Nurse Fatigue

INTRODUCTION

Fatigue is defined as physical and/or mental exhaustion that can be triggered by stress, medication, overwork or mental and physical illness or disease (www.medical-dictionary.thefreedictionary.com/Fatigue). Typically, fatigue is assigned or identified as a symptom for the patients we care for. When we consider the unique characteristics in the daily routine of nurses, specifically emergency nurses, we can also attribute mental and physical fatigue as a common consequence of nursing. With the advent of extended work hours as a possible solution to the nursing shortage, a culture has been created which potentially puts our patients, our peers and ourselves at an increased risk for fatigue, burnout and compassion fatigue. Burnout is an emotional condition marked by fatigue, apathy and/or frustration that interferes with job performance and home life (www.medical-dictionary.thefreedictionary.com). Compassion fatigue is defined as the combination of physical, emotional and spiritual exhaustion associated with the care of patients with significant pain and physical distress (Lombardo, Eyre 2011).

Multiple studies over the past 20-plus years have looked at factors affecting the nurse’s workday, but very few of these studies have looked specifically at emergency nursing (Bae 2013, Halm et al 2005, Josten, Ngatham & Thierry 2003, Letvak, Lane & Ruhm 2011, Olds & Clarke 2010, Richardson et al 2007, Rogers 2004a, Ruggerio & Pezzino 2006, Sharp & Cancy 2008, Trinkhoff et al 2011, Trinkhoff et al 2006). Emergency nursing has some work role and responsibility characteristics unique to the specialty: constant change, unpredictability, increased patient acuity and complexity combined with uncontrollable patient census and flow. Additionally, the emergency department (ED) has no cap on clinical patient loads, although several states have implemented nurse-patient ratios that include the emergency department. Emergency nurses care for patients of all ages and gender with a vast array of illnesses and injuries. The ED staff practices under the scrutiny of peers, other emergency personnel, patients and family members (Shriver et al 2003). Emerging technologies, while improving the delivery of patient care, now require proficiency in the use of electronic health records (EHR), medication administration systems, and IV infusion pumps and devices. Emergency nurses report more time pressures, physical demands and challenges in decision-making due to a variety of regulations. The psychological and clinical demands of emergency nursing practice appear to be important determinants of psychosomatic complaints and fatigue in emergency nurses (Adriaenssens et al 2011). The current health care environment has placed demands on health care providers by asking them to do much more with fewer resources. Health care worker fatigue is the consequence of any and all of these factors. Health care worker fatigue can and does significantly affect patient safety, patient satisfaction and job satisfaction (AANA 2012, ANA 2006a, ANA 2006b, Ashley 2011, Bahr 2008, Ellis 2008, Halm et al 2005, IOM 2003, JC 2011, Sharp & Clancy 2008).

As stated in the Emergency Nurses Association’s 2012-2014 Strategic Plan, the mission of the Emergency Nurses Association (ENA) is to advocate for patient safety and excellence in emergency nursing practice. One of the four priority areas is “advocating for a culture of safe practice and safe care.” In order for nurses to provide safe care for our patients it is imperative to create an environment that cultivates wellness and safety for both patients and staff. All nurses should expect to be able to work in a positive, safe and healthy work environment (WHO 1994).
Fatigue can be physical or psychological or a combination and can lead to compromised decision-making, reaction time and critical thinking as well as negatively influence general health (Drake et al 2012). To fully understand the impact of fatigue on health care nurse work conditions (work environment culture, shift length and overtime), nurse and patient satisfaction and the consequences and impact of fatigue on patient care must be considered. Financial considerations for organizations, patients and nurses must also be taken into account.

