



# ***TeamCME***

*National Network of DOT Medical Examiners*

***Accredited Training for the  
National Registry of  
Certified  
Medical Examiners***

***Module 6***

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Welcome to the TeamCME accredited training for the national registry of certified medical examiners this is Module 6



## **Module 6**

**Neurological**  
**TIA**  
**Stroke**  
**Traumatic Brain Injury**  
**Seizures**  
**Headaches**  
**Parkinson's**  
**Dementia**  
**Neuromuscular Disease**

In module 6 we will discuss neurological, TIA, Stroke, Traumatic Brain Injury, Seizure disorders, Headaches, Parkinson's disease, dementia, and neuromuscular disease.

## **Neurological 49CFR 391.41 (b)(7)(8)(9)**

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

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

**Has no mental, nervous, organic, or functional disease or psychiatric, disorder likely to interfere with his/her ability to driver a commercial motor vehicle safely.”**

The codified federal regulation regarding neurological conditions is contained in three separate citations of 391.41. That's because the neurological conditions play a role in rheumatic, arthritic, orthopedic, muscular, neuromuscular, vascular, mental, nervous, organic, psychiatric, functional, and epilepsy diseases. The content on this slide is a codified federal regulation and must be followed. But the neurological standard is a *discretionary* standard.

## Driver History/ Exam- Neurological

Does the driver:

- **Follow instructions, appropriate responses**
- **Appearance reasonable, good personal hygiene**
- **Appear alert, comprehension, appropriate behavior**

**Does the driver have a Hx of:**

- **Seizures, epilepsy or uses an anticonvulsant medication**
- Head/brain injury, disorder, illness
- Loss or altered consciousness
- Fainting or dizziness
- Stroke, residual paralysis
- Spinal injury/disease with residual effects
- Current limitations

Medical examiners can pick up important clues to neurological conditions during the review of the driver's medical history. Does the driver follow instructions, have appropriate responses and comprehension? Do they behave appropriately and are they alert? How is their dress and appearance? Do they have good personal hygiene? Does the driver have a history of seizures or epilepsy, or are they using anticonvulsant medication? Have they had a traumatic brain injury, loss or altered consciousness, an episode of fainting or dizziness, a history of stroke or spinal disease? Do they have any current limitations or residual deficits?

## Neurologic/Neuromuscular Conditions 49 CFR 391.43 (f)

Most common complaints to see PCP include headache, dizziness and vertigo.

### Risks from Headaches:

- Generally inconsequential, may constitute a problem for a commercial driver
- Chronic nagging pain could be inadvisable for certification or medication used for Tx may interfere with driving.
- Incapacities symptoms even if periodic, or early stage of diseases warrant disqualification

The most common reasons for a commercial driver with a neurological condition to see their primary care provider is for headaches, dizziness and vertigo. Although generally inconsequential, headaches may constitute a problem for commercial driving. Chronic nagging pain could be inadvisable for commercial driving, or the medication used to treat headaches may interfere with safe driving. Incapacities and symptoms, even if periodic or in the early stage of disease may warrant disqualification.

## Neurologic/Neuromuscular Conditions 49 CFR 391.43 (f)

### Risk from Vertigo and Dizziness:

- Loss of equilibrium or balance with incapacitation symptoms even if periodic or in early state of disease warrant disqualification when interfering with:
  - Cognitive ability
  - Judgment
  - Attention
  - Concentration
  - Sensory or motor function

When related to vertigo or dizziness, the loss of equilibrium or balance with incapacitating symptoms, even if periodic or as part of an early stage of a disease, warrant disqualification. Especially when interfering with the driver's cognitive ability, judgement, attention, concentration, or sensory or motor function defects.

## Neurologic/Neuromuscular Conditions 49 CFR 391.43 (f)

### Risk from Seizures and Epilepsy:

- Loss of consciousness endangers the driver and the public
- Demands of driving may increase the risk for seizures and the difficulty with management of seizures;
  - Inconsistent access to evaluation and care for acute episodes
  - Delay in replacement of anticonvulsant medication if lost/forgotten

Seizures and epilepsy represent a significant risk of loss of consciousness that endangers both the driver and the public. The demands of driving increases the risk for seizures and the difficulty of management of seizure disorders. This is caused by inconsistent access to evaluation and care for acute episodes as well as delays in replacement of medications if lost or forgotten.

## Neurologic/Neuromuscular Conditions

**Identify if driver has a history of seizures, loss of consciousness, fainting or dizziness, stroke or paralysis, spinal injury.**

### **Assessment of cognitive abilities:**

- Sustained vigilance, attention
- Quick reactions
- Communication skills
- Appropriate behavior

### **Physical demands:**

- Coordination

Does driver have any identified limitations? Does he utilize medications for neurologic disease or disorders?

In evaluating neurological conditions, the medical examiner should identify if the driver has a history of seizures, loss of consciousness, fainting, dizziness, stroke, or paralysis. In addition, medical examiners should make an assessment of the driver's cognitive abilities, including attention. Can they sustain vigilance? Do they have quick reactions? Good communication skills? Do they have appropriate behavior? And can they meet the physical demands such as the need for coordination? Does the driver have any identified limitations? Do they take medications for neurologic disease or disorders?

## Neurologic/Neuromuscular Exam

### Examine for:

- Compromised equilibrium, coordination, speech pattern
- Asymmetrical deep tendon reflexes
- Abnormal patellar and Babinski reflexes
- Sensory abnormalities
- Position sense abnormalities
- Ataxia

During the examination, check for compromised equilibrium, coordination and speech pattern. Check the deep tendon reflexes, patellar and Babinski reflexes. Look for sensory abnormalities, loss of position sense or abnormalities and the presence of ataxia.

## Neurological Conditions

*49 CFR 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 rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a commercial motor vehicle safely;*

Static Neurological Conditions

Episodic Neurological Conditions

Infections of the CNS

Neuromuscular Diseases

Progressive Neurological Conditions

The neurological standard is that a person is physically qualified to drive a commercial motor vehicle if that person - Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a commercial motor vehicle safely. We will be reviewing the following categories of neurological conditions: episodic neurological conditions, infections of the central nervous system, neuromuscular diseases, progressive neurological conditions and static neurological conditions.

## Static Neurological Conditions:

### Cerebrovascular Disease, Head Injuries, Spinal Cord Injuries

Common cerebrovascular diseases:

- Transient Ischemic Attack (mini stroke) with minimal to no impairment
- Embolic/Thrombotic Cerebral infarction with moderate to major impairment
- Intracerebral or subarachnoid hemorrhage
- Traumatic Brain Injury
- Seizure Disorders

Static neurological conditions are comprised of cerebral vascular diseases, head injuries and spinal cord injuries. Common cerebrovascular diseases include transient ischemic attacks (also known as mini strokes), embolic and thrombotic cerebral infarction, intracerebral and subarachnoid hemorrhage, traumatic brain injury and certain seizure disorders. Although these conditions are static in nature, many of these conditions have a predisposition towards symptoms that are a risk for driving, such as the risk of a future seizure.

## TIA / Stroke

- Seizure risk is associated with the location of the lesions. *Cortical and subcortical* deficits (both being Cerebral) have an increased risk while *cerebellum and brainstem* lesions are not.
- Cerebral infarctions can cause residual intellectual and/or physical impairments
- Most recovery occurs within first year.
  
- FMCSA does not regulate when a driver can return to work after experiencing a TIA or stroke.
- The certifying ME evaluates the status of the medical condition and determines if the driver is safe to operate a CMV.
  - The ME may consult with specialists and request additional evaluation to assist the ME in making a physical qualification determination.

