

WSH Guidelines on Return-To-Work

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1 Introduction

Employee absence from work due to work-related injury or sickness leads to decreased work productivity. The injured or sick employee is also adversely affected physically and mentally, impacting his health. The employer, faced with an employee in degraded health, is often caught in the dilemma of deciding how long to wait before releasing the employee on medical grounds.

However, the injured or ill employee does not have to recover fully before returning to work. The employee can return to some level of nuanced work appropriate for his level of health or fitness and continue to contribute to the company. This return to some level of productivity before full fitness also helps the employee to go back to work as soon as possible. Such Return-To-Work (RTW) programme supports employers in maintaining productivity of their companies and contributes to the recovery and rehabilitation of the injured or ill employee.

The **Return-To-Work (RTW) programme** is a structured process within a company to facilitate the safe and expeditious return to the workplace of injured or sick employees. It provides early intervention to help these employees regain their work ability and long-term employability so that they can continue to be productive at the workplace with the assistance of the RTW co-ordinator or case manager (Hospital-based or Workplace-based) or RTW physician.

2 Purpose

These guidelines were developed to encourage employers to establish an RTW programme in their workplace. The guidelines provide guidance to assist employers in doing so.

The guidelines also serve as a practical guide for medical practitioners functioning the role of RTW physician¹ to determine the worker's fitness status.

¹ The RTW physician is any SMC-registered doctor who is executing the role of determining an employee's fitness status. SMC, or the Singapore Medical Council, is a statutory board under the Ministry of Health, which maintains the Register of Medical Practitioners in Singapore, administers the compulsory continuing medical education (CME) programme and governs and regulates the professional conduct and ethics of registered medical practitioners.

3 Business Case

An appropriate RTW programme can address the various issues that surface when a worker is injured or diagnosed with a medical condition that impacts his fitness to work. The programme offers benefits to both the worker and the company, from injury prevention, preservation of workforce to optimisation of productivity. The company saves cost and the business profits while ensuring the workers' safety, health and wellbeing are taken care of.

Studies have shown that putting in place an effective RTW programme can result in productivity savings. A Sun Life RTW study² reported an average time savings of 2.7 weeks for short term disability. These time savings were considerable noting the true cost of sickness absence; a summary report published by the Integrated Benefits Institute³ estimated full productivity cost at USD 11,181 per employee. The cost savings to this number if an RTW programme were in place was at least 18% in a report by Watson-Wyatt Worldwide⁴.

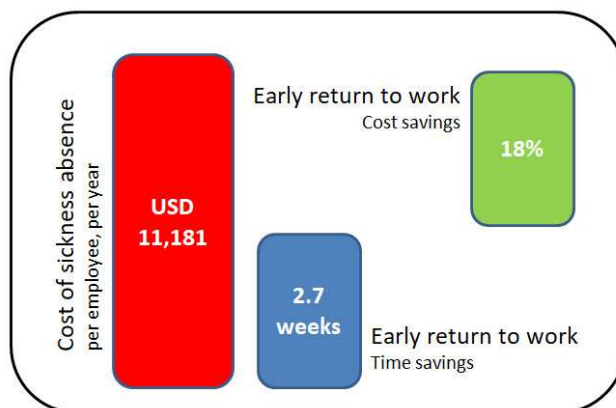


Figure 1: Snapshot of the costs of sickness absence and potential savings from an RTW programme.

² The RTW Study conducted by Sun Life, a Canadian insurance company, can be accessed at <http://www.insure.com/disability-insurance/early-intervention-costs.html>

³ The Integrated Benefits Institute (IBI) is a US non-profit organisation that analyses health and productivity issues at the workplace. The IBI published a summary report in June 2004 titled "The Business Case for Managing Health and Productivity: Results from the IBI's Full-Cost Benchmarking Program".

⁴ Watson-Wyatt Worldwide, now known as Towers Watson, a global consulting firm, published a report in 2000 titled "Staying@Work".

4 Legal Requirements

The RTW programme is voluntary in nature. Injured employees can choose to opt out if they do not wish to be enrolled into or continue with the programme.

The payment of RTW-related intervention (which includes RTW case management or co-ordination services, worksite visits, functional capacity evaluation, etc.), is however, mandatory under the Work Injury Compensation Act (WICA). This means that if a registered medical practitioner recommends or refers an injured employee to participate in the programme, and the employee is agreeable and undergoes RTW services, the employer is obliged to pay for all RTW-related expenses. The employer can seek reimbursement from their WIC insurers subsequently. This is in accordance with Section 2(d), First Schedule of the WICA, which states that the cost of medical treatment includes, but is not limited to, the charges for case management, psychotherapy for the treatment of post-traumatic stress disorder, functional capacity evaluation and worksite assessment, required for the purposes of rehabilitating and enabling an injured employee to return to work.

Additionally, RTW and the associated issues of sickness absence and employee fitness have interactions with laws such as the Employment Act and the Workplace Safety and Health (WSH) Act.