WORK CONDITIONS

In the 1970s, 12-hour shifts were created as a retention strategy during national nursing shortages. The use of 12-hour shifts grew as a result of nurse satisfaction and hospital/facility satisfaction as well as improved continuity of care. A three-day work week allowed for better work/life balance and flexibility (Geiger-Brown & Trinkhoff 2010a, Lorenz 2008). In order to meet the needs of patient care, patient census and patient safety, many hospitals and health care facilities have now moved to a staffing model using a variety of shift lengths, including four-, six-, eight-, 10- and 12-hour shifts. Nursing shift patterns no longer follow traditional models of days, evenings and nights. Flexibility in scheduling is popular for several reasons. Nurses are able to arrange schedules to have longer stretches of time off and are able to meet the needs of their personal and family life more easily. They are also able to work additional hours at other facilities, creating situations where they could work as many as six 12-hour shifts in seven days. Nursing surveys regarding work conditions and shift length reveal conflicting results. On one hand, nurses working shifts longer than 10 hours were much more likely to experience burnout and job dissatisfaction and intended to leave their jobs (Bae 2013, Bae 2012, Ellis 2008, Sharp & Clancy 2008). When the three-day workweek turns into additional hours and unplanned overtime, satisfaction appears to decrease (Halm et al 2005). However, the overwhelming majority of nurses participating in surveys revealed that they were satisfied with their schedules and the flexibility they provided (Stimpfel, Sloan & Aiken 2012).

Advantages to 12-hour shifts include: increased productivity, fewer handoffs, increased continuity, reduced absenteeism, reduced staff turnover and better morale (Bahr et al 2008, Geiger-Brown & Trinkhoff 2010a, Geiger-Brown & Trinkhoff 2010b, IOM 2003, Letvak, Lane & Ruhm 2011, Lorenz 2008, ONE 2012, Rogers et al 2004a, Ruggerio & Pezzino 2006). Staff working 12-hour shifts have more days off and may have longer breaks from work, both allowing for improved family and social life as well as opportunities for working a second job. A study by Stone et al in 2006 found that on average nurses working 12-hour shifts were more satisfied with their jobs, experienced less emotional exhaustion, were more likely to be satisfied with their work schedule and less likely to miss shifts. No differences in patient quality outcomes were found with 12-hour shifts when compared with eight-hour shifts, although there was repeated evidence that nurses who worked longer than 12.5 hours were found to have decreased vigilance and an increased risk of suffering an occupational injury or making an error (Stone et al 2006). Disadvantages of 12-hour shifts include longer work hours, fewer breaks during the workday, less rest time between consecutive work shifts and increasing fatigue with consecutive work shifts. Nurses may underestimate the impact of working longer shifts because the idea of working three days a week instead of five days is quite appealing (Bahr et al 2008, Geiger-Brown & Trinkhoff 2010a, Geiger-Brown & Trinkhoff 2010b, IOM 2003, Letvak, Lane & Ruhm 2011, Lorenz 2008, ONE 2012, Rogers et al 2004a, Ruggerio & Pezzino 2006). An extensive literature review revealed conflicting research results for recommending the elimination of 12-hour work shifts (Demb & Erickson 2009, Fagan 2012, Garrett...

Winwood et al in 2006 found that domestic responsibilities had no relationship to differences in fatigue. Their results revealed that for full-time nurses being part of a family structure might actually be protective against developing maladaptive fatigue (the inability to adequately or appropriately adjust to the environment or situation). The most important factor in developing maladaptive fatigue was the shift worked, particularly rotating shifts and night shifts. Interestingly, this study also found that the youngest age group reported a higher rate of fatigue and poorer recovery than the oldest group of respondents (Hill 2011, Winwood, Winefield & Lushington 2006). Several studies have demonstrated relationships between job demands, job control and social support in the work environment and workers' satisfaction, burnout, fatigue and health problems (Adriaenssens et al 2011, Ashley 2011, Collins Sharp & Clancy 2008, Drake et al 2012, Garcia-Izquerido & Ruiz-Risquez 2012, Josten, Ngatham & Thierry 2003, Rogers 2008, Ruggerio & Pezzino 2006). Greater levels of supervisor support, job control and appropriate job demands correlated with less occupational stress and fatigue in nurses (Parhizi, Steege & Pasupathy 2013). Psychological job demands caused the highest level of fatigue, both chronic and acute. Increased mental and physical fatigue has been associated with a lack of control over one's work, high job demands, lack of rewards and perceived poor coworker support (Parhizi, Steege & Pasupathy 2013).