For drivers that have had either a TIA or stroke, the risk of having a future seizure is increased when the stroke occurred in the cerebral cortical or subcortical areas. A TIA or stroke occurring in the cerebellum or brainstem have a lower risk of seizure than when the stroke occurs in the cortical or subcortical areas of the brain. FMCSA does not regulate when a driver can return to work after experiencing a TIA or stroke. The certifying ME evaluates the status of the medical condition and determines if the driver is safe to operate a CMV. The ME may consult with specialists and request additional evaluation to assist in making a physical qualification determination.

## Transient Ischemic Attack

Focal inadequate blood supply to a portion of the brain. Usually lasting more than a few seconds but less than 20 minutes. Symptoms can persist for 24 hours. Resolution of symptoms is complete.

Risk of recurrent event is highest during the first weeks/months, declining to 5% after one year. Risk of recurrent event may be reduced by surgical intervention.

### Certify If:

- Off anticonvulsant medication
- Clearance from a neurologist
- Normal physical exam, neurological exam

A transient ischemic attack or TIA is a focal loss of blood supply to a portion of the brain. It usually lasts more than a few seconds, but most are less than 20 minutes in length. Symptoms can persist for 24 hours. The FMCSA definition of a TIA includes complete resolution of all symptoms. The risk of having a future event is highest during the first weeks and months after having a TIA and then the risk declines to 5% after about one year. Risk of a recurrent event can be reduced by surgical intervention. They must have clearance from a neurologist and have a normal physical and neurological exam.

## Embotic/Thrombotic Stroke

- Majority of recovery happens in first year
- Deficits that remain after one year are usually permanent
- Early seizure: when a seizure happens at the same time as an embolic stroke
  - Indicates an increased risk of a future unprovoked seizure
- 16% of stroke victims have an unprovoked seizure within 5 years

For drivers that have had an embolic or thrombotic stroke, most of the recovery will occur within one year. Deficits that are present after one year are generally considered to be permanent. Many times, an embolic stroke is accompanied by a seizure at the time of the event, called an early seizure. The presence of an early seizure indicates an increased risk for a future unprovoked seizure. 16% of these drivers will have an unprovoked seizure within five years.

## Embolic/Thrombotic Stroke

### Certify If:

- Physical exam, neurological exam *demonstrating that driver's residual impairments do not interfere with their ability to operate a CMV*
- Medications do not cause side effects that could impair the driver from operating a CMV
- Clearance from a neurologist
- Annual medical examination

**Certification Interval:** 1 year

Drivers with a history of embolic or thrombotic stroke can be certified to drive if they have a physical exam and a neurological exam indicating any residual impairment does not interfere with safe driving, Drivers that meet the requirements to be certified after an embolic or thrombotic stroke can be certified up to one year.

## Intracerebral and Subarachnoid Hemorrhage

Bleeding into substance or spaces of the brain. May result from hypertension, trauma, aneurysms, neoplasms, AV malformation. Risk for seizure is associated with location of hemorrhage

### Waiting Period:

- 1 year if not at risk of seizures (cerebellum or brainstem)
- 5 years if risk for seizure (cortical or subcortical)

### Certify If:

- Completed waiting period
- Normal physical exam, neurological exam including neuro-ophthalmological evaluation and neuropsychological testing.
- No neurological residuals affecting driving
- Clearance from a neurologist

Intracerebral and subarachnoid hemorrhage (or bleeding) into the substance or spaces of the brain may result from hypertension, trauma, aneurysms, neoplasms, arteriovenous malformation. The risk for having a future seizure is associated with the location of the hemorrhage and waiting periods are based upon the risk of having a future seizure. There is a one-year mandatory waiting period for a hemorrhage that occurs in the cerebellum or brainstem and a five-year waiting period for those occurring in the cortical or subcortical areas. Drivers who have had an intracerebral or subarachnoid hemorrhage can be certified if they complete appropriate waiting time and have normal physical and neurological exams which include neuro-ophthalmological and neuropsychological testing. Drivers must have no neurological residuals that affect safe driving and they must have clearance from a neurologist.

## Intracerebral and Subarachnoid Hemorrhage

### Do Not Certify If:

- Waiting Period incomplete
- Uses oral anticoagulant therapy (risk for excessive bleeding)
- Uses any drugs with potential high rate of complications (depressing effect on nervous system)
- Residual intellectual or physical impairment interfering with driving
- Does not have clearance from a neurologist

**Certification Interval:** 1 year

Drivers that have had an intracerebral or subarachnoid hemorrhage should not be certified to drive unless they have completed their appropriate waiting period. They should not use oral anticoagulant therapy or medications with a high rate of potential complications. Most of these drivers are not treated with anticoagulant therapy so this does not come up as often as those that have an embolic or thrombotic stroke. They cannot have residual intellectual or physical impairments that interfere with safe driving or if they have not had clearance from a neurologist. Drivers that meet the certification requirements can be certified for up to one year.

## Traumatic Brain Injury

Injury from external physical force. May result in diminished state of consciousness, coma, memory loss, speech, emotional problems, decreased reasoning, long term cognitive or physical function.

### Classification of TBI:

- **Mild head Injury:**
  - No dural penetration or loss of consciousness that lasts for longer than 30 minutes.
- **Moderate head Injury:**
  - No dural penetration but causes loss of consciousness lasting longer than 30 minutes but less than 24 hours.
- **Severe Head Injury:**
  - Dural penetration causing loss of consciousness longer than 24 hours.
  - High risk of unprovoked seizure *does not diminish with time*

**Severe Head Injury (TBI) with or without early seizures is disqualifying.**

Traumatic brain or spinal cord injury is described as an injury resulting from an external physical force. The results of the injury may be; a diminished state of consciousness, coma, memory loss, difficulty in speech, emotional problems, decreased cognitive ability, decrease reasoning ability, or physical dysfunction. There are three classifications of traumatic brain injury. Mild head injuries are described as having no dural penetration or loss of consciousness that lasts for fewer than 30 minutes. This can be further classified by whether or not an early seizure occurred. Moderate head injury is described as having no dural penetration but there is a loss of consciousness lasting longer than 30 minutes, but less than 24 hours. This can also be further classified by whether or not an early seizure occurred. Severe head injury is described as an injury that penetrates the dura causing loss of consciousness longer than 24 hours. When a severe head injury has occurred, there is a high risk of unprovoked seizures that does not diminish with time. Severe traumatic brain injury with or without an early seizure is disqualifying.

## Traumatic Brain Injury



### Examination Recommendations:

- Complete physical exam, vision, strength, agility
- Neurological exam
- Neuropsychological testing with normal results, judgment, concentration, cognitive, attention
- If seizures, follow seizure guidelines
- TBI or Spinal Cord injury that results in paraplegia is disqualifying.
- Drivers with muscle weakness should be evaluated.

When performing the medical exam on a commercial driver with a history of a traumatic brain injury, the medical examiner completes a physical exam including vision, strength, agility, and a general neurological exam. Neuropsychological testing with normal results in judgement, concentration, cognition and attention should be obtained if the driver has had a seizure. Medical examiners will also need to follow the seizure guidelines to be discussed later. Traumatic brain or spinal cord injury that results in paraplegia is disqualifying. Drivers that have any weakness should be evaluated to determine whether they are fit for duty.

## Traumatic Brain Injury

### Waiting Periods if seizure free and off anticonvulsant meds:

- Mild TBI w/o early seizures = none
- Mild TBI with early seizures = 2 years
- Moderate TBI w/o early seizures = 2 years
- Moderate TBI with early seizures = 5 years
- Severe TBI is disqualifying

The mandatory waiting periods following traumatic brain injury are based upon the risk of a future seizure. When a traumatic brain injury occurs accompanied by an early seizure, the risk for a future unprovoked seizure is increased. Waiting periods are periods of time where the driver is seizure free and off anticonvulsant medications. There is no waiting period for a mild TBI without an early seizure. For a Mild TBI with an early seizure, or a Moderate TBI without an early seizure there is a two-year waiting period. There is a five-year, seizure-free and off anticonvulsant medication waiting period if the drivers had a moderate TBI companied by an early seizure. Drivers who have had a severe traumatic brain injury are disqualified from driving.

