

**AUSTRALIAN AND NEW ZEALAND COLLEGE OF
ANAESTHETISTS**

ABN 82 055 042 852

STATEMENT ON FATIGUE AND THE ANAESTHETIST

INTRODUCTION

The provision of anaesthesia requires a high level of knowledge, sound judgement, fast and accurate responses to clinical situations, and the capacity for extended periods of vigilance.

In the interests of patient safety, it is important that anaesthetists are aware of the following principles and their responsibilities in respect of working while fatigued.

PRINCIPLES

1. Fatigue has been demonstrated to impair vigilance and accuracy of response ^(1,2,3). Decreased performance of motor and cognitive functions in a fatigued anaesthetist may result in impaired judgement, late and inadequate responses to clinical changes, poor communication and inadequate record keeping ^(4,5,6,7). The decrement in cognitive psychomotor performance after 17 hours of sustained wakefulness is equivalent to the performance impairment observed with a blood alcohol level of 0.05%, and after 24 hours to a blood alcohol level of 0.1% ⁽⁸⁾.
2. Fatigue may contribute to adverse events and critical incidents ^(9,10). In other industries these have been shown to be commonest in a bimodal distribution between 0300 and 0700 and between 1300 and 1600, when circadian drowsiness is greatest ^(2,11).
3. Adults require (on average) eight hours of sleep each night (range 6-10 hours)⁽²⁾. Fatigue will occur with sleep debt; this sleep debt is cumulative and does not dissipate. Short sleep nights (4 - 6.5 hours) are associated with a cumulative impairment in the performance of psychomotor tasks requiring vigilance ⁽¹²⁾. Sleep efficiency decreases with increasing age ⁽¹¹⁾. Ageing reduces the capacity to recover from fatigue ⁽¹³⁾.
4. Many individuals find it difficult to reset their body time clocks to allow for effective daytime sleep after night duties. Daytime sleep is typically shorter and of inferior quality compared with sleep at night ⁽¹³⁾. Minimising the effects of night-time shift work may be achieved by taking a two hour afternoon sleep prior to the night duty, taking a 20-30 minute nap during the duty time, ensuring proper meals, and sleeping as soon as possible after the duty ⁽¹⁴⁾.
5. Individuals are often unable to recognise fatigue and their reduced capacity to continue working safely ^(13,15,16). "Microsleeps", a sign of extreme fatigue, may be

equally unrecognised⁽¹⁷⁾.

6. Use of caffeine and other stimulants is an attempt to combat rather than to prevent the problem and as such is not recommended. Sleep loss-induced deterioration in performance is only mitigated by naps (30-45 min) and caffeine (100-600 mg) for the first 24 hours of continuous wakefulness^(2,18,19,20). Naps are followed by a period of “sleep inertia” (drowsiness after waking) associated with reduced performance which dissipates over 15-30 minutes^(21,22).
7. Health facility employers have a responsibility under occupational health and safety legislation to provide a safe working environment for their employees^(23,24,25,26).
8. Inappropriate work practices and rosters that contribute to fatigue may put employees at risk of accidents to themselves and their patients while at work, and while travelling to and from work^(1,2,27).

RESPONSIBILITIES

1. Anaesthetists have a responsibility to organise their lives in a way that ensures fatigue does not regularly impact on clinical duties^(1,2,4). Individuals and Departments must have knowledge of fatigue related risk categories, as set out in the Australian Medical Association National Code of Practice (March 1999)⁽²⁸⁾. Anaesthetists have a moral and ethical responsibility to consider not proceeding with clinical duties if physical or mental fatigue, stress or ill health, alone or in combination, might interfere with safe patient care.
2. When working out-of-hours results in significant disturbance to normal rest and sleep, the anaesthetist should ensure that any clinical commitments on the subsequent day are either covered by another anaesthetist or postponed until there has been the opportunity for an adequate rest period.
3. For shift work, forward-rotating shifts (mornings - evenings - nights) are associated with the least disturbance to normal sleep patterns^(2,21). Many individuals cannot readily reset their biological clock to accommodate night shifts.^(21,29) These individuals should be aware that a prolonged period of night shifts may result in serious sleep deficit. Anaesthetists who are involved in shift work, particularly overnight shifts, should be aware that clinical performance may potentially be affected by increasing fatigue due to altered sleep routines and should be prepared to call for assistance if fatigued.
4. Departments, hospitals and groups of anaesthetists should have a management plan to address the short-term consequences of anaesthetists being unavailable for clinical duties because of fatigue following “on-call” work.
5. Long-term work patterns should be based on the following principles:
 - 5.1 Adequate time must be available for leisure activities, and for rest and sleep.

- 5.2 Adequate breaks must be taken during a day of clinical work
- 5.3 Rosters for shift and weekend work must be available for a significant time ahead to permit planning for leisure activities.
- 5.4 Recreation leave should be taken regularly.

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