In December 2011, the Joint Commission (JC) issued a Sentinel Event Alert, "Health Care Worker Fatigue and Patient Safety," which identified that shift length and work schedules were found to have a significant impact on health care workers' quantity and quality of sleep (JC 2011). The impact on sleep may be reflected in their job performance, their individual safety and their patients' safety. This JC alert cites multiple studies that support these findings. The alert also included recommendations for organizations to address this concern.

Nurses are working longer shifts with fewer breaks and less recovery time between shifts, with an increase in patient load and acuity. Actual shift lengths are often unpredictable due to patient needs, unanticipated staffing changes and unplanned overtime. Nurses reported leaving work at the end of their shifts less than 14 percent of the time (Rogers 2004a). Although multiple surveys found increased nurse satisfaction with the 12-hour shift format, that satisfaction decreased the longer the shift (working past regular end of shift and/or overtime) (Halm et al 2005, Josten, Ngatham & Thierry 2003, Letvak, Lane & Ruhm 2011, Lothschuetz et al 2010, Richardson et al 2007, Ruggerio & Pezzino 2006, Sharp & Clancy 2008, Witkowski & Dickson 2010).

Overtime continues to be a strong factor in extended shifts, although currently 17 states have legislation or regulations regarding mandatory overtime (Drake et al 2012, Fagan 2012). These regulations mandate that nurses cannot be required to work more than 12 hours in a 24-hour time period; however, there are no restrictions to voluntary overtime, the number of consecutive days worked or the number of hours per week worked. There are no national work hour policies for
nurses, although individual organizations and union contracts may regulate work hour standards (Fagan 2012, Lothschuetz et al 2010, and O’Reilly 2012). Ultimately, it is the individual nurse’s responsibility to be able to identify her or his capacity and limits for fatigue, both emotional and physical. Monitoring nurse overtime falls to the hospital’s compliance with regulations in addition to voluntary decisions to work overtime. The most common reason for agreeing to work overtime is financially driven. Other reasons include wanting to complete one’s own workload and not wanting to let co-workers down. Knowing that peers and patients may suffer if the nurse leaves at the end of the regular shift is a powerful overtime motivator (Bae 2013, Bae 2012, Hughes 2008, Rogers et al 2004a, Sharp & Clancy 2008, Trinkhoff et al 2011). While it might be easy to place the blame for nurse fatigue on shift length, it is possible that many other factors contribute to this concern, including: the particular shift worked, overtime, personal and home life responsibilities, additional work responsibilities (other jobs) and the nurse’s overall physical and mental health status (Adriaenssens et al 2011, Bahr et al 2008, Demb & Erickson 2009, Halm et al 2005, Josten, Ngatham & Thierry 2003, Letvak, Lane & Ruhm 2011, Owens 2007, Poissonnet & Veron 2000). Nurses and employers seem reluctant to accept the fact that long work hours may result in increased fatigue and increased errors. Nurses tend to underestimate levels of fatigue and impairment, believing instead they will be aware of their own limitations and act appropriately by not scheduling themselves further (Clark 2012, Rogers et al 2004a). The Joint Commission cites a study that found nurses working shifts longer than 12 hours were involved in three times more fatigue-related preventable adverse events, and that nurses who work long hours are at a greater risk of injuring themselves on the job (JC 2011).

Night shift work and rotating shifts have long been identified as being difficult physically and mentally. Approximately 1/3 of the nursing population may be employed as shift workers (Scott et al 2010). Night shifts may be preferred by these nurses due to flexibility and the ability to meet the needs of their home life and for the monetary benefits (shift differentials and bonuses). Night shifts are often entry-level positions for the new nurse. Due to the disruption of their circadian rhythm, night shift nurses report a higher incidence of sleep disorders and fatigue than day shift nurses. Night shift nurses may adjust to their work schedules in time; however, those working a rotating schedule are rarely able to accommodate to the ever-changing physical demands that this variation in schedule puts upon their life. Night shift workers may be more prone to chronic illnesses and may have an increased susceptibility to colds and viruses. Decreased alertness for nightshift workers leads to errors which steadily increase with each consecutive shift worked (Demb & Erickson 2009, Letvak, Lane & Ruhm 2011). Several studies have found that staff who work permanent night shifts may suffer less severe sleep deprivation effects; when they have sufficient time to adjust to their schedule, they are able to adapt to the change in their circadian rhythm (AANE 2012, Blachowicz & Letiza 2006, Demb & Erickson 2009, Garrett 2008, Lerman et al 2012, Lockley et al 2007, Muecke 2005, Olds & Clarke 2010, Rogers et al 2004a).