## Traumatic Brain Injury

### **Certify If:**

- Completed waiting period
- Normal physical exam, neurological exam including neuro-ophthalmological evaluation and neuropsychological testing.
- Clearance from a neurologist
- Annual medical examination

### **Do Not Certify If:**

- Uncompleted waiting period
- Abnormal physical exam, neurological exam including neuro-ophthalmological evaluation and neuropsychological testing.

**Spinal cord injury resulting in paraplegia is disqualifying.**

**Certification Interval:** 1 year, 2 year for Mild TBI w/o early seizure

**Severe Head Injury (TBI) with or without early seizures is disqualifying.**

Drivers with a history of mild or moderate TBI should not be certified if they have not completed their waiting period or if they have an abnormal physical, neurological, neuro-ophthalmological, or neuropsychological evaluation. They should not be certified if they do not have clearance from a neurologist and an annual medical examination. Drivers who have a history of a severe TBI with or without early seizures should not be certified to drive because the risk of a future seizure never decreases with time. Drivers that meet the requirements following a traumatic brain injury can be certified to drive for up to one year. However, a driver who had a mild TBI without an early seizure can be certified for up to 2 years.

## Seizures & Epilepsy- **Non-Discretionary**

- Acute Seizures due to a structural insult to the brain
  - TBI
  - Stroke
  - Hemorrhage
- Single Unprovoked Seizures
- Acute Seizures from a known cause such as systemic metabolic diseases
- Childhood Febrile Seizures
- Epilepsy
  - FMCSA Epilepsy Definition: 2nd unexplained/unprovoked seizure

The discussion on seizures is somewhat a review of what was just covered in the previous slides. The seizure and epilepsy medical guideline are non-discretionary. Medical examiners must follow the guideline and guidance associated with the standard. We will be discussing acute seizures caused by a structural insult to the brain, such as a TBI, an embolic or thrombotic stroke, hemorrhage, or other etiology, single unprovoked seizures, seizures with a known cause, childhood febrile seizures, and epilepsy. The FMCSA definition of epilepsy is having a second unexplained or unprovoked seizure.

## Acute Seizures- Structural Insult to Brain

- The site and severity of the injury to the brain reflects the likelihood of having a future seizure.
- Early seizures are a risk factor for later unprovoked seizures and epilepsy.
- Risk for subsequent seizures is greatest in the first 2 years following the event.

The length of time an individual is seizure free and off anticonvulsant medication is considered the best predictor of future risk of seizures.

**Therefore, the driver should be seizure free and off anticonvulsant medication for the entire waiting period before being certified to drive.**

Acute seizures can be the result of a structural insult to the brain. The site and severity of the insult to the brain reflects the likelihood of having a future seizure. As previously discussed, early seizures occur at the time of the brain injury and are a risk factor for a later unprovoked seizure and the development of epilepsy. The risk for subsequent seizures is greatest in the first two years following the insult event. The length of time the individual is seizure free and off anticonvulsant medication is considered the best predictor of the future risk for seizures. Therefore, drivers should be seizure free and off anticonvulsant medication for the entire waiting period before being certified to drive.

## Acute Seizures- Structural Insult to Brain

### **Waiting Periods:**

- 2 years seizure free and off anticonvulsant medication if:
  - Moderate insult without early seizures
  - Mild insult with early seizures
- 5 years seizure free and off anticonvulsant medication if:
  - Moderate insult with early seizures
  - Stroke with risk for seizures
  - Intracerebral or subarachnoid hemorrhage with risk for seizures

The waiting periods for drivers who have had an acute seizure resulting from a structural insult are like that of stroke and hemorrhages. The mandatory waiting period is two years if they remain seizure free and off anticonvulsant medication with the following conditions: Moderate insult without early seizures or a mild insult with early seizures.

A five-year waiting period seizure free and off anticonvulsant medication is required for drivers with moderate insults with early seizures, stroke with a risk for seizures, and intracerebral or subarachnoid hemorrhages with a risk for seizures.

## **Acute Seizures- Structural Insult to the Brain**

### **Certify If:**

- Completed waiting period seizure free and off anticonvulsant medication
- Normal physical exam, neurological exam including neuro-ophthalmological evaluation and neuropsychological testing.
- Clearance from a neurologist

### **Do Not Certify If:**

- Hx of **severe** brain insult with or without early seizures
- Mild or Moderate Insult and:
  - Uncompleted waiting period
  - Has not completed normal physical exam, neurological exam including neuro-ophthalmological evaluation and neuropsychological testing.
  - No Clearance from a neurologist

**Case-by-case basis obtain additional tests/consultation to assess fitness**

**Certification Interval:** 1 year

Drivers with a history of an acute seizure following a structural insult to the brain can't be certified if they have a history of mild or moderate insult with an early seizure until they have completed the appropriate waiting period, have a normal physical exam, neurological exam, neuro-ophthalmological exam, and neurophysiological testing. They must also have clearance from a neurologist. Drivers should not be certified until they fulfill all of certification requirements. On a case-by-case basis, medical examiners can obtain additional tests or consultation to determine whether the driver is physically fit for duty. Drivers that meet the requirements following an acute seizure from a structural insult of the brain can be certified for an interval up to one year.

## Acute Seizures- Structural Insult to the Brain

### Severe Head Injury (TBI):

The risk for developing seizures does not decrease with time and therefore there is always a risk for future seizure.

**Do not Certify:** Hx of Severe Head Injury (TBI)

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### Surgical Procedures with Dural Penetration:

Risk for subsequent epilepsy similar to severe head trauma.

**Do Not Certify:** Hx of surgical dural penetration

Drivers with a severe head injury, whether or not it is accompanied by an acute seizure, are not certified to drive. This is because the risk for having a future unprovoked seizure does not decrease with time and therefore, they are always at risk. Drivers who have had a surgical procedure that penetrated the dura are at the same risk of having a future seizure as those that had a severe TBI and are therefore disqualified from driving.

## Single Unprovoked Seizure

Occurs in the absence of an identified acute alteration of metabolic function or acute insult to brain structure. There may be a known or distant cause of the seizure.

Indicates a higher risk for further seizures. Reoccurrence estimated as 36% within five years. After 5 years the risk drops to 2-3% per year

**Waiting Period:** 5 years, seizure and anticonvulsant medication free

Earlier return to work may be considered for drivers with a normal EEG who have no epileptic-form activity and normal exam by a neurologist specializing in epilepsy.

A single unprovoked seizure may be the first sign of an unidentified epileptic condition. A single unprovoked seizure that occurs in the absence of an identifiable acute alteration of metabolic function or insult in brain structure, even though there may be a known or distant cause, has a higher risk of future seizures. Reoccurrence occurs 36% of the time within five years. After five years, however, there is a significant drop in risk to only 2 to 3% per year. The waiting period for a driver who has had a single unprovoked seizure is five years seizure free and off anticonvulsant medication. An early return to work might be considered for drivers who have a normal EEG, who have no epileptic form activity, and have a normal exam performed by a neurologist who specializes in epilepsy.

## Single Unprovoked Seizure

### **Certify If:**

- Completed mandatory waiting period
- Clearance from a neurologist who specializes in epilepsy

### **Do Not Certify if:**

- Not completed waiting period, No neurological clearance

**Certification Interval:** 1 year

Drivers who have had a single unprovoked seizure can be certified if they have completed the mandatory waiting period and have clearance from a neurologist who specializes in epilepsy and may need to have biennial medical exams with their treatment provider. Do not certify drivers who have not completed the five-year waiting period or have no neurological clearance. Drivers that meet the certification requirements can be certified for a period of up to one year.

