. See Psychiatric Conference Report for specific recommendations on the use of these medications and potential hazards for driving.

(See Conference on Psychiatric Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

#### **Vision:**

##### **§ 391.41(b)(10)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has a distant visual acuity of at least 20/40 (Snellen) in each eye with or without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber.*

The term "ability to recognize the colors of" is interpreted to mean if a person can recognize and distinguish among traffic control signals and devices showing standard red, green and amber, he or she meets the minimum standard, even though he or she may have some type of color perception deficiency. If certain color perception tests are administered, (such as Ishihara, Pseudoisochromatic, Yarn) and doubtful findings are discovered, a controlled test using signal red, green and amber may be employed to determine the driver's ability to recognize these colors.

Contact lenses are permissible if there is sufficient evidence to indicate that the driver has good tolerance and is well adapted to their use. Use of a contact lens in one eye for distance visual acuity and another lens in the other eye for near vision is not acceptable, nor telescopic lenses acceptable for the driving commercial motor vehicles.

If an individual meets the criteria by the use of glasses or contact lenses, the following statement shall appear on the Medical Examiner's Certificate: "Qualified only if wearing corrective lenses".

(See Visual Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

#### **Hearing:**

##### **§ 391.41(b)(11)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*First perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid, or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz and 2,000 Hz with or without a hearing aid when the audiometric device is calibrated to the American National Standard (formerly ASA Standard) Z24.5-1951.*

Since the prescribed standard under the FMCSRs is the American Standards Association (ANSI), it may be necessary to convert the audiometric results from the ISO standard to the ANSI standard. Instructions are

included on the Medical Examination report form.

If an individual meets the criteria by using a hearing aid, the driver must wear that hearing aid and have it in operation at all times while driving. Also, the driver must be in possession of a spare power source for the hearing aid.

For the whispered voice test, the individual should be stationed at least 5 feet from the examiner with the ear being tested turned toward the examiner. The other ear is covered. Using the breath which remains after a normal expiration, the examiner whispers words or random numbers such as 66, 18, 23, etc. The examiner should not use only sibilants (s-sounding test materials). The opposite ear should be tested in the same manner. If the individual fails the whispered voice test, the audiometric test should be administered.

If an individual meets the criteria by the use of a hearing aid, the following statement must appear on the Medical Examiner's Certificate "Qualified only when wearing a hearing aid".

(See Hearing Disorders and Commercial Motor Vehicle Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

**Drug Use:**  
**§ 391.41(b)(12)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Does not use a controlled substance identified in 21 CFR 1308.11 Schedule I, an amphetamine, a narcotic,*

*or any other habit-forming drug. Exception: A driver may use such a substance or drug, if the substance or drug is prescribed by a licensed medical practitioner who is familiar with the driver's medical history and assigned duties; and has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle.*

This exception does not apply to methadone. The intent of the medical certification process is to medically evaluate a driver to ensure that the driver has no medical condition which interferes with the safe performance of driving tasks on a public road. If a driver uses a Schedule I drug or other substance, an amphetamine, a narcotic, or any other habit-forming drug, it may be cause for the driver to be found medically unqualified. Motor carriers are encouraged to obtain a practitioner's written statement about the effects on transportation safety of the use of a particular drug.

A test for controlled substances is not required as part of this biennial certification process. The FMCSA or the driver's employer should be contacted directly for information on controlled substances and alcohol testing under Part 382 of the FMCSRs.

The term "uses" is designed to encompass instances of prohibited drug use determined by a physician through established medical means. This may or may not involve body fluid testing. If body fluid testing takes place, positive test results should be confirmed by a second test of greater specificity. The term "habit-forming" is intended to include any drug or medication generally recognized as

capable of becoming habitual, and which may impair the user's ability to operate a motor vehicle safely.

The driver is medically unqualified for the duration of the prohibited drug(s) use and until a second examination shows the driver is free from the prohibited drug(s) use. Recertification may involve a substance abuse evaluation, the successful completion of a drug rehabilitation program, and a negative drug test result. Additionally, given that the certification period is normally two years, the examiner has the option to certify for a period of less than two years if this examiner determines more frequent monitoring is required.

(See Conference on Neurological Disorders and Commercial Drivers at: <http://www.fmcsa.dot.gov/rulesregs/medreports.htm>)

**Alcoholism:**  
**§ 391.41(b)(13)**

A person is physically qualified to drive a commercial motor vehicle if that person:

*Has no current clinical diagnosis of alcoholism.*

The term "current clinical diagnosis of" is specifically designed to encompass a current alcoholic illness or those instances where the individual's physical condition has not fully stabilized, regardless of the time element. If an individual shows signs of having an alcohol-use problem, he or she should be referred to a specialist. After counselling and/or treatment, he or she may be considered for certification.