CONSEQUENCES OF FATIGUE

Other industries have been investigating fatigue and its consequences on performance, health and safety for many years. Working while fatigued has been compared with alcohol intoxication. There are physical, mental and emotional signs of excessive fatigue. Among the consequences of fatigue are: diminished memory, slowed reaction time, slowed information processing, irritability, compromised problem solving and critical thinking, lapses in attention to detail, decreased concentration and judgment, and diminished motivation (Blachowicz & Letiza 2006, Demb &
Erickson 2009, Ellis 2008, Graves & Simmons 2009, Hill 2011, Josten, Ngatham & Thierry 2003, Letvak, Lane & Ruhm 2011, Muecke 2005, Owens 2007, Poissonnet & Veron 2000). A landmark study in 2004 by Rogers found that hospital staff nurses made more errors when they worked more than a 12.5-hour shift with or without overtime (Rogers et al 2004a). They found that working 12.5-hours or longer in a 24-hour time period increased the likelihood of making an error by three times when compared with staff working an 8.5-hour shift. In 2007, Lockley et al found strong evidence after reviewing a series of studies that extended-duration work shifts in both physicians-in-training and nurses resulted in increased fatigue and impaired performance and safety. This sleep deprivation from extended work shifts affected their decision-making ability, their ability to learn as well as having personal health consequences.

There is much anecdotal and research evidence that nurse fatigue is associated with long work shifts, night-shift work and shift rotation, caring for physically and emotionally demanding patients, stressful work and home environments, poor sleep and a lack of physical and psychological restoration (Bahr et al 2008, Blachowicz & Letiza 2006, Demb & Erickson 2009, Drake et al 2012, Graves & Simmons 2009, IOM 2003, Lerman et al 2012, Muecke 2005, Olds & Clarke 2010, O’Reilly 2012, Owens 2007, Poissonnet & Veron 2000). Working long shifts or working night shifts lessens sleep time, resulting in a cumulative sleep loss and increased time awake and impacts normal circadian rhythm (Ellis 2008). Fatigue and inadequate sleep have been shown to negatively impact health. There is strong evidence that working long shifts and/or consecutive shifts with insufficient sleep puts a patient’s health at risk, risks nurses’ own health and, if they drive home when drowsy, puts the general public at risk (Rogers et al 2004a). Cancer, heart disease, diabetes, GI disorders and obesity have all been tied to fatigue and sleep debt (Letvak, Lane & Ruhm 2011). Mental health complaints, including anxiety and depression, may also be consequences of fatigue and sleep debt (Demb & Erickson 2009, Drake et al 2012, Graves & Simmons 2009, Josten, Ngatham & Thierry 2003, Letvak, Lane & Ruhm 2011, Poissonnet & Veron 2000). Work-related injuries, including musculoskeletal injuries and needle-stick injuries, are an additional health issue. Consequences of fatigue also include decreased physical and emotional well-being in addition to having an impact on personal safety. Nurse fatigue has been associated with medication errors, charting errors and medical decision errors. Small though important changes in a patient’s condition or medication or treatment orders may be missed by a sleep-deprived nurse (Hughes 2008).