## Acute Seizures- Known Cause

A sudden, non-epileptic seizure or **loss of consciousness** can result from:

- A drug reaction
- High temperature
- Acute infection
- Disease
- Dehydration
- Acute metabolic disturbance

Certification should be deferred until fully recovered, no residual complication and not taking anti-seizure medication.

### **Certify If:**

- Normal neurological exam
- Anti-seizure medication is not required

**Certification Interval:** 2 years

If the driver has a sudden episode of a non-epileptic seizure or a loss of consciousness resulting from a drug reaction, a high temperature, an acute infection, dehydration, or an acute metabolic disturbance, the driver's certification should be deferred until they have fully recovered, have no residual complications and are not taking anti-seizure medication. The driver can be certified if they have a normal neurological exam and no anti-seizure medication is required. Drivers who have an acute seizure from a known cause and meet all the recommendations can be certified for up to two years.

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## Acute Seizures- Systemic Metabolic illness

Seizures caused by metabolic illness (when controlled) are not associated with increased risk of further seizures. The risk of recurrence is related to recurrence of the inciting illness.

**Waiting Period:** No recommended time frame  
Do not certify driver until etiology confirmed and Tx shown adequate, effective, safe and stable

**Certify If:**

- Underlying metabolic dysfunction has been corrected
- No disqualifying risk of recurrence of inciting illness

**Do Not Certify If:**

- Severe/Nature is a danger to driver health or the public

Case-by-case basis obtain additional tests/consultation to assess fitness for duty

**Certification Interval:** 2 year

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Acute seizures caused by metabolic illness are not associated with an increased risk of a future seizure when the metabolic illness has been controlled. The future risk of a seizure is related to the risk of reoccurrence of the illness. There is no recommended waiting period, but medical examiners should not certify the driver until the metabolic illness is confirmed and treatment is shown to be effective, safe and stable. Do not certify the driver if the severity or nature of the condition is a danger to the driver or to the public. Medical examiners on a case-by-case basis may obtain additional tests or consultation to assess fitness for duty. Otherwise, these drivers can be certified for a two-year interval.

## Acute Seizures- Childhood Febrile Seizures

Occur in 2-5% of children before age 5 yrs.. Seldom after 5 yrs. of age. Most unaware they had a seizure, risk of an unprovoked seizure decreases after age 10.

**Waiting Period:** No recommended time frame

Do not certify driver until etiology confirmed and Tx shown adequate, effective, safe and stable

**Certify If:**

- Seizure Hx is limited to childhood febrile seizures

**Do Not Certify If:**

- Severe/Nature is a danger to driver health or the public

Case-by-case basis obtain additional tests/consultation to assess fitness for duty

**Certification Interval:** 2 year

Childhood febrile seizures occur in 2-5% of children before the age of 5. Seldom does it occur after the age of five and many are unaware that they had a seizure. With febrile seizures, the risk for an unprovoked seizure decreases after age 10. Therefore, there is no waiting period recommended for drivers who have had a history of a childhood febrile seizure. Drivers that have a seizure history that is limited to childhood febrile seizures can be certified to drive for a two-year interval. Medical examiners should not certify a driver whose severity or nature of the seizure condition is a danger to the driver health or to the public safety. Medical examiners can on a case-by-case basis obtain additional testing, or consultation to assess the driver's fitness for duty.

## Epilepsy

**Epilepsy is characterized by seizures without warning.**

**The following drivers can not be certified to drive:**

- **Drivers with a medical Hx of epilepsy**
- **Drivers with a current clinical Dx of epilepsy**
- **Drivers taking anti-seizure medication (for Tx of seizures)**

Seizures that occur without warning are characteristic of epilepsy. Drivers cannot be certified to drive if they have a medical history of epilepsy, a current clinical diagnosis of epilepsy and drivers who are taking anti-seizure medication for treatment of seizures. However, there is a Federal seizure exemption that may allow drivers a shorter waiting period.

## Epilepsy

**Waiting Period:** 10 years off anticonvulsant medications & seizure free

**Certify if:**

- Driver completes mandatory waiting period
- Nature/Severity not a danger to driver health or public

**Do not Certify if:**

- Established Hx of epilepsy
- Clinical DX of epilepsy
- Any other disqualifying medical condition
- Taking anticonvulsants due to Hx or risk for seizures

**Clearance from neurological specialist is prudent if choosing to certify a driver with established Hx of epilepsy.**

Drivers who have a history or diagnosis of epilepsy can be certified if they complete a 10-year seizure free waiting period while off anti-convulsant medications. For a medical examiner to consider certification of the driver, they must have been removed from the anti-convulsant medications by their treating physician and have ample evidence that no further seizures occurred. For a driver with a history of epilepsy, it is prudent that the medical examiner obtain clearance from a neurological specialist prior to certifying the driver. Drivers with a history of epilepsy can be certified if they complete the mandatory waiting period and the nature and severity of their epilepsy is not a danger to themselves or to the public.

## Seizure & Epilepsy Disorder Exemption

**To apply for the Exemption the following must be met:**

- **Epilepsy DX:**
  - be seizure free for 8 years, on or off medication
  - If taking anti-seizure meds, the plan for medication should be stable for 2 years. (Stable means: no change in meds, dosage, or frequency of administration.)
  - **Recertification Interval: 1 year**
- **Single Unprovoked Seizure: (no known reason for cause)**
  - Seizure free for 4 years, on or off medication
  - If taking anti-seizure medication, the plan for medication should be stable for 2 years (see above).
  - **Recertification Interval: 2 years**

There is a Federal seizure and epilepsy disorder exemption for those who do not meet the medical guidelines for seizure disorders and epilepsy. Like all federal exemptions, this exemption can take up to six months to obtain but will allow the driver to drive across state lines. FMCSA would like for medical examiners to be the gatekeeper in determining which drivers can apply for the exemption. Drivers with a history of epilepsy can apply for the exemption if they have been seizure free for eight years, on or off anti-seizure medication. If during that time they have been taking anti-seizure medication, the “plan” for that medication should be stable for two years. Stable means there's been no change in the medications, the dosage, or the frequency of administration. Drivers that meet these requirements can apply for the exemption and can be certified for one year.

Drivers who have a history of a single unprovoked seizure, where there is no known reason or cause, can apply for the exemption if they have been seizure free for four years, on or off anti-seizure medication. If they are taking anti-seizure medication during the waiting period, the “plan” for that medication should be stable for a least two years using the same definition of stability as what was just discussed for epilepsy. These drivers can apply for the exemption and be certified for two years. This is the only time a driver who has obtained a federal exemption can be medically certified for over 1 year. The epilepsy and seizure disorder exemption is for two years. Every two years the driver will need to re-apply for the exemption.

## Seizure & Epilepsy Disorder Exemption

(continued)

### Single Provoked Seizure; (known reason for seizure)

– **Low-risk factors:**

- Seizures caused by a medication,
- by non-penetrative head injury with loss of consciousness less than or equal to 30 minutes,
- by a brief loss of consciousness not likely to recur while driving,
- by metabolic derangement not likely to reoccur,
- and by alcohol or illicit drug withdrawal.

**Recertification Interval: 1 year**

Drivers who have had a single provoked seizure where the reason or cause is known can apply for the epilepsy and seizure disorder if they have low risk factors. Low risk factors are seizures caused by medication, a non-penetrative head injury with loss of consciousness less than or equal to 30 minutes, a brief loss of consciousness not likely to recur while driving, metabolic derangement not likely to reoccur, or by alcohol or illicit drug withdrawal. Drivers with these low risk factors for their single provoked seizure can apply for the exemption and can be certified for one year.

