The DOT Medical Examination: What You Need to Know

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Objectives

• Explain the purpose of the Department of Transportation (DOT) medical examination and the terminology associated with it
• Discuss the most common diagnoses affecting the outcome of driver physical examination
• Apply commercial driver Federal Motor Carrier Safety Administration (FMCSA) federal regulations and recommendations
• Evaluate understanding of the Commercial Drivers License (CDL) Medical Examination through case studies

History

1935 • Motor Carrier Safety Act required authorized Interstate Commerce Commission (ICC) to require medical certification for operators of Commercial Motor Vehicles (CMV), but not Physical Exam (PE).
1954 • PE and Certificate of Physical Evaluation required
1970 • DOT created with responsibility for commercial driver qualifications
1971 • Initially annual PE, changed to biennial
1992 • Federal Motor Carrier Safety Regulations (FMCSR) permitted other licensed health care providers to perform PE
1999 • Motor carrier safety initially under Federal Highway Administration
1999 • Changed to FMCSA
1999 • Reports to DOT

Terminology

CDME Commercial Driver’s Medical Exam
CMV Commercial Motor Vehicle
DOT Department of Transportation
FMCSA Federal Motor Carrier Safety Administration
FMCSR Federal Motor Carrier Safety Regulations
MRB Medical Review Board
MEP Medical Expert Panel
CDL Commercial Driver’s License
SDLA State Driver Licensing Agency
SPE Skilled Performance Exam

What is a Commercial Motor Vehicle?

• Any self-propelled or towed vehicle in interstate commerce to transport property or passengers
• Important to know weight, passengers and product

Guidelines & Certifications

Guidelines
• Make decisions by integrating H & P data and available regulations and guidelines
• Hartenbaum
• The Cardiovascular Guidelines
• FMCSA website
• Regulations are rules that must be followed
• Guidelines are best practices determined by expert panels

Certifications
• Drivers can be medically certified to maximum of 2 years
• Any medical condition that is NOT stable is at examiner’s discretion for shortened certification, such as those that may require frequent monitoring, i.e. hypertension
• Refer to FMCSA website or Hartenbaum book

Weight
• Gross weight rating or combination of 10,001 lbs or more

Passengers
• 9 passengers including driver for compensation
• OR > 15 passengers including driver, not for compensation

Product
• Hazardous materials
• OR quantity requiring placarding under 49CFR U.S.C

Hartenbaum, N. The DOT Medical Examination, 2010.
Purpose of CDL Medical Exam

• To medically certify commercial drivers to safely operate a CMV
• To certify commercial drivers for a set period of time according to FMCSR and guidelines.
• CDME is used for documentation of the examination
• Exemptions and waivers may be granted for any standard.
• Exemptions may be valid up to 2 yrs
• Waivers up to 3 months
• Applicant must show how safety can be achieved at the same or greater level if exemption was granted; exceptions have been granted for vision.
• SPE may be used to grant an exemption, i.e. loss of limb.

Medical Exam

• Medical Examination Form
• Driver completes and signs portion
• Testing:
  • BP, height, weight, peripheral vision, color vision, hearing
  • History, any illness, surgery or injury in last 5 years
  • Meds, PSH, PMH, tobacco, ETOH, or drug use
• Complete Medical Exam

Common Diagnoses

• Common diagnoses affect exam outcome
  • Hypertension
  • Diabetes
  • Neurological disorders (seizures, MS)
  • Psychiatric disorders (ADHD)
  • Cardiovascular disease
  • Obstructive sleep apnea (OSA)
  • Understanding the recommendations and regulations associated with these diagnoses is imperative

Patient Case - Hypertension

• 48 year old man presents with BP of 160/108
• Medications: lisinopril 10 mg., Hctz 12.5 mg.
• Height 6’9”, Weight 220 lbs.
• BMI 32.5  Neck: 16 ¼ ”
• Exam: WNL, carotid arteries no bruits, slight ventral hernia without symptoms,
• What would you do?

