

Hazard Identification	Risk Assessment Lower Risk → Moderate Risk → Higher Risk			Risk Control
MENTAL & PHYSICAL DEMANDS OF WORK These include, for example: 1. Repetitive or monotonous work 2. Sustained physical or mental effort 3. Sustained and/or complex physical or mental tasks	Low Risk 1. Varying tasks demand 2. Minimal physically demanding work 3. Minimal periods of high concentration and/or mentally demanding work	Moderate Risk Highly repetitive work and/or high concentration work, with high demands over an extended period of time Highly physically demanding work that results in muscle fatigue Long periods of high concentration and/or mentally demanding work	High Risk	Options <ul style="list-style-type: none"> Re-design jobs to eliminate boring, repetitive tasks Improve communication Provide training to allow multi-skilling and effective job rotation Use alarms and monitors, particularly for solo work (eg driving vehicles) Use plant, machinery and equipment to eliminate or reduce the excessive physical demands of the job Reduce the amount of time employees/workers need to spend performing sustained physically and mentally demanding work Ensure there are adequate employees/workers and other resources to do the job without placing excessive demands on staff Roster enough employees/workers during peak times and demands Ensure adequate breaks during shifts to allow recovery Allow supervisors and employees/workers to reschedule tasks if fatigue becomes a problem Ensure work demands gradually increase towards the middle of the shift and decrease towards the end Eliminate sources of risks that might exacerbate fatigue (eg lack of job control, manual handling, extremes of temperature) Improve communication processes Improve the duration and timing of work Ensure safe and efficient shift hand-over
WORK SCHEDULING & PLANNING - NIGHT WORK 1. Shift end (for those working eight hours or more between 10.00pm and 6.00am) 2. Length of shift 3. Sequential night shifts 4. Period of non-work following a sequence of night shifts 5. Breaks during work - frequency 6. Breaks between work periods - recovery time 7. Seasonal work arrangements - hours worked	Low Risk 1. After 10.00 pm 2. 8 Hours 3. 6 or more 8 hour shifts, 5 or more 10 hour shifts, 4 or more 12 hour shifts 4. 48 Hours 5. Adequate and regular breaks 6. Adequate time for sleep, travel, meals, etc 7. Regular hours over 12 months	Moderate Risk Before 6.00 am 10 Hours 12 hours Less than 48 hours Infrequent or no breaks Inadequate time for sleep, travel, meals, etc Long hours during peak season	High Risk	Options Night shifts, including the number of consecutive night shifts <ul style="list-style-type: none"> Eliminate or limit night work where possible Eliminate the use of nightshifts for particular jobs or activities Schedule complex tasks for daytime Schedule work for hours when the risks may be lower – for example, complex and safety-critical tasks are best undertaken during normal day shifts when employees/workers are less likely to be fatigued, rather than during low body clock periods (ie don't schedule tasks between 2am and 6am and, to a lesser degree, between 2pm and 4pm) Avoid scheduling higher risk tasks on the first night of a night shift cycle. If unavoidable, when planning the task consider additional controls such as job rotation or additional rest breaks Minimise or redesign routine administrative tasks to ensure employees/workers can focus on core duties during their night work Allow for naps during night shifts Limit the number of consecutive night shifts worked – no more than four night shifts in a row Allow regular night employees/workers periods of normal nights' sleep to catch up on their sleep deficit Ensure that rosters allow for at least two full nights' sleep after the last night shift Arrange shifts so that day sleep is adequate Use a forward-rotation shift system (ie morning to afternoon, afternoon to night) Improve the order, speed, direction and length of rotation of the shift cycle Except for emergencies, give at least 24 hours notice before night work. Consider providing a longer period of notice so that employees/workers have time to adjust their activities
WORK SCHEDULING & PLANNING - SHIFT WORK 1. Length of shift 2. Time of shift 3. Speed and direction of shift 4. Split shifts/variable shifts	Low Risk 1. 10 Hours 2. Day shifts, Afternoon shifts 3. Forward rotation (morn/afternoon/night) 4. 13 hour period	Moderate Risk 13 hours Night shifts Backward rotation (night/evening/morn) Slower rotation (weekly/3-4 week)	High Risk	Options Hours of work in a single shift. This includes travel time, especially for remote sites <ul style="list-style-type: none"> Reduce working hours Increase resourcing Eliminate the use of extended hours for particular jobs or activities Control the length of shifts Limit the use of overtime, especially unscheduled overtime Monitor hours of work Provide alternative transport at end of overtime/long shift