## Seizure & Epilepsy Disorder Exemption

- **Single Provoked Seizure Continued:**
  - **Moderate-to-high-risk factors:**
    - caused by non-penetrating head injury with loss of consciousness or amnesia greater than 30 minutes,
    - or penetrating head injury,
    - intracerebral hemorrhage associated with a stroke or trauma,
    - infections, intracranial hemorrhage,
    - post-operative complications from brain surgery with significant brain hemorrhage, brain tumor, or stroke.

**Do Not Certify drivers with moderate-to-high-risk factors**

Drivers who have had a single provoked seizure when the cause is known and have moderate to high risk factors for a future seizure should not be certified to drive. These risk factors include seizures caused by a non-penetrating head injury with a loss of consciousness or amnesia greater than 30 minutes, a penetrating head injury, intracerebral hemorrhage associated with a stroke, trauma, or infection, intracranial hemorrhage or post operative complications from brain surgery, or with significant brain hemorrhage, brain tumor or stroke. These drivers can apply for the exemption but should not be certified to drive.

## Anticonvulsant Therapy

- Used for control or prevention of seizures, but there is still a risk should medication be inadvertently missed.
- Also prescribed for psychiatric, antimanic, mood-stabilizing, and for chronic pain

### Side Effects:

- Depressed mood
- Cognitive deficits
- Decreased reflex responses
- Unsteadiness
- Sedation

**Small doses for chronic pain are less likely to have side effects that interfere with safe driving.**

Anticonvulsant medications used to control or prevent seizures still have a risk, should a dose be inadvertently missed. These medications are also prescribed for treating other medical conditions such as chronic pain, but still have the side effects of depressed mood, cognitive deficits, decreased reflex responses, unsteadiness and sedation. When used for treatment of chronic pain, the dosage is usually much smaller. Thus, it is less likely that they will have severe side effects that will interfere with safe driving.

## Anticonvulsant (Anti-Seizure) Therapy

**Waiting Period:** No recommended time frame Do not certify until medication is shown to be adequate/effective, safe/stable

**Certify If:**

- Nature/Severity of underlying conditions does not interfere with safe driving
- Effect of medication is not a danger to safety of driver or public

**Do Not Certify If:**

- Use of Anticonvulsant medication to control or prevent seizures

**Case-by-case additional testing/consultation to adequately assess fitness for duty.**

**Certification Interval: 2 years**

For drivers taking anticonvulsant medications, if they are using that medication to control or prevent seizures, they should not be certified to drive. There is no recommended waiting period for drivers who are taking an anti-convulsant medication for other reasons. However, the medical examiner should not certify the driver until the medication is shown to be adequate, effective, safe and stable. Drivers can be certified if the nature and severity of the underlying medical condition does not interfere with safe driving. The effect of the medication should not be a danger to the safety of the driver for the public. On a case-by-case basis, the medical examiner can ask for additional testing or consultation with the specialist to adequately determine whether the driver is fit for duty. If qualified to drive, the driver can be certified for up to two years.

## Anticonvulsant Meds

**Barbiturates** – Phenobarbital (Luminal), Amobarbital (Tuinal), Barbitol (Veronal), Secobarbital (Seconal)

- Central nervous system depressants, Tx for Epilepsy, **Largely replaced by benzodiazepines** which are significantly less dangerous in overdose.

**Hydantoins (glycolylurea)**– Dilantin

- Tx epilepsy, anxiety, trigeminal neuralgia, mood disorders.

**Carbamazepine's** – Tegretol, Carbatrol

- Anticonvulsant/mood stabilizing, for epilepsy, bipolar disorder, trigeminal neuralgia, ADHD, schizophrenia, phantom limb syndrome, neuromyotonia, post-traumatic stress disorder.

**Valproic Acids** – Depakote, Depakene, Depacon

- Anticonvulsant/mood-stabilizing, epilepsy, bipolar disorder, major depression, migraines, schizophrenia.

**Others:** Topamax (Topiramate), Neurontin (Gabapentin), Lyrica (Pregabalin), Lamotrigine (Lamictal)

There are several categories, or classifications, of anticonvulsants such as barbiturates, which are have mostly been replaced by the benzodiazepines. This slide also lists many other conditions that are treated by anticonvulsants such as bipolar disorders, depression, migraines, schizophrenia, trigeminal neuralgia, ADHD and PTSD.

## Headaches

Chronic or recurring headaches can potentially interfere with a driver's ability to safely operate a CMV due to symptoms such as a *visual distortion or disequilibrium* associated with a migraine.

Examples: Migraine, Tension, Cluster, TBI, Substance Abuse, Cranial Neuralgia, Atypical Facial Pain

- Incapacitating symptoms, even if periodic, or early stage of diseases, warrant disqualification.
- Do not certify until etiology is confirmed and treatment is shown to be adequate, effective, safe, and stable.

### Certify If:

- Nature/Severity not a danger to driver's health or public safety

**Certification Interval:** 2 years

For drivers that have chronic or recurrent headaches, the medical examiner should consider not only the frequency and severity, but other symptoms such as visual or equilibrium disturbances which may be related to a migraine, headache or stroke. Headaches that may interfere with safe driving include migraines, tension headaches, cluster headaches, post-traumatic brain injury, substance abuse, cranial neuralgia or atypical facial pain.

## Vertigo - Dizziness

**Loss of equilibrium or balance with incapacitating symptoms warrant disqualification, even if periodic.**

- When interfering with concentration, attention, judgement, and sensory or motor function

**Waiting Period of 2 months if asymptomatic with:**

- Benign positional vertigo (BPV)
- Acute and Chronic peripheral vestibulopathy (ACPV)

**Certify If:**

- Completed asymptomatic waiting period
- Nature/Severity not a danger to driver's health or public
- Biennial medical exams

**Certification Interval:** 2 years

Drivers with uncontrolled vertigo may be disqualified from driving. Balance and orientation are affected by input from vestibular, visual, and proprioception, and has motor integration within the central nervous system. Vertigo is commonly treated with anti-histamines, benzodiazepines and theophylline. There is a mandatory two-month asymptomatic waiting period for drivers with a diagnosis of Benign positional vertigo or acute and chronic peripheral vestibulopathy. Drivers with vertigo can be certified if they complete the appropriate waiting period, have a biennial medical exam and the severity and nature of their vertigo or dizziness is not a danger to driver or public. Those that meet the requirements can be certified for up to two years.

## Vertigo - Dizziness

### Do Not Certify if:

- Have not completed waiting period
- Meniere's Disease
- Labyrinthine Fistula
- Nonfunctioning labyrinths
- Taking Benzodiazepines or Phenothiazines

Do not certify a driver with vertigo if they have not completed the appropriate asymptomatic waiting period. Also, those with a diagnosis of Meniere's disease, Labyrinthine fistula, nonfunctioning labyrinths or who are taking Benzodiazepines or Phenothiazines as treatment for their vertigo or dizziness should not be certified.

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## Infections of the CNS

Drivers with a **current infection** of the CNS **should not be certified** until etiology is confirmed and treatment is adequate, effective, safe and stable.

**No restrictions for drivers with Aseptic Meningitis as there is no increase in seizure risk.**

**Waiting Period after being seizure free and off anticonvulsant medication:**

1 year:

- Bacterial meningitis or Viral Encephalitis without early seizures

5 years:

- Bacterial meningitis with early seizures

10 years:

- Viral encephalitis with early seizures

**Certify If:**

- Aseptic meningitis
- Completed waiting period for Bacterial meningitis or Viral encephalitis
- Nature/Severity not a danger to driver health or public safety
- Clearance from Neurologist

**Certification Interval:** 2 years

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As with strokes, brain hemorrhage and traumatic injury, when evaluating a driver with a history of central nervous system infection, the medical examiner should consider the diagnosis and whether an early seizure occurred. Drivers with a current central nervous system infection or those with signs and symptoms should not be certified until the ideology is confirmed and treatment is adequate, effective, safe and stable.