Fatigue is not only a concern for bedside nurses providing direct patient care; the workload and expectations placed on nursing supervisors, nurse managers and others involved in nursing administration should be taken into consideration. With more hospitals re-organizing, nurse leaders are often required to work long hours under stressful conditions. They are tasked with critical decisions that may be affected by their fatigue. Factors that contribute to fatigue for those in a management/leadership position may include the following (Hendren 2011, Hughes 2008, Lerman et al 2012, Lorenz 2008, Lothschuetz et al 2010, Reed 2013, Travaglia et al 2011):

1. Lack of support in the organization, either from staff, physicians, or organizational leaders
2. Changes in one’s influence in the organization
3. "Change fatigue" – the frequency of change, unfocused, uninspired and unsuccessful at times
4. "Decision fatigue" – as the quantity and pace of decisions increase, the quality decreases and the seriousness of the results of decisions made (and their impact on others) is draining
5. 24/7 responsibility/availability
6. Inability to find/retain top talent
7. Daily change in priorities  
8. Need to do more to get better results with fewer resources and shorter time frames  
9. Physical tiredness  
10. Poor work/life balance  
11. Daily factors that nurse leaders deal with: crisis, confusion, conflict, loneliness and exhaustion.  
12. Sense of isolation

Emotional exhaustion may affect performance for nurse leaders and the bedside nurse as well as the quality of patient care. The hospital environment today demands increased work for nurses, long work days, and results in potential conflicts between staff, management and patients (Drake et al 2012). A nurse’s daily routine includes supporting patients and their families through devastating illnesses and injuries, work-related risks (i.e., needle-sticks, heavy lifting, staffing shortages) and the need to continually remain up-to-date in a progressive and ever-changing profession. In addition to physical fatigue, nurses are confronted daily with emotional situations that drain them (Manzano García & Ayala Calvo 2012). This combination of physical and emotional fatigue may put nurses, their co-workers and their patients at risk on a daily basis. A healthy work environment and a culture of safety is a first step to address this serious problem. We can no longer ignore the consequences of a culture that encourages nurses to work when fatigued.

RECOMMENDATIONS FOR PRACTICE

We must all work together to change the culture of nursing and emergency nursing that allows and often encourages nurses to work long hours with insufficient sleep and rest. Working conditions and work environments are influenced and controlled by the health care industry and health care organizations and their leadership. The management and leadership of health care organizations are instrumental to the safety and quality of care of our patients and to the safety of nursing professionals (ANA 2006a, Avillion 2005, Hendren 2011, Hughes 2008, Lorenz 2008, Lothschuetz et al 2010, Travaglia et al 2011). The 2003 IOM report recommends that nursing shifts not exceed 12.5 hours in a 24-hour period and their workweek should not exceed more than 60 hours in a seven-day period (IOM 2003).

A literature review has made it clear that despite the fatigue and potential risks associated with 12-hour shifts they are the preferred shift for many nurses and organizations. Nurse executives and managers must develop and implement strategies to create safe and healthy environments for patients, nurses and all health care workers. These strategies should apply to all shifts, as fatigue is not exclusive to the night shift. Nurses and other health care workers must be allowed adequate breaks and able to consistently leave at the end of their shifts.


Any approach to addressing nurse fatigue must be collaboration among hospital administration, nursing management and nursing staff. An assessment of current staffing, scheduling and nursing
procedures is necessary to identify potential risks for staff and patients. Recommendations for identifying and addressing fatigue-related risks include the following:

1. Assess organization’s fatigue related risks – staffing, consecutive shifts, off-shift hours
2. Collect information on the hazards of fatigue, analyze the risks and implement measures to mitigate these risks
3. Develop an “Alertness Management Program” which includes education, strategies, practices and organizational policy support
4. Evaluate patient hand-off processes for consistency and safety
5. Invite staff input in designing work schedules
6. Create and implement a fatigue management plan that includes strategies for fighting fatigue
7. Educate staff regarding sleep hygiene and fatigue and its consequences
8. Provide non-punitive opportunities for staff to express concerns about fatigue
9. Encourage teamwork as a strategy to support staff who work long hours
10. Consider fatigue as a potential contributing factor when reviewing all adverse events
11. Provide a non-punitive fatigue reporting system for employees
12. Develop a system to monitor fatigue levels among staff


The nurse executive is in a unique position to create a culture of change in his or her organization. He/she has the opportunity to implement policies and practices that impact the health and safety of staff as well as of the patient. Some considerations specific to the nurse executive include the need to:

