**CHAPTER 7: Driver Fatigue – Second Jobs**

**OVERVIEW**

This chapter will describe the symptoms of fatigue, their causes and what can be done to be alert when driving a school bus.

**THIS CHAPTER INCLUDES:**

* Lesson plan
* Evaluation

**CHAPTER ELEMENTS:**

* Signs and causes of fatigue
* Alertness management strategies

**EQUIPMENT LIST:**

* Overhead projector
* Screen
* Handouts
* Transparencies
* TV/VCR
* Recommended Video: “Drowsy Driving - Shattered Lives”

**CHAPTER CHECKLIST:**

As a trainer, you are responsible to:

* Make sure school bus drivers can identify signs and possible causes of fatigue
* Make sure school

**TITLE OF LESSON: FATIGUE – SECOND JOBS**

**Objectives of Lesson:** At the end of this lesson, the school bus driver will be able to:

* List three signs of fatigue.
* Explain possible consequences of dispatching a tired driver.
* List ideas for staying alert.

**Introduction:**

A driver is responsible to operate a school bus in such a way as to ensure a safe trip for all passengers at all times. Skill in driving is important but so are alertness and the ability to react quickly in case of an emergency — expect the unexpected.

**Presentation**

Review causes and symptoms of fatigue and other factors causing fatigue. When your body is tired it will just shut down. You have no control. Use the following as an example:

You want to watch a specific television show and no matter how hard you try to stay awake, you fall asleep!! You wake up to the TV show or the final commercial of the show. The body is tired and just shuts down

“The complexity of operations and human physiology suggest that at this point in time it would be extremely difficult, if not impossible, to eliminate fatigue in operational settings. Rather than attempt to eliminate fatigue, the challenge is to manage it.”

Dr. Mark R. Rosekinc

Fatigue Countermeasures Program

NASA Ames Research Center

1. Causes and Symptons of Fatigue
2. Causes of Fatigue Slide 1
3. Sleep deprivation equals sleep debt
4. Stress
5. Inconsistent awake/sleep hours
6. A second job — A second job usually involves regular night type work and less sleep than required.
7. Family influences — very young children, illness or care of elderly parents — these situations may be for only a few days or long term
8. Signs and symptoms of fatigue
9. Forgetful — when you read the same passage three times or try to remember how to get somewhere is a sign your memory is starting to be affected. Have you ever driven by a regular bus stop and forgot to stop? Have you ever stopped at a bus stop and then a mile or so down the road wondered if you have stopped?
10. Slowed reaction time — very important when driving a bus load of students! You can’t be prepared for the unexpected.
11. Fixation — driver is so tired he can only focus on one thing. It maybe the tail lights of the vehicle in front or the noise in the bus. Cues that would keep the bus ride safe are ignored as the person is fatigued.
12. Poor mood — yelling at students, cross, pouts, unfriendly appearance.
13. Poor communication — not willing to engage in conversation, just drive and “get kids to destination!!”
14. Cannot handle multiple tasks — drive, be aware of surrounding traffic/pedestrians, highway signs and markings, keep an eye on students.
15. Other signs — yawning, eyes watering, desire to close eyes (or rest one eye at a time.)
16. Combating Fatigue Slide 2

Education. Know what causes fatigue, how to recognize it, and consider the harmful consequences irregular and unpredictable work and rest cycles can have on people who operate a vehicle.

1. Know that sleep deprivation becomes a deficit that drugs (caffeine over-the-counter medications, i.e., No Doze) cannot overcome. The only way to repay sleep deprivation is to sleep!
2. Know that many people may use alcohol just before bedtime to help them relax and go to sleep. This is a myth. The alcohol affects the quality of their sleep by interrupting the normal sleep cycle and a good night of sleep does not happen
3. Irregular work/rest cycles can affect good sleep. The body is used to regular bed times and wake up periods. A later bed time usually means less sleep and sleep debt. Trying to get to bed early to better prepare for a long next day doesn’t work as the body is not “ready” for bed yet.
4. Sleep Disorders and Sleep Apnea Slide 3
5. Sleep Disorders

* Sleep disorders are illnesses and disturbances of sleep and wakefulness that are caused by abnormalities existing only during sleep, or abnormalities of specific sleep mechanisms.

1. Sleep Apnea

* Sleep apnea is a disorder whose victims cannot breathe when they fall asleep. The word apnea refers to the absence of breathing.
* The failure to breathe is caused by the collapse of the tissues of the throat producing closure of the airway. Once this has occurred, the victim may continue to make respiratory efforts without airflow. Blood oxygen drops and finally triggers an alarm response so the victim wakes up to breathe.
* In a severe condition, this occurs hundreds of times as the sleep deprived victim immediately returns to sleep. In the morning these hundreds of awakenings are completely forgotten. If the sleep apnea condition has progressed to a level of severity, it is almost always associated with cardiovascular disease. Victims have high blood pressure, which is difficult to control, and are likely to have already had heart attacks or strokes. It also causes severe cardia arrhythmia during sleep and these arrhythmia can be fatal. This occurs because the victims must wake up hundreds of times to breathe and therefore sleep loses its restorative power.
* The condition is frequently misdiagnosed as chronic fatigue syndrome, or hyperthyroidism, or depression. The cardinal symptom of the disorder is loud snoring. Sleep apnea may affect 24% of the adult male population and 9% of the adult female population
* Red alert – Drowsiness
* Vast numbers of people suffer from a sleep disorder or sleep deprivation or both. The final, common path of impairment and danger is sleepiness. In the sedentary, eyelids get heavy, our heads sag, and we feel that wave of strong drowsiness.
* Responsibility of dispatching a potentially tired driver
* Dispatching a driver who you know is tired or who by the end of the shift will be too tired to react to the normal and unexpected events, is wrong. Not only is it the driver’s responsibility to be a safe driver, but it is the responsibility of the supervisor to dispatch safe drivers.
* A dispatcher and supervisor would be wise to limit consecutive long-duty days and make sure there is adequate off-duty time between driving duties.
* Should a driver be involved in an accident, the dispatcher or supervisor could be named as contributory to the accident since they allowed a driver to drive without adequate rest or time off between trips.
* Many districts allow drivers to bid on extra trips. Many times drivers will bid consecutive late trips in order to fill their time early in the week.