Drivers with a history of *Aseptic Meningitis* are not required to complete a waiting period, once the etiology is confirmed and treatment is adequate, effective, safe and stable because it is not associated with subsequent seizures. Drivers with a history of *bacterial meningitis* without an early seizure have a one-year waiting period seizure-free and off anti-convulsant medication. The same is true for drivers with *Viral Encephalitis* without an early seizure.

Drivers who have a history of bacterial meningitis *with* an early seizure have a five-year waiting period seizure free and off anticonvulsant medication while drivers with a history of viral encephalitis associated *with* an early seizure have a ten-year waiting period seizure free and off anticonvulsant medication.

Do not certify drivers who have a current central nervous system infection. Otherwise, these drivers can be certified for two years, if monitored more frequently by their treating provider.

## Parkinson's Disease

**Waiting Period:** No recommended timeframe

**Certify If:** Meets the following criteria based on specialist evaluation:

- Mild symptoms only, Hoehn and Yahr Stage 1 or less and 90% or higher on the Schwab and England ADL Scale.
- Tolerate medications w/o cognitive, motor or other side effects that might affect driving.
- No significant fluctuations in motor response or "on-off" effects.
- Satisfactory function on tests assessing key cognitive functions
- No evidence of mood disorder or satisfactory control of an existing mood disorder
- **Semi-annual reevaluation by neurologist**
- **Annual neuropsychological evaluation**

**Certification Interval:** Not specified

Drivers with Parkinson's can be certified if they have mild symptoms, are categorized as Hoehn and Yahr stage one or less and have a score of 90% or higher on the Schwab and English ADL skills. They must tolerate their medications without side effects that could affect safe driving. They must have no significant fluctuations in motor response, sometimes referred to as "on-off" affects. They must have satisfactory results on tests assessing key cognitive function and have no cognitive dysfunction and no evidence of a mood disorder. If they do have an existing mood disorder, this must be satisfactorily controlled. There is no mandatory waiting period and no specific interval for certification, although drivers must have a semi-annual reevaluation by a neurologist and an annual neuropsychologist evaluation. Therefore, if a driver is being reevaluated every six months, it would seem logical that six months could be the appropriate certification interval for drivers with Parkinson's.

## Dementia

A progressive decline in mental functioning affecting memory, language, spatial functions, problem solving and behavior.

**Drivers with a diagnosis of dementia are disqualified.**

**Alzheimer's and Pick's Disease are incompatible  
with safe driving**

Dementia is described as a progressive decline in mental functioning that affects memory, language, spatial functions, high functions and problem-solving. Alzheimer's and Pick's disease (which is essentially Alzheimer's in a different location of the brain) are incompatible with safe driving. Drivers that have dementia have no applicable waiting period, cannot be certified and therefore no certification interval is applicable.

## Disqualifying Dementias

### Disqualified when related:

- Alzheimer's disease
- AIDS
- Pick's disease – like Alzheimer's, effects different part of brain
- Huntington's Chorea
- Progressive Supranuclear Palsy
- CVA
- Encephalitis
- Hypothyroidism
- Organic-solvent toxicity
- Sedative use
- Antihypertensive use
- Creutzfeldt-Jacob Disease (Mad cow)
- Syphilis

Dementia associated with the diseases are disqualifying: Alzheimer's, AIDS, Pick's disease, Huntington's Chorea, Progressive Supranuclear Palsy, CVA, Encephalitis, Hypothyroidism, Organic- solvent toxicity, Sedative use, Antihypertensive use, syphilis and Creutzfeldt-Jacob disease.

## Disqualifying Dementias

- Metabolic Encephalopathy
- Alcoholism
- Depression
- Granulomatous Meningitis
- Vitamin B-12 deficiency
- Heavy-metal toxicity
- Tranquilizer use
- Structural lesions
  - Tumor
  - Subdural Hematoma
  - MS
  - Stroke
  - Hydrocephalus

Continuing with disqualifying dementia: metabolic encephalopathy, alcoholism, depression, granulomatous meningitis, vitamin B-12 deficiency, heavy-metal toxicity, tranquilizer use or structural lesions of the brain such as tumor, subdural hematoma, multiple sclerosis, stroke or hydrocephalus.

## Dementia Screening

### Mini-Mental State Exam (MMSE) or Folstein's test:

- 30-point questionnaire used for Cognitive Impairment evaluation
- Samples functions including arithmetic, memory and orientation.
- Any score  $\geq 25$  is considered normal.
- Divided into 5 sections
  - Orientation
  - Immediate Recall
  - Attention and Calculation
  - Recall
  - Language

The Folstein's Test or Mini-Mental State Exam (MMSE ) is a brief 10-minute, 30-point questionnaire used for cognitive impairment evaluation and can be used to screen for dementia. Some versions are copyrighted, but free versions are available to be downloaded from the internet. A score greater than or equal to 25 out of 30 is normal.

## Central Nervous System Tumors

Brain tumors affect cognitive ability, judgment, sensory and motor abnormalities. Some benign tumors may be allowable w/successful treatment.

**Waiting Period post surgical treatment, remaining seizure free and off anticonvulsant meds:**

**1 year:**

- Infratentorial meningioma
- Acoustic neuromas
- Pituitary adenomas
- Spinal benign tumors
- Benign extra-axial tumors

**2 years:**

- Benign supratentorial tumors
- Spinal tumors

Drivers presenting with neurological signs or symptoms should be referred to a neurologist for a detailed evaluation of their neurological status. Central nervous system tumors can affect cognitive ability, judgement, sensory and motor function. Some benign tumors may be allowable if there has been successful surgical treatment. There is a one-year waiting period following surgical treatment of Infratentorial meningiomas, acoustic neuromas, pituitary adenomas, spinal benign tumors and benign extra-axial tumors. There is a two-year waiting period following surgical treatment of benign supratentorial tumors and spinal tumors.

## Central Nervous System Tumors

### **Certify if:**

- Completed waiting period
- Stable non-progressive deficit or no neurological deficit
- Imaging shows no tumors
- Evaluation performed by neurologist or physiatrist

### **Do not Certify if:**

- Incomplete waiting period
- Primary or metastatic malignant tumors of the nervous system
- Current untreated benign nervous system tumors

**Certification Interval:** 1 year

Drivers with these central nervous system tumors can be certified to drive if they complete the waiting period, their condition is stable and non-progressive, there is no neurological defect that interferes with safe driving, and no tumor on imaging. They also must have an evaluation performed by a neurologist or physiatrist. Do not certify drivers who have an incomplete waiting period or if they have a primary or metastatic malignant tumors of the nervous system, or any currently untreated benign nervous system tumor. Drivers who meet these guidelines can be certified for up to one year.

## Summary of Neurological Waiting Periods

### Seizure Waiting Periods

The driver must complete the minimum waiting period seizure free and off anticonvulsant medication.

Waiting Period	Diagnosis
10 years	History of epilepsy.  Viral encephalitis with early seizures.
5 years	Single unprovoked seizure, no identified acute change, may be distant cause (possible earlier return to driving if normal neurological examination by a specialist in epilepsy who understands the functions and demands of commercial driving, and the driver has a normal electroencephalogram).  Bacterial meningitis and early seizures.
2 years	Acute seizure with acute structural central nervous system insult.
Based on risk of recurrence of primary condition.	Acute seizure with acute systemic/metabolic illness.

