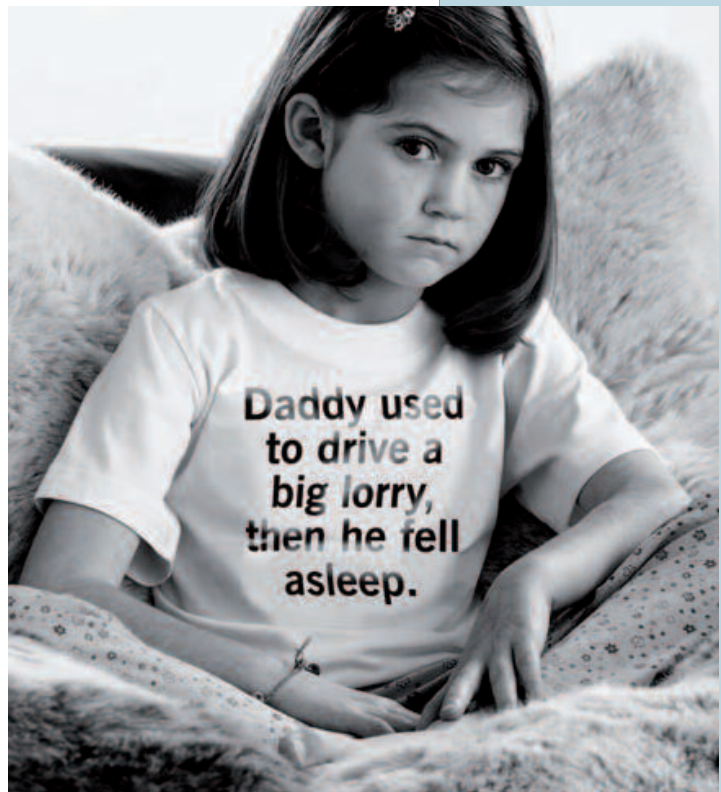


# Road Transport Commercial Briefing 2009



## Obstructive Sleep Apnoea

### Introduction

Ron Webb, Unite National Secretary, Road Transport Commercial

I am pleased to introduce this briefing for drivers on Obstructive Sleep Apnoea (OSA). OSA is a significant health issue for Unite professional drivers. This briefing has come about as a result of an excellent and timely initiative in the North East where members researched and circulated the original leaflet on which this briefing is based. I am delighted that we have rolled this out nationally and I hope that members will find it useful. This briefing provides general information only. Individual members should if necessary seek medical advice from their GP.

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# Background Information

## **What is Obstructive Sleep Apnoea?**

OSA is a serious, potentially life-threatening condition that is far more common than is generally understood. OSA is a breathing disorder characterised by brief interruptions of breathing during sleep. It owes its name to a Greek word, apnoea, meaning “without breath”.

The effects of OSA is that a person can stop breathing for periods when asleep. These interruptions (apnoeas), which last for 10 seconds or more, occur when the airway narrows so much that it closes. This stops breathing, and the brain reacts by briefly waking up, causing the airways to re-open and breathing to restart. The individual is usually unaware of this awakening and this process can be repeated up to several hundred times during the night. Proper restful sleep becomes impossible, resulting in sleepiness and impairment of daytime function. Early recognition and treatment of OSA is important.

The excessive sleepiness associated with OSA impairs quality of life and places people at increased risk of road traffic and other accidents. It may also be associated with irregular heartbeat, high blood pressure, heart attack and stroke.

## **Who suffers from Obstructive Sleep Apnoea?**

OSA occurs in all age groups and in both sexes although it is more common in middle aged men. OSA, which causes symptoms of excessive sleepiness, affects an estimated four per cent of the male (Stradling, Thorax 1991) and one per cent of the female middle aged population. Recent research has suggested that the disorder is much more prevalent in the transport industry. A 2005 study found that 16 per cent of HGV drivers in the study had OSA and a corresponding increased risk of accidents. Other research found that drivers with OSA have a two to 13-fold increase in accident rates. The risk of an accident for an OSA sufferer appears to be greatly increased. Studies show that approximately 33 per cent of sufferers have had an accident in the past five years, with 19 - 27 per cent of OSA patients admitting to falling asleep at the wheel.