A suggestion is for districts to establish procedures for driving during the following:

1. Consecutive late night trips when the driver must report for work early the following day, or
2. Long athletic trips or field trips which would require a driver to drive into the early morning hours and still be expected to report for the morning shift the following day.
3. **Alertness Management Strategies Slide 4, 5, 6**

The following recommendations are intended to help you and allow you to tailor alertness management strategies to your own needs. The best efforts may result from combining multiple strategies rather than relying on a single strategy.

1. At home — get the best sleep possible before starting a trip.
2. On a trip — try to get at least as much sleep per 24 hours as you would in a normal 24-hour period at home.
3. Trust your own physiology — if you feel sleepy and circumstances permit, then sleep. If you wake spontaneously and cannot go back to sleep within 15-30 minutes, get up.

**Strategic napping (see Slide 5)**

1. Napping can acutely improve alertness.
2. Limit nap to 45 minutes if right before a work period.
3. It may take longer for you to become fully awake if you sleep too long or go into deep sleep.
4. Napping will decrease the length of continuous wakefulness before a duty period.

**Strategies while driving (see Slide 6)**

1. Engage in conversations with others.
2. Do something that involves physical action — stop the bus, stretch and/or walk around outside the bus for a minute or two.
3. Caffeine — use caffeine to sharply increase alertness; however, use it about 30 minutes before you think you will be tired as it takes that long for it to take affect. Avoid caffeine near bedtime and/or at the end of your shift when the effect will not keep you up when you want to go to sleep.
4. Be sensible about nutrition and stay hydrated.
5. Sleepiness can have severe consequences-take it seriously.
6. People are different — tailor this information to your own needs.
7. There is not one simple answer — these are recommendations; find out what works for you.

**Summary**

Communication between drivers and supervision is vital. Is the driver tired or on medication? Not enough rest? Has the fireman been asked how much sleep he/she had the previous 24 hours? The fireman may have more sleep then your regular driver(s)!! Communicate! What has been the work, play, sleep schedule the previous 24-36 hours of any driver?

**Evaluation**

Ask the driver candidates questions regarding the information explained in this lesson.

**Questions**

1. List three signs of fatigue.

(Forgetful, Slowed reaction time, Poor mood, Can’t handle multiple tasks, yawning, eyes watering, desire to close eyes.)

1. Explain possible consequences of dispatching a tired driver.

(The dispatcher or supervisor could be named as contributory to the accident since they allowed a driver to driver without adequate rest or time off between trips.)

1. List ideas for staying alert.

(Strategic Napping, Engage in Conversation, Do something that involves physical action, caffeine, and stay hydrated.)**Questions**

1. List the three documents required to legally drive a school bus

**Answers Please separate the answers from above** **Fatigue**

**Causes of Fatigue**

* Sleep deprivation equals sleep debt
* Stress
* Inconsistent awake/sleep hours
* A second job — A second job usually involves regular night type work and less sleep than required.
* Family influences — very young children, illness or care of elderly parents — these situations may be for only a few days or long term

**Slide 1**

**Fatigue**

**Combating Fatigue**

Know:

* What causes fatigue
* How to recognize it
* The only way to repay sleep deprivation is to sleep
* Irregular work/rest cycles can affect good sleep

Slide 2

**Fatigue**

**Sleep Disorders**

Illnesses and disturbances of sleep and wakefulness that are caused by abnormalities existing only during sleep or abnormalities of specific sleep mechanisms.

**Sleep Apnea**

Sleep apnea is a disorder whose victims cannot breathe when they fall asleep. It is almost always associated with cardiovascular disease. The cardinal symptom of the disorder is loud snoring.

**Slide 3**

**Fatigue**

**Alertness Management Strategies**

* At home — get the best sleep possible before starting a trip
* On a trip — try to get at least as much sleep per 24 hours as you would in a normal 24-hour period at home
* Trust your own physiology — if you feel sleepy then sleep. If you wake and cannot go back to sleep, get up.

**Slide 4**

**Fatigue**

**Strategic Napping**

* Napping can acutely improve alertness
* Limit nap to 45 minutes if right before a work period
* It may take longer for you to become fully awake if you sleep too long or go into deep sleep
* Napping will decrease the length of continuous wakefulness before a duty period

**Slide 5**

**Fatigue**

**Strategies While Driving**

* Engage in conversations with others
* Do something that involves physical

action —stretch and/or walk around outside the bus caffeine — use caffeine to increase alertness; however, use it about 30 minutes prior

* Be sensible about nutrition and stay hydrated
* Sleepiness can have severe consequences so take it seriously
* People are different tailor this information to your own need

**Slide 6**