1. Assess the organizational culture regarding fatigue and fatigue awareness
2. Develop specific policies regarding length of work time in direct patient care
3. Ensure that employees recognize and honor their ethical responsibility to provide safe and high-quality nursing care for their patients
4. Encourage a culture that allows safe expression of fatigue-related concerns
5. Encourage a culture that respects nurses’ scheduled days off and vacation time
6. Evaluate staffing issues and solicit input from affected staff in order to resolve these issues
7. Create limits on the number of voluntary overtime hours nurses can work to prevent adverse nurse and patient outcomes
8. Post federal regulations in break rooms, locker rooms and bathrooms
9. Provide information via intranet or hard copy on the harmful effects of long work hours, multiple consecutive shifts and shift work

Nurse managers are acutely aware of the needs and practices of their department. They know the roles and work of their staff and all that is asked of them on a daily basis. In partnership with their nursing staff, they have the opportunity to create a healthy work environment. They must also consider their own well-being and be role models and change agents for their staff.

Recommendations for nurse managers include:

1. Be aware of staffing patterns, amount of overtime and the number of hours individual nurses are working
2. Promote a culture that recognizes nurse fatigue as an unacceptable risk
3. Consider permanent shift assignments – they may lessen fatigue effects as opposed to rotating shifts
4. Hold brief information sessions that may be useful. Do not hold huddles at the end of the shift for those working night shift.
5. Provide written information via intranet or hard copy on the harmful effects of long work hours, multiple consecutive shifts and shift work
6. Evaluate reasons for staffing issues, including overtime, appropriate workload, and staffing; involve staff in resolution
7. Educate staff about sleep hygiene and the effects of fatigue on patient safety
8. Set up redundant systems to intercept errors prior to reaching patients
9. Encourage booster breaks – short time periods in which health-promoting activities can be performed
10. Do not schedule staff meetings at the end of the night shift
11. Stagger nurse shifts – know census and work patterns for the department
12. Provide flexible scheduling options
13. Promote job satisfaction and a safe work environment
14. Evaluate staff’s individual needs – consider that some nurses should not work long hours or do shift work (those with chronic illness, advanced age and those with pressing responsibilities outside of work)
15. Ensure policies and provide leadership to support any fatigue management practices initiated
16. Schedule sensibly and maintain consistently – Do not rotate shifts, consider permanent assignments
17. Monitor nurses’ hours worked including second jobs
18. Bring in an additional nurse during the peak four hours of patient care
19. Promote prompt departure at the end of a scheduled shift
20. Support a culture where nurses are able to refuse to work overtime without retribution
21. Provide opportunities for rest, relaxation and exercise during long work shifts
22. Recommendations to deal with nurse manager fatigue:
   a. Consider 10-minute morning and afternoon breaks
   b. Get adequate sleep
   c. Set realistic goals and have realistic self-expectations
   d. Take physical care of self – exercise, eat, rest, limit or eliminate detrimental habits
   e. Have an enjoyable diversion
   f. Ask for help
   g. Learn to say no
   h. Be clear about boundaries and goals
   i. Use sabbatical, if available

Staff nurses must take personal responsibility for their health and well-being. They have an ethical responsibility to not work when fatigue and stress from extended work hours puts them at an increased risk. They need to be involved in changing their culture to one that makes their safety and well-being as much a priority as their patients’. By working in collaboration with hospital and nursing leadership, staff nurses can create healthy work environments that benefit everyone. To assure this, they:

1. Must speak up when fatigue is a concern before patient safety is compromised
2. Need to evaluate the decision to work if they have not had enough rest
3. Must communicate to their nurse managers when they have worked extended shifts
4. Have an ethical responsibility to practice safely
5. Must uphold their ethical responsibility to arrive at work adequately rested and prepared to provide patient care
6. Should consider that multiple workloads and work settings affect fatigue levels
7. Should limit the number of hours they agree to work overtime
8. Should identify and work the shift that fits their circadian rhythm the best
9. Must establish support networks
10. Exchange solutions with colleagues on ways to cope with the problems of shift work
11. Help co-workers by watching for signs of drowsiness
12. Integrate innovative strategies that support adequate rest and time away from the workplace between worked shifts