UK research estimated 20 per cent of all motorway accidents being caused by sleepiness.

If untreated, OSA syndrome is a major threat to nightly rest. People most likely to have or develop Obstructive Sleep Apnoea include those who snore loudly, are overweight, have high blood pressure, or have a physical abnormality in the nose, throat, or other part of the upper airway. If left untreated or undiagnosed the results can be tragic.

Stimulants (like coffee) taken to counter the effects of tiredness are not a substitute for sleep. The regular use of stimulants by individuals may be a clue to the existence of an underlying sleep disorder.

# What are the signs and symptoms of Obstructive Sleep Apnoea?

If you, or someone you know, snores nightly and has one or more of the following signs or symptoms, Obstructive Sleep Apnoea may be the cause.

Common signs and symptoms of OSA include:

- Excessive daytime sleepiness
- Nightly snoring interrupted by pauses in breathing
- Falling asleep when you shouldn't, – at work, while driving, etc.
- Loss of energy, fatigue
- Choking and gasping during sleep
- Restless sleep
- High blood pressure
- Neck size greater than 17" in men, 16" in women
- Overweight
- Depression
- Trouble concentrating
- Irritability
- Forgetfulness
- Morning headaches

## What causes Obstructive Sleep Apnoea?

As we go to sleep, the muscles of the throat relax as a normal part of the sleep process. In individuals with OSA, this relaxation progresses to the point where the passage for air is partially or completely blocked, dramatically reducing or stopping airflow into the lungs. This causes an increase in Carbon Dioxide levels and the brain responds by waking up the individual for a short while to open the air passage. Breathing begins again, but the natural sleep cycle is interrupted.

Ingestion of alcohol, sleeping pills, anti-depressants or smoking increases the frequency and risk of breathing pauses in people with OSA. Consequences of untreated OSA are:

- Excessive sleepiness during the day
- Frequently "nodding off" at inappropriate times or places
- Impairment of cognitive function
- Mood and personality changes
- Reduction in quality of life
- Heart disease
- Stroke

## More information about Obstructive Sleep Apnoea

OSA is a common sleep disorder characterized by brief interruptions of breathing during sleep.

- **Apnoea** is a Greek word meaning "without breath."  
An apnoea is clinically defined as a cessation of breath that lasts at least ten seconds.
- **Hypopnoea** also comes from Greek: "hypo" meaning "beneath" or "less than normal" and "pnea" meaning "breath."

A hypopnoea is not a complete cessation of breath but can be defined as a perceptible reduction in airflow that leads to sleep fragmentation or to a decrease in the oxygen level in the bloodstream.

**The apnoea-hypopnoea index (AHI)** or respiratory disturbance index (RDI) refers to the total number of apnoeas and hypopnoeas divided by the total sleep study in a patient's sleep study.

The AHI gives one measure of the severity of the sleep apnoea. Typically the soft tissue in the rear of the throat collapses and closes the airway, forcing sufferers to stop breathing repeatedly during sleep, sometimes hundreds of times a night.

Although the typical OSA patient is overweight, male, and over the age of forty, sleep apnoea affects both males and females of all ages and also those of ideal weight.

The most common symptoms of OSA are loud snoring and excessive sleepiness (i.e. falling asleep easily and sometimes often inappropriately).

Untreated Obstructive Sleep Apnoea can be life threatening; consequences may include high blood pressure and other cardiovascular complications.

### **Risk Factors for Obstructive Sleep Apnoea**

- Some studies have shown that a family history of OSA increases the risk of OSA two to four times.
- Being overweight is a risk factor for OSA, as is having a large neck. However, not all individuals with OSA are overweight.
- OSA is more likely to occur in men than in women.
- Abnormalities of the structure of the upper airway contribute to OSA.
- OSA may be more common amongst certain ethnic groups (African, Mexican, Aborigines)
- Smoking and alcohol use increase the risk of OSA.