The next two slides are the 2<sup>nd</sup> and 3<sup>rd</sup> most important slides of this training module for preparing to take the national registry certification test. This slide presents an organized chart of waiting periods according to the appropriate neurological condition. There are four general waiting periods for neurological conditions. 10 years, 5 yrs., 2yrs, and those based on the risk of recurrence of the underlying condition.

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## Summary of Neurological Waiting Periods

**Other Neurological Event Waiting Periods**

The driver must complete the minimum waiting period seizure free and off anticonvulsant medication.

Waiting Period	Diagnosis
5 years	Moderate traumatic brain injury (TBI) with early seizures.  Stroke with risk for seizures.  Intracerebral or subarachnoid hemorrhage with risk for seizures.
2 years	Moderate TBI without early seizures.  Surgically removed supratentorial or spinal tumors. <span style="float: right;">(nervous system)</span>
1 year	Transient ischemic attack, stroke, or intracerebral or subarachnoid hemorrhages with no risk for seizures.  Surgically-repaired arteriovenous malformations/aneurysm with no risk for seizures.  Surgically removed infratentorial meningiomas, acoustic neuromas, pituitary adenomas, and benign spinal tumors or other benign extraaxial tumors with no risk for seizures.  Infections of the central nervous system (e.g., bacterial meningitis, viral encephalitis without early seizures).

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This slide contains waiting periods for other neurological events. There are only 3 categories of waiting periods. 5 years, 2 years, and 1 year.

## Self Check

Stem:

- Which of the following conditions is the driver DQ?
  - Febrile seizure
  - Dementia (Severe)
  - Dementia (metabolic)
  - TIA within 1 year
  - TIA greater than 1 year ago.
  
- Key:
- According to medical guidance, the driver with dx of dementia (severe) or TIA (under 1 year) should not be certified.

This is an FMCSA-prepared self check slide. Which of the following conditions is disqualifying? Febrile seizures, severe dementia, metabolic dementia, TIA within one year, and TIA greater than one year.

According to the medical guidance, the driver with a diagnosis of severe dementia or TIA under one year should not be certified. Note that drivers that have metabolic dementia which is reversible can be certified to drive.

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## Self Check

**Stem:**

- The driver is taking Sinemet (levodopa/carbidopa). Can he be certified?

**Key:**

- Used to Tx Parkinson's syndrome may cause disqualification.

**Stem:**

- What should the ME do if the driver has a positive Babinski test?

**Key:**

- DQ the driver.

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This is an FMCSA prepared self check slide. The driver is taking Sinemet. Can they be certified to drive? Sinemet is used to treat Parkinson's disease which may cause disqualification if the driver does not meet the medical guidelines for Parkinson's disease.

What should the medical examiner do if the driver has a positive Babinski test? The correct response would be to disqualify the driver. A positive Babinski test indicates an abnormal condition in the central nervous system, most likely in the perimetral track.

## Self Check

### Stem:

- Which episodic neurological conditions are disqualifying?

### Key:

- Extreme headaches, migraine, cluster neuralgia that affect driving
- Untreated Vertigo
- Untreated Narcolepsy
- Untreated Sleep Apnea
- Idiopathic Central Nervous System Hypersomnolence
- Primary Alveolar Hyperventilation
- Restless legs associated with excessive somnolence syndrome

Which episodic neurological conditions are disqualifying? These include extreme headaches, migraines, cluster neuralgias; Vertigo, narcolepsy, and sleep apnea if left untreated. Idiopathic central nervous system hypersomnolence, primary alveolar hyperventilation, and restless legs associated with excessive somnolence syndrome are also disqualifying.

## Self Check

### Stem:

- When discussing TIA's, what does "no functional residual" mean?

### Key:

- Lack of impairment
- No residual neurological deficit (weakness/paralysis, impaired hearing or vision)
- No loss of sensation
- No impairment or loss of speech
- No fixed dystonia (sustained muscle contraction)
- No tremor or other movement disorders (gait problems)

**All as determined by neurologist.**

When discussing TIA's, what does "no functional residual" mean? The answer is lack of impairment, no residual neurological deficit, no loss or disturbance of sensation or speech, no fixed dystonia, no tremor or other movement disorders or gait problems, all determined by a neurologist.

## Self Check

### Stem:

- What is the risk of a future seizure associated with TIA?
- What are the certification guidelines for TIA?

### Key:

- TIAs are associated with high rate of recurrence during the first year. TIA is warning sign of potential severe stroke. The risk is high whether the patient has had one or several attacks. 1 yr. after the occurrence, the risk is less than 5%.
- 1-year DQ (WP). Interval 1 yr., Dependent on interval Hx, general health, neurological examination, and compliance with Tx.

What is the risk of a future seizure associated with TIA? What are the certification guidelines? TIA's are associated with a high rate of occurrence during the first year. However, after one year the risk of having a future seizure is reduced to less than 5%. TIA's may be a warning sign for a potential severe stroke. Drivers can be certified for one year after completing a mandatory one year waiting period.

## Drug and Alcohol Regulation 49 CFR Part 40

### Medical Examiners should be familiar with FMCSA Regulations 40 CFR 390.5 and 49 CFR Part 40 (Omnibus Transportation Employee Testing Act)

Testing is required for all drivers with a CDL, operating CMV over 26,000lbs, or transporting more than 16 passengers, or transporting hazardous waste on public roadways.

#### **Includes:**

- Federal, State and local government
- Owner-operators
- Equivalently licensed drivers from foreign countries
- For-hire motor carriers

Medical examiners should be familiar with the FMCSA regulations for alcohol and drug testing. All drivers that have a CDL License, regardless of whether they are driving interstate or intrastate, must be in a federal drug testing program if they drive a vehicle that weighs over 26,000 pounds, or a vehicle that is placarded for hazardous waste, or vehicles transporting 16 or more passengers. This includes federal, state, and local government drivers, owner-operators and drivers that are CDL licensed drivers from Mexico and Canada.

## Alcohol and Drug Testing

- Pre-employment (alcohol test is optional)
  - If not in a random program the last 30 days, or if 1 year of past testing records are not available
- Post-Accident
  - Required if a fatality, or if the driver is cited and truck towed, or medical treatment occurs away from the accident site
- Reasonable Suspicion (one supervisor, manager)
- Random
- Return to Duty
- Compliance with SAP requirements
- Conduct Follow-up testing (up to 5 years)

Employers are responsible for implementing and maintaining program

Federal drug testing programs include more than just randomized testing. For a new employee, the driver must have a pre-employment drug test if they have not been in a randomized testing consortium in the last 30 days or if the motor carrier cannot obtain the driver's drug testing records for the last year. Because of the difficulty in obtaining past drug testing records, most companies require the driver to have a pre-employment drug test. Drivers cannot drive until the results of the drug test is obtained.

Before performing a DOT post-accident drug and alcohol test, it should be confirmed that the accident meets the DOT definition of an accident. An accident has occurred if there is a fatality or, when the driver was cited by law enforcement and a vehicle was towed away from the accident scene, or where the driver was cited by law enforcement and a person received medical treatment away from the accident scene.

Reasonable suspicion testing is the most litigated type of testing performed. It occurs when at least one supervisor who has had alcohol and drug abuse training to recognized signs of impairment requests that a test be performed.

Follow-up testing is for drivers who have completed a substance abuse program and must have follow-up testing for up to five years.

Employers are responsible for implementing and maintaining the alcohol and drug testing program themselves or have it managed by a third-party administrator.

## Alcohol and Drug Abuse

### Substance abuse may occur from:

- Illegal substances
- Prescription substances
- OTC substances
- Supplements and herbs

### Information on drug (and alcohol) abuse can come from:

- BAT (Breath Alcohol Technician)
- DER (Designated Employee Representative)
- MRO (Medical Review Officer)
- SAP (Substance Abuse Professional)

Alcohol and drug abuse can occur with substances such as prescription medications, over-the-counter medications, supplements, herbs, designer substances or chemical compounds. Information regarding a driver's drug abuse can come from a breath alcohol technician, the driver's designated Employee Representative, a Medical Review officer, or a Substance Abuse Professional.