Under the Employment Act, an employee is entitled to 60 days of paid hospitalisation leave, including 14 days of out-patient sick leave. The issue of sick or medical leave, which by the nature of RTW, may result in differences in opinion between the doctor treating the patient (i.e. the employee who is injured or has a medical condition) and the doctor conducting the RTW (i.e. the RTW physician). It is important for the RTW physician to deal with the patient with due care professionally, while he may be engaged by the patient's employer to conduct the RTW assessment.

The employer should be aware of his obligation to grant sickness absence to the employee who has been certified of his injury or medical condition by the medical practitioner. Should the employer not allow the employee to consume the given medical leave or require the employee to perform work which he is deemed unfit to perform, the employer would be responsible and liable for any incident that may occur subsequently as a result. Under the WSH Act, the employer is responsible to protect the safety and health of the employees working under his direction.

Kaiser v Suburban Transport System (1965)

Case synopsis: A physician sent a bus driver back to work after prescribing antihistamines (which causes drowsiness). The driver subsequently fell asleep at the wheel and was involved in an accident, injuring a passenger. The passenger sued the doctor and the bus company. The court considered that the doctor had a duty to the passenger (who was not his patient) if he had sent the driver back to work without warning him of the sedative effects of antihistamines.

Learning points: In RTW, there should be consideration by the doctor and the employer of their duty of care to the patient's co-workers and to the general public, should an incident occur as a result of sending back a worker who is unfit to perform the job. The WSH Act imposes duties on the employer to protect the safety and health of persons who may be affected by the work of their employees.

DO YOU KNOW?

The Work Injury Compensation Act (WICA) lets employees make claims for work-related injuries or diseases without having to file a civil suit under common law. WICA does not interfere with the RTW process. Hence neither the company nor the employee is disadvantaged if the employee can return to work while the claim is being processed.

It is therefore paramount that the RTW physician conducts a professional and thorough assessment to satisfy himself of the fitness of the worker to RTW. The RTW physician must also be aware of and not inadvertently disclose personal information of a confidential nature when fulfilling the obligation to update the employer of the patient's fitness to work. The employer, on his part, must treat all medical information received with sensitivity and strictly limit the information to only those who need to know.

5 Return-To-Work and Injury Life Cycle

The natural life cycle of an employee with work-related injury or ill health, or the injury life cycle, gives the employer an appreciation of the sequence of events from the incident to recovery. It allows the employer to make a sound decision on the appropriate time to initiate the RTW process. The injury life cycle also guides the treating medical practitioner to the time point where the RTW decision becomes relevant, such as handover to the RTW physician. This is important especially when the treating medical practitioner is unfamiliar with the industry or job scope of the employee.

The following figure shows a graphical representation of the key phases of the injury life cycle and their associations with RTW.

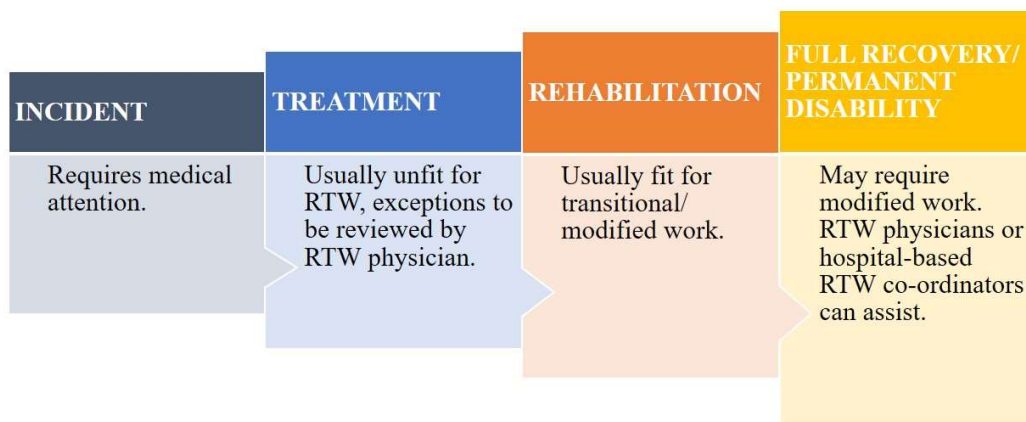


Figure 2: The 4 key phases of the injury life cycle and RTW.

Phase 1: Incident

This is the point of injury or the acute medical event. Following first aid or first responder action, the injured or sick employee is sent to a medical facility.

At this phase, priority is on stabilising the employee's condition and providing timely medical attention.

Sample Scenario

A construction worker was hit on the head by a brick that fell from three storeys above him in a worksite. He was wearing a safety helmet and there was no visible injury. He was dazed by the impact but was conscious and able to speak coherently. He was then brought to the resting area and given water to drink. Half an hour later, he complained of a headache and dizziness to his supervisor. As there was no transport vehicle in the worksite at that time, the supervisor decided to wait an hour for the vehicle to return before sending the worker to the clinic.