WORK SCHEDULING & PLANNING - HOURS 1. Average weekly hours 2. Total hours over a three-month period 3. Daily work hours 4. Daily work hours and work-related travel 5. Scheduling of work	Low Risk 1. 35-40 Hours (working week) 2. 624 working hours 3. 9 working hours 4. 10 working hours 5. Regular and predictable hours	Moderate Risk 48 Hours (working week) 12 working hours 13 working hours Irregular and unpredictable hours, short notice of schedule, extended overtime on call across shift cycle	High Risk 56 Hours (working week)	Options Hours of work across a shift cycle <ul style="list-style-type: none"> Develop a working-hours policy on daily work hours, maximum average weekly hours, total hours over a three-month period and work-related travel Reduce working hours Reduce the number of consecutive day shifts that can be worked Eliminate or reduce the need to work long shifts for more than four consecutive days Allocate shift employees/workers consecutive days off, including some weekends, depending upon their fatigue risk level Avoid working arrangements that provide incentives to work excessive hours Control overtime, shift swapping and on-call duties Offer alternatives to employees/workers who may have difficulties adjusting to working hours On call duties<ul style="list-style-type: none"> Limit use of standby and on-call duties Ensure that exchange of shifts does not result in excessive hours Ensure that responding to emergencies does not result in excessive hours Breaks between work shifts<ul style="list-style-type: none"> Increase the length of breaks between shifts Allow for recovery between work periods Defer non-urgent work to allow appropriate rest and recuperation for employees/workers Provide rest days; (opportunity for two consecutive night sleeps) Improve the timing of shifts Allow for family and social commitments between shifts and shift cycles Make sure that there is enough time in a break for six hours uninterrupted sleep Breaks within work shifts<ul style="list-style-type: none"> Provide more and/or longer breaks to allow for recovery within work periods Provide adequate resources to cover breaks Ensure adequate number and location of crib and toilet facilities Reduce the use of split shifts Where split shifts are used, arrange timing so sleep of employees/workers is not disrupted due to the times they are required to work Shift start/finish times<ul style="list-style-type: none"> Don't start or finish between 10pm and 6 am Ensure time for adequate communication at shift handovers Match shift times to the availability of public transport Changes to rosters<ul style="list-style-type: none"> Set shift rosters ahead of time and avoid sudden changes of shifts to allow employees/workers to plan leisure time Reduce irregular and unpredictable work schedules
EXCESSIVE COMMUTING TIMES NECESSARY	Low Risk Minimal commuting time	Moderate Risk Long commuting time	High Risk	Options <ul style="list-style-type: none"> Start work at long distance commute sites on the day after arrival and start travel home on the day after the shift cycle is finished Assist with travel arrangements, eg provide transport Reduce active working time to account for long commuting time or distance
WORK ENVIRONMENT CONDITIONS 1. Exposure to hazardous substances and atmospheric contaminants 2. Exposure to noise 3. Exposure to extreme temperatures 4. Exposure to vibration 5. Effect of exposure during extended shifts	Low Risk 1. For hazardous substances, low risk calculated using national exposure 2. Low risk calculated according to formulae in AS/NZS 1269.1 3. Minimal exposure 4. Minimal exposure 5. Minimal exposure	Moderate Risk For hazardous substances high risk calculated using national exposure High risk calculated according to formulae in AS/NZS 1269.1 Long period exposure Long period exposure High exposure	High Risk	Options Hours of work across a shift cycle Stress <ul style="list-style-type: none"> Improve job control and the other risk factors associated with stress Ensure opportunities to clarify stress-related issues Physical conditions <ul style="list-style-type: none"> Avoid working during periods of extreme temperature Control exposure to hazardous substances and environments Provide effective protective clothing and equipment, allowing for different shifts. Use heating and cooling to control ambient temperatures to support alertness Provide adequate facilities for rest, sleep, meal breaks, onsite accommodation (if appropriate) and other essential requirements, such as bathroom facilities Install adjustable, vibration-free seats in appropriate machinery and vehicles Ensure the workplace and surroundings are well lit, safe and secure Employees/workers who perform repetitive manual tasks should have regular rest breaks Ensure exposures are carefully monitored and exposure levels adjusted. For example, exposure during a 10-hour shift may not equate to 1.25 times the exposure experienced during an eight-hour shift
INDIVIDUAL & NON-WORK FACTORS 1. Sleep (amount and quality) 2. Health 3. Fitness for work 4. Lifestyle factors	Low Risk 1. Night sleep 8 hours night sleep (in 24 hours) 2. 3. 4.	Moderate Risk Day sleep 6 hours night sleep (in 24 hours) Poor diet, Recent illness/injury, Sleep disorders Influence of alcohol, drugs or amount of sleep Activities/responsibilities that limit amount of sleep, eg second job or long commute	High Risk	Options <ul style="list-style-type: none"> Maintain vigilance in identifying non-work related factors Subsidise modifications to private homes to improve sleeping conditions (eg air conditioning) Provide information and education about how non-work related factors can increase the risks of fatigue Provide a mechanism to encourage employees/workers to report non-work factors that might affect fatigue management