Health care is a 24-hour-a-day profession. We must seek ways to support shift workers to be able to provide safe care and to identify strategies to enable them to maintain safe work environments despite the known challenges of shift work. The disruption of their normal circadian rhythm puts shift workers at greater risk for health and safety consequences. Some recommendations for those nurses working at night include the following:

1. Help the body adjust to night hours by working in bright lights with non-distracting noise, such as music
2. Mandate uninterrupted break times
3. Use alertness strategies to overcome fatigue (caffeine, good sleep habits)
4. Be aware of fatigue levels and ask for “checks” of medications, doses, procedures, etc. as necessary.

1. Daytime sleep tips
   a. Use room darkening shades over all windows
   b. Decrease room temperature
   c. Consider ear plugs and sleep masks
   d. Place a "Do Not Disturb" sign on bedroom door
   e. Create guidelines for families to eliminate noise and interruptions
   f. Consider unplugging the phone
   g. Take control of your sleep – make sleep a priority

2. Identify your sleepiest time

3. Wake up at the same time every day if possible

4. Avoid alcohol, caffeine and nicotine before bedtime

5. Keep a sleep diary to record sleep patterns and problems

6. Maintain a consistent routine to minimize sleep debt

7. Over-the-counter or prescribed sleep aids should be used cautiously


Good nutrition and exercise offer many health benefits including stress reduction, better sleep and improved overall well-being.

1. Schedule short breaks as often as possible
2. Exercise when feeling fatigued – go for a walk, climb stairs
3. Avoid unhealthy foods
4. Do not rely on medications to enhance alertness
5. Avoid caffeine for at least five hours prior to sleeping
6. Consider all sources of caffeine (chocolate, energy drinks, gum, sodas)
7. Choose nutritious foods to eat during the shift to avoid large blood glucose fluctuations
8. Do not eat a heavy meal prior to bedtime
9. Exercise regularly – find activities that you enjoy and can fit into your daily routine
10. Cut back on sugars and foods with empty calories


Well-designed studies are necessary to examine the effects of shift length, fatigue and the nurses’ work environment on the safety and quality of patient care and health care outcomes. Some of the questions to be answered might include:
1. Has there been an increase in errors since the change from eight-hour shifts to 12-hour shifts?
2. If there has been an increase in errors is it due to shift length or outside influences?
3. Do organizations that provide scheduling flexibility and creativity have fewer errors?
4. How can we decrease overtime per shift and per week?
5. Have there been more nurse injuries or use of sick time in nurses whose shifts exceed 10 hours per day or whose workweeks exceed 50 hours?

We need continued research on fatigue, hours of work and shift work to assist hospitals in moving toward an evidence-based practice culture. Hospital administration and nurses should collaborate to develop policies based on scientific evidence in regards to work hours and work environments. Education is a critical first step toward this work.

**FATIGUE RESOURCES**

1. American Academy of Sleep Medicine Patient Education Portal  
   [www.yoursleep.aasmnet.org](http://www.yoursleep.aasmnet.org)
2. National Sleep Foundation Patient Education Portal  [www.sleepfoundation.org](http://www.sleepfoundation.org)
3. Nurse Fatigue – American Nurses Association  
   a. American Nurses Association Shift Work Sleep Disorder Kit  
   b. Fatigue Risk Management in the Workplace (ANA)
4. Sleep and Sleep Disorders  [www.cdc.gov/sleep](http://www.cdc.gov/sleep)
5. Wisconsin Hospital Association Inc. Fatigue and Hours of Work Toolkit  
   [www.wha.org/fatigue.aspx](http://www.wha.org/fatigue.aspx)
6. Wisconsin Nursing Coalition Facts About Nurse Fatigue and Patient Safety  
   [www.wisconsinnurses.org/media/Presentation_outline.pdf](http://www.wisconsinnurses.org/media/Presentation_outline.pdf)

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