Hypertension

Stage I:
• Initial exam:
  • BP of 140/90 - 159/99, issued 1 yr. card
  • Recertify:
    • BP < or = 140/90, 1 year card
    • BP >140/90 but <160/100, 3 month card

Stage II:
• Initial exam:
  • BP of 160/100 - 179/109, issued 3 month card one time.
  • Recertified annually

Stage III:
• Initial exam:
  • BP of 180/110 can not be certified, no card issued unless BP is less or equal to 140/90
  • Recertified every 6 months

Hartenbaum, N. The DOT Medical Examination, 2010.
**Patient Case - Diabetes**

- Known diabetic presents for annual DOT physical
- Physical unremarkable except for decreased ROM of right knee; hx of arthritis
- Glycosuria: 2000 mg/ml
- No current FBS or Hbg A1-c
- BP 138/90
- Medications:
  - Metformin 1000 mg twice a day
  - Glipizide 10 mg daily
  - Lisinopril 20 mg, daily
- What would you do?

**Diabetes**

- One of most common diseases of commercial drivers
- Patients requiring insulin unable to receive a medical card
- Patients on oral agents or diet controlled may receive a medical card
- Diabetes must be under good "control", control is not specified according to regulations
  - FBS, glycosuria, Hbg A1-c
  - One year medical card only

**Diabetes - Exam**

- Eyes
  - Consider ophthalmologic exam annually
- Nervous System
  - Evaluate presence of neuropathy
- Heart
  - EKG recommended every 2 years
- Blood Glucose
  - Yearly FBS and Hbg A1-c

**Patient Case - OSA**

- Patient is a 62 year old man who drives a 16 passenger van for nursing home. A your facility for new DOT exam. Had uvuloplasty 4 years ago for OSA; no follow-up sleep study. Known hypertension, stable, takes 10 mg of lisinopril daily. No other PMH or PSH. No tobacco, rare ETOH use.
- Exam WNL. What are your recommendations?
- What would you do?

**Patient Case - OSA**

- Discussion: Sleep study showed moderate sleep apnea—CPAP set at 11 cm of water pressure; first download showed 20% compliance with using machine > 4 hrs; patient not given card; second download showed 60% > 4 hrs.

**OSA**

- Medical research supports that OSA is a significant cause of motor vehicle crashes
- OSA is more prevalent in operators of commercial vehicles
- DOT regulation FMCSR 391.41 (b): driver must have no medical hx or clinical diagnosis of a respiratory dysfunction likely to interfere with the ability to drive or control a MV
- Drivers with OSA have as much of a 7 fold increase risk of accidents
OSA

- Nocturnal apnea or hypopnea
- Brief periods of waking, snoring with/without daytime sleepiness
- Risk factors: > age 40, large neck > 17 inches in men, 16 in women, large tonsils, BMI > 35
- Untreated OSA can lead to:
  - HTN, Stroke, Mood disorders, Weight gain, Impotency
  - Headaches, Heart Failure, Sudden Death

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Cardiovascular Case

- Patient is a 58 year old male with a recent history of chest pain during a stress test and had stent placement 4 days ago. He is at your facility because his employer wanted a fit for duty DOT examination. He is on Plavix and ASA and another medication he states is for his heart, but does not know the name. He has a PMH of cardiomyopathy and an EF of 40%. Exam is WNL.

- What would you do?

Cardiovascular Disease

- Qualified to drive a CMV if: no current clinical diagnosis of
  - MI
  - Angina pectoris
  - Coronary insufficiency
  - Thrombosis
  - Or any cardiovascular disease accompanied by Syncope, dyspnea, collapse, or CHF

- Before medically certified with CVD, a driver must
  - Have an ETT
  - Be able to achieve at least 6 METS (Bruce Stage II)
  - Not have ischemic segments
  - Normal EKG

Cardiovascular Disease

- History:
  - Chest pain?
  - SOB, with or without activity
  - Difficulty laying flat
  - Dizziness or light headedness
  - Palpitations
  - Smoking hx
  - Family hx

Cardiovascular Disease

- Study found 10% of 189 fatal-to-driver heavy truck accidents attributed to medical issues
  - Of those 90% cardiac in nature

- Evidence Report on Cardiovascular Disease and Commercial Motor Vehicle Driver Safety Medical Expert Panel
  - Evidence inconclusive that commercial drivers with CVD have increased risk for MVC

- CMV found moving slowly from outer to inner traffic lane
  - Driver of nearby car got into rig and steered truck to safety with help of another commercial driver, who stopped traffic in his lane and shouted to driver how to stop the truck.
  - Driver, 56, dead of heart attack