## Drug and Alcohol Regulation

**Medical Review Officer (MRO):** A licensed physician (MD, DO) who receives and reviews laboratory results generated by a DOT drug test and obtains an explanation for certain results.

**Substance Abuse Professional (SAP):** A person who evaluates drivers who have violated DOT drug/alcohol regulations and makes recommendations concerning education, treatment, follow-up testing and aftercare.

The medical review officer (MRO) is a licensed MD or DO who receives and reviews the results of drug tests of commercial drivers from the laboratory. Whenever a drug test indicates the presence of a controlled substance or an illicit drug, the MRO must determine if there is an allowable explanation for that result by contacting the driver for a list of medications that might be responsible for the positive drug test. The MRO reports these results to a third-party administrator and/or to the driver.

The substance abuse professional (SAP) evaluates the driver and makes recommendations concerning treatment, education, follow-up testing, and after care. They determine when a driver has completed the drug or alcohol abuse treatment program, allowing the driver to return to driving.

## DOT-Qualified Substance Abuse Professional

*DOT Qualified Substance Abuse Professionals (SAPs) are professionals that have knowledge of not only the diagnosis and treatment of abuse-related disorders, but also of DOT drug and alcohol testing and return-to-duty processes as required by § 40.281. A DOT-qualified SAP initially evaluates drivers who have violated DOT drug and alcohol regulations and makes recommendations concerning education, treatment, follow-up testing, and aftercare. Once the education and/or treatment is successfully completed, the SAP reassesses the driver's condition and, if satisfied with the driver's compliance, completes a SAP report and prescribes a series of follow-up tests covering a period of one to five years. Any motor carrier employing this driver during the prescribed period must complete the follow-up testing as specified by the SAP.*

*The regulations pertaining to SAPs and the return-to-duty process are found in [49 CFR Part 40 Subpart O](#).*

The DOT qualified substance abuse professional plays a large part in the certification process for drivers who have had a violation of DOT alcohol and drug policy. They initially evaluate the driver and make recommendations concerning education and treatment, follow up testing, and aftercare once the driver completes the recommended treatment and education program. The substance abuse professional then reassesses the driver and if satisfied with the driver's progress and compliance they complete a report and prescribe a series of follow-up drug or alcohol testing covering a period of 1 to 5 years. Any motor carrier who employs this driver must complete the follow up testing as recommended by the SAP. When the driver returns for a new or subsequent medical exams, the ME should verify the driver is compliant with their follow-up testing requirements.

When a driver has a positive result from a non-DOT drug test, this is not a violation of DOT alcohol and drug testing regulations. The ME should require the driver to be evaluated by an SAP, but it is not required for the SAP to be DOT qualified.

## Alcohol and Drug Testing

If the Medical Examiner suspects that a DOT alcohol or drug test is needed, call the FMCSA Service Center and/or the motor carrier for information regarding drug testing policy under Part 382 or 391.41

MEs can contact the DOT Office of Drug and Alcohol Policy and Compliance or FMCSA Service Center for your area.

If while performing a physical exam on a commercial driver, the medical examiner suspects that a DOT alcohol or drug test is needed, the medical examiner should call FMCSA Service Center for there area and the motor carrier.

## Drug and Alcohol Abuse 49 CFR 391.41 (b) (12) (13)

A driver is disqualified if they use a controlled substance identified as amphetamines, narcotics, or any other habit-forming drug, **WITHOUT A VALID PRESCRIPTION.**

*The use of a Schedule 1 drug is ALWAYS disqualifying.  
ANY use of Marijuana is always disqualifying.*

### **A driver may use a controlled substance if:**

- The substance is prescribed by a licensed medical practitioner
- Medical practitioner is familiar with the driver's history and assigned duties
- Has advised the driver that the prescribed substance will not adversely affect the driver's ability to safely operate a CMV.
- Provides clearance regarding the driver's ability to drive a CMV.

A driver may not be certified if they use a controlled substance identified as an amphetamine, a narcotic or any other habit-forming drug. However, **a driver may use a controlled substance** if it has been prescribed by a licensed medical practitioner who is familiar with the driver's history and assigned duties. The medical practitioner should have advised the driver that the prescribed substance will not adversely affect the driver's ability to safely operate a CMV and must provide clearance regarding the driver's ability to operate a CMV.

The use of a schedule 1 drug, including marijuana, is always disqualifying. There are no exceptions. Keep in mind that the federal drug schedules are based upon addiction potential and not upon the effect or side effect of the medication.

## Drug and Alcohol Use

Alcohol and drug abuse are risk factors for those with personality disorders. Certification is based on multiple factors, *including additional testing requested by the ME.*

**A test for controlled substances is not required as part of the medical certification process, but MEs may use drug and/or alcohol abuse screening tests.**

Even in the absence of abuse, the driver should be counseled regarding interactions of other drugs and alcohol with medications.

Medical examiners should remember that for those with personality disorders, drug and alcohol abuse may also be present. A test for controlled substances is not required as part of the medical certification process but the medical examiner may use a drug and alcohol abuse screening test if desired. Medical examiners should counsel the driver regarding interactions of drugs and alcohol with their other medications.

## Drug Abuse and Alcoholism

**Medical examiners should not hesitate to assess for signs/symptoms of substance abuse and take appropriate action to confirm or rule out such abuse. It should be done in accordance with FMCSA standards and policies with awareness of the DOT Office of Drug and Alcohol Policy and Compliance governing CMV drivers with a suspected or known substance abuse history.**

When a driver has a history or findings indicating possible drug abuse or alcoholism, the medical examiner should not hesitate to assess for signs and symptoms of substance abuse and take the appropriate action to confirm or rule out such abuse. This should be done in accordance with the FMCSA medical guidelines and standards with an awareness of the DOT office of drug and alcohol policy and compliance governing CDL and non-CDL drivers who are suspected of or have a known history of substance abuse.

## Risk Assessment /Certification Outcomes

### Risk Assessment:

- Effects from rotation schedule and irregular sleep
- Fatigue from extended work hours without breaks
- Risk from common dietary choices
- Stress from extended time away from social support system

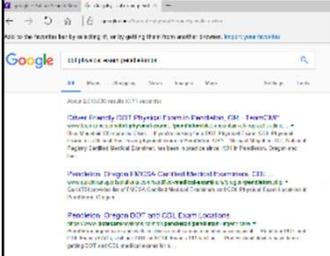
### Disqualify a driver who:

- Has a current clinical diagnosis of alcoholism or drug abuse
- Uses a controlled substance, narcotic, amphetamine or habit-forming drug without a prescription
- Has a condition that will likely interfere with safe CMV driving
- Misuse, wrong use, and especially excessive use likely to interfere with safe CMV operation
- Uses a Schedule 1 Drug (such as Marijuana) including “medicinal, religious, prescription, and recreational use.”

When performing a risk assessment for alcohol or drug abuse, the medical examiner should consider risks that are associated with driving such as the effect from a rotating schedule and irregular sleep, fatigue from extended work hours without breaks, risk from common dietary choices and stressors from extended time away from the driver's social support system. Medical examiners should disqualify a driver who has a clinical diagnosis of alcoholism or drug abuse or uses a controlled substance, narcotic, amphetamine, or habit-forming drug without a prescription, has a medical condition that will likely interfere with safe commercial motor vehicle driving, misuse, wrong use, and especially excessive use likely to interfere with safe CMV operation, and drivers that use a schedule one drug such as marijuana or peyote for medicinal, religious, prescription, or legal or illegal recreational use.



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