Sleep disorders, sleepiness and traffic safety: a public health menace

Abstract

Sleep disorders are not uncommon and have been widely reported throughout the world. They have a profound impact on industrialized 24-h societies. Consequences of these problems include impaired social and recreational activities, increased human errors, loss of productivity, and elevated risk of accidents. Conditions such as acute and chronic insomnia, sleep loss, excessive sleepiness, shift-work, jet lag, narcolepsy, and sleep apnea warrant public health attention, since residual sleepiness during the day may affect performance of daily activities such as driving a car. Benzodiazepine hypnotics and zopiclone promote sleep, both having residual effects the following day including sleepiness and reduced alertness. In contrast, the non-benzodiazepine hypnotics zolpidem and zaleplon have no significant next-day residual effects when taken as recommended. Research on the effects of wakefulness-promoting drugs on driving ability is limited. Countermeasures for excessive daytime sleepiness have a limited effect. There is a need for a social awareness program to educate the public about the potential consequences of various sleep disorders such as narcolepsy, sleep apnea, shift-work-related sleep loss, and excessive daytime sleepiness in order to reduce the number of sleep-related traffic accidents.

Key words
- Sleep disorders
- Sleepiness
- Automobile and truck drivers
- Automobile traffic
- Public health

Introduction

There is a lack of awareness among the public and among physicians and authorities in general of the problem posed by sleepy drivers. Every year about 20-40% of American adults have difficulty sleeping and 17% consider the problem serious (1). According to the National Sleep Foundation Gallup Survey, 63 million adults have sleep levels considered to be hazardous to their well-being, with 6% experiencing severe levels of sleepiness (2). In addition, 12% of senior citizens report chronic insomnia, and this estimate is even higher among those with concomitant medical or psychiatric illnesses (3). The 2002 Sleep in America Poll (4) revealed that 37% of adults reported that daytime sleepiness interfered significantly with their daily activities. Hence, today in-