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Cardiovascular Disease – Certification

• Myocardial Infarction
  • 2 month wait period
  • Cardiology evaluation
  • Echocardiogram with EF > 40 percent
  • ET 3-6 months after MI (step II Bruce protocol, 8 METS, 85% of maximal predicted HR)

• Post-PCI
  • 1 week post procedure, if no MI or unstable angina
  • Cardiologist clearance
  • No vascular site complication
  • No ECG ischemic changes
  • ET 3-6 months post-PCI
  • Recertification: annual, ETT every 2 yrs, cardiologist evaluation recommended

• Myocardial Infarction
  • 3 months post procedure
  • UVE greater or equal to 40%
  • Cardiologist clearance
  • Asymptomatic
  • Medication tolerance
  • Recertification: annual; ETT after 5 years, imaging test recommended if ETT positive

• Recertification
  • Annual, cardiologist evaluation

Cardiovascular Disease – Certification (Continued)

• Angina pectoris
  • Asymptomatic
  • No if angina present, change in anginal pattern within 3 months, abnormal ET
  • Ischemic changes on resting ECG
  • Recertification: Annual with ET at least every 2 yrs

Cardiovascular Disease – Valvular Heart Disease

• Cardiologist evaluation
• Two-dimensional Doppler echocardiography
• Exercise stress test, Bruce protocol

• Mitral Stenosis
  • Mild or moderate
  • Annual certification if asymptomatic (ordinary physical activity does not cause dyspnea, fatigue or anginal pain)

• Mitral Regurgitation
  • Mild to moderate
  • Annual certification if asymptomatic, normal LV size, function
  • Severe: EF < 60% disqualified; surgery, wait 3 months to certify

• Aortic Stenosis
  • Mild to moderate
  • Annual certification if asymptomatic, normal LV size & function
  • EF > 50%

• Aortic Regurgitation
  • Mild to moderate
  • Annual certification if asymptomatic, normal LV size & function

Psychiatric Disorders

• Attention Deficit Hyperactivity Disorder (ADHD)
  • Certified annually
  • Requires mental health professional recommendation, regarding medications and advising that treatment is effective
  • Tolerates drugs without disqualifying adverse reactions (sedation)
  • May need driving test

Patient Case – Neurological Disorders

• 32 yr. old man, no sx. Hx except for 2 yr. hx of recurring/relapsing MS, Date of exam, July 10th
• Currently on Copaxone, SC injection daily, Baclofen for muscle spasms if needed
• BMI 25, neck 15 ½ inches
• Medical exam WNL, some tightness with FB ROM of back
• Last relapse in May 2012, presents with bilateral leg weakness which progresses to paralysis within 72 hrs.
• Will begin treatment with Rebif (interferon beta-1a) at the end of July
• What should you do?

Patient Case – Psychiatric Disorder

• 42 year old man
• Several yr. hx of bipolar disorder
• Requesting new medical certification for Federal Express
• States he is being taken off lithium
• Current meds are: xanax, ambien, lorazepam, valproate
• What would you do?
Neurological Disorders

- Must have absence of:
  - Musculoskeletal, orthopedic, cognitive, or neuromuscular diseases
- Must assess:
  - Ability to drive
  - Prognosis
  - Risk and safety
  - **Consider driver’s responsibilities, i.e. unloading truck.**

Disqualified:

- Narcolepsy
- Meniere’s disease, due to severe & unpredictable bouts of vertigo
- Parkinsons, may appeal if stable
- Multiple Sclerosis disqualified unless:
  - No sign of relapse or progress
  - Normal MRI or no new lesions compared to prior evaluation
  - No musculoskeletal dysfunction that would impair driving MV
- Muscular dystrophies
- Congenital myopathies

Neurological Disorders - Seizure

<table>
<thead>
<tr>
<th>Type</th>
<th>Waiting period Before Cert.</th>
<th>Max Cert. Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seizure/epilepsy</td>
<td>10 yrs (off meds for 10 yrs)</td>
<td>1 yr</td>
</tr>
<tr>
<td>Acute seizure systemic/metabolic illness</td>
<td>None (however, up to medical provider)</td>
<td>2 yrs</td>
</tr>
</tbody>
</table>
| Acute seizure-structural brain insult | 1 yr off meds & seizure free if:  
  - Mild insult without early seizure  
  - Stroke without risk of seizure  
  - Intracranial or subarachnoid hemorrhage without risk of seizure  |
| Single unprovoked seizure | 5 yrs off meds & seizure free if:  
  - Moderate insult with early seizure  
  - Intracranial or subarachnoid hemorrhage with risk of seizure  |
| Febrile seizure           | None                        | None            |