### **Treatments for Obstructive Sleep Apnoea**

Treatment regimen include:

- Lifestyle changes - weight reduction and reduction of alcohol consumption
- Oral appliances
- In a small number of cases surgery may have a place if there is a definite anatomical cause
- Positive Airway Pressure (PAP) therapy is the most common and effective treatment for OSA.  
The PAP machine adds gentle pressure to the air as it is breathed in. This prevents the airway from collapsing and stops obstruction during sleep.

## **What is Body Mass Index (BMI)?**

Body Mass Index or BMI is a tool for indicating weight status in adults. It is a measure of weight for height. For adults over 20 years old, BMI falls into one of these categories:

### **BMI Weight Status**

Below 18.5	Underweight
18.5 -24.9	Normal
25.0- 29.9	Overweight
30.0 and above	Obese

BMI correlates with body fat. The relation between fatness and BMI differs with age and gender. For example, women are more likely to have a higher percent of body fat than men for the same BMI. On average, older people may have more body fat than younger adults with the same BMI.

### **How does BMI relate to health?**

The BMI ranges are based on the effect body weight has on disease and death. As BMI increases, the risk for some disease increases. Some common conditions related to overweight include:

- Obstructive sleep apnoea
- Premature death
- Cardiovascular disease
- High blood pressure
- Osteoarthritis
- Some cancers
- Diabetes

BMI is only one of many factors used to predict risk for disease. BMI cannot be used to tell a person if he/she has a disease such as diabetes or cancer. It is important to remember that weight is only one factor that is related to disease.

### **What does this all mean?**

So you have calculated your BMI and found which weight category your BMI matches.

BMI is not the only indicator of health risk.

BMI is just one of many factors related to developing a chronic disease (such as heart disease, cancer, or diabetes). Other factors that may be important to look at when assessing your risk for chronic disease include:

- Diet
- Physical Activity
- Waist Circumference
- Blood Pressure
- Blood Sugar Level
- Cholesterol Level
- Family History of disease

All persons who are obese or overweight should try not to gain additional weight. In addition, those who are obese or who are overweight with other risk factors should consider losing weight. A complete health assessment by a physician is the best way to decide the right steps for you.

Whatever your BMI, talk to your doctor to see if you are at an increased risk for disease and if you should lose weight. Even a small weight loss (just 10 per cent of your current weight) may help to lower the risk of disease.

Physical activity and good nutrition are key factors in leading a healthy lifestyle and reducing risk for disease.

### **Next Steps**

Restful sleep is required for a normal healthy life. Daily wakefulness should be effortless and free from unintended sleep episodes. Excessive sleepiness is far more common than often realised and can be dangerous.

If you or someone close to you regularly shows the signs of excessive sleepiness, or complains of constantly feeling tired – get help from your GP. OSA can be simply screened, diagnosed and treated.

Treatment of OSA is effective, affordable and uncomplicated. The most widely used therapy is Positive

Airway Pressure (PAP). The individual wears a mask over the nose or mouth during sleep, and gentle pressure from a quiet air blower forces air through the nasal passages. This air pressure is adjusted so that it is just enough to prevent the airways from collapsing, whilst ensuring comfortable sleep.

**Important:** In this leaflet Unite provides general information only about OSA. Individual members should contact your GP for medical advice about OSA and its treatment.

### Acknowledgements

Fred Beach, Stella Guy and George Douse.

Unite would also like to thank the University of Loughborough Sleep Research Centre/Awake Ltd for their help in preparing this briefing.

### Sources of further information

- Loughborough Sleep Research Centre/Awake [www.awakeltd.info/](http://www.awakeltd.info/)
- OSA online: [www.osaonline.com](http://www.osaonline.com)

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