Neurological Disorders

- Stroke
  - Require neurologist evaluation
  - Certified for 1 yr. only
- No neuro or cognitive deficits, normal exam, severity does not interfere with operating MV

Medication Summary

**Methadone**
- Disqualifying for commercial drivers
- May drive with legal prescription from licensed provider if not adversely affected

**Medical marijuana**
- Disqualifier

**Antidepressants/Antipsychotics**
- Annual certification
- Medication must be shown to be safe and effective
- Medication must not interfere with driver’s ability to operate motor vehicle

**Other Drugs**
- These are guidelines with MRO recommendations:
  - Schedule II, amphetamine, benzodiazepine, narcotic, Schedule II med—driver will not be certified
  - Exception: prescribed by licensed provider for legitimate purpose, able to drive safely

FMCSA’s National Registry

- By May 21, 2014 all healthcare professional who perform PE’s for truck and bus must be certified and listed on FMCSA’s National Registry (MD, DO, NP, PA, DC)
- All CDL drivers must have medical exams done by certified medical examiners
- Certified medical examiners will be listed on National Registry
- Rule assures all medical exams for interstate truck and bus drivers are done by healthcare providers that have been trained, tested & certified on specific physical qualification standards that assure drivers ability to operate vehicle safely

National Registry

• Medical Examiners who fail to maintain federal standards will be removed from registry.
• All commercial drivers must pass a DOT medical examination at least every 2 yrs to obtain a valid medical certificate, maintain a CDL, and legally drive a CMV.
• Medical certificate will contain same medical information as current one, but will include ME’s National Registry Number.


National Registry

• Beginning August 20, 2012 ME may register at National Registry web site; receive unique ID #, which used to sign-up for mandatory training and testing.
• http://nrcme.fmcsa.dot.gov
• Training/Testing Organizations on National Registry web site.
• Training organization must be accredited by nationally recognized medical professional accrediting organization to provide CEU’s.
• Regulatory Requirements for training include 8 topics covered in training curriculum on National Registry site.
• Test may be given at Testing Center or online by Testing Organization (TO).
• List of approved TO’s on Registry web site.


National Registry

• ME’s must comply with administrative requirements as of May 21, 2014.
• Submit Form MCSA 5850 electronically once every calendar month on every CMV driver examined. Info: DOB, date of exam, name, driver’s license number and state, outcome of exam (i.e. medically qualified) whether intrastate driver only, and date of certificate expiration. Submit via National Registry Website.
• If no exams performed, submit that as well.
• Retain original, completed CME for all drivers and a copy/electronic version of medical certificate for at least 3 yrs.
• Submit to periodic audits.
• Continue to be licensed, registered, certified in each state he/she performs exams according to state regulations.


National Registry

• ME’s responsible for paying fees charged by training & testing organization.
• Certification for ME valid for 10 yrs., but periodic training must be completed every 5 yrs.
• ME’s will be required to complete & transmit to FMCSA every yr. information about each CMV driver examined during the previous month.
• Name
• DOB
• Date of exam
• Intra or interstate driver
• Indication of exam outcome
• Date of expiration of medical certificate
• Driver’s license # and state


National Registry

• Drivers Requirements:
  • No later than Jan. 30, 2014 all CDL holders report to SDLA of CMV they operate or expect to operate.
  • Drivers operating in certain types of commerce will be required to submit a current medical examiner’s certificate to SDLA.
  • In PA: Failure to keep medical certificate, immediate removal of commercial designation on driver’s license. To regain, must apply for commercial learner’s permit and complete all required knowledge and skills testing and training.
  • ME’s not responsible for driver reporting!!


Summary

• The CDL Medical Examination can be a complicated process, involving integration of federal laws and recommendations with H & P exam findings.
• There are several common diagnoses that complicate the decision making process in certifying commercial drivers.
• The goal of this exam is to ensure the safety of the driver and the general public.

Useful References

- FMCSA website – Medical Programs

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