Review and suggested actions: In the above scenario, the delay was due to administrative reason (lack of transport vehicle). While the worker was conscious, he was symptomatic and timely medical attention was required. The worker might have a head injury that was progressing and required proper clinical examination. An ambulance should have been called to evacuate the worker.

Phase 2: Treatment

Following the injury or medical event, the employee will receive treatment. The period of this phase varies, as it depends on the extent of the injury or severity of the medical condition.

In general, an employee is in this phase if any of the following is true:

- Is hospitalised or issued hospitalisation leave;
- Has a plaster cast that is still applied;
- Has any external tube, bar, rod or wire that is operatively applied and has not yet been removed;
- Has a urinary catheter, nasogastric tube or peripheral/central intravenous access; or
- Has an open wound that is pending operative closure.

The employer should note that the employee would be unfit to return to work in most cases if he is in this phase. This holds true for any form of manual work, material handling, industrial equipment handling, crane and heavy vehicle operations.

In situations where return to work is being considered, whether normal work or light duties, the employee must be assessed by an RTW physician who is familiar with the work that the employee is expected to do. The RTW physician would need to consider the following when doing the assessment:

- Full nature of duties expected of the employee;
- Risk of exacerbation of the employee's injury or medical condition;
- Safety and health implications to the employee and the workplace; and
- Definition of light duties if employee is returning to perform them.

The medical practitioner should only certify if he is comfortable performing the role of an RTW physician. Otherwise, he should make a referral to an appropriate RTW physician.

Phase 3: Rehabilitation

The rehabilitation phase is characterised by the healing of the acute injury and the focus is on the restoration of strength, function and work capacity. Wounds would have closed and bones united, and the employee is discharged from the hospital. However, the employee might still have appointments with physiotherapists or occupational therapists.

The employee can return to work in a limited capacity, often as a subset of his original job or as a modified job. Such transitional work is a temporary arrangement to allow the employee who has some capacity to return to the workplace in a productive manner. The alternative would be to keep the employee on either hospitalisation leave or extended light duties, which is often not recommended and viewed as a last resort.

Light duties are not legally defined and should be pre-defined between the company and the RTW physician after an appropriate work assessment (in a best practice setting). The following guidance could be considered when defining light duties:

- No physical exertion or heavy load carriage. Any load greater than 1kg can be regarded as a heavy load in an undefined situation.
- No driving of heavy vehicles (vehicles requiring a Class 4 or 5 driving licence.)
- No operation of industrial vehicles e.g. cranes, excavators, forklifts, reach trucks, etc.
- No operation of industrial equipment e.g. cutters, grinders, hydraulic pallet lifters, mechanised saws and presses, etc.
- Typical administrative office work is compatible with light duties.

During this phase, the RTW physician should discuss with the employer and explore the most suitable work arrangement for the employee.

Work Arrangement	Description
Return to 100% of original job	If the employee's current capacity is compatible with his original job, he can be returned to work.
Transitional work (return to a subset of the original job)	If the employee has temporary incapacity or functional deficit, his original job should be examined to see which portion(s) of the job he can do. The employee can then be returned to work within this defined subset or limited role.
Transitional work (return to a modified job)	If the employee is temporarily unable to do a significant portion of his original job, a modified job may need to be crafted. Such modified job is a task that is not standard within the company but is specially customised to accommodate the employee's current capacity.

Phase 4: Full recovery or permanent disability

This phase has two distinct outcomes; either the employee recovers fully from his injury/medical condition or he is left with some degree of permanent disability.

Full recovery -

If the employee recovers fully, he can return to his original job in an unrestricted capacity.

Permanent disability -

If the employee has a permanent disability, an assessment by the RTW physician would be appropriate before returning him to the workplace. Should the employee be able to do his original job, he may be returned to his original job in an unrestricted capacity. Should he not, the following alternatives could be considered:

- Transfer to another suitable role (other jobs that are suitable for the employee despite his disability)
- Permanent job modification (modify the job or create a new role that suits the employee)

Note: Medical out-boarding of the employee should only be considered as a last resort. Preservation of the workforce through vocational transfer or job modification can often be executed in a cost effective and operationally feasible manner.

6 Return-To-Work Programme

The RTW programme is a structured process within a company to facilitate the safe and expeditious return to the workplace of injured or sick employees. A sound programme comprises five key components, which are elaborated in the sections that follow.

1. RTW policy

A company policy statement relating to RTW reflects the support by senior management in the implementation of the RTW programme. Commitment by senior management is necessary to ensure the successful rollout of the programme.

A sample RTW policy could read as follows: *“When an employee is injured or is diagnosed with a medical condition, XYZ company commits to the safety, health and well-being of its employees through appropriate and timely return to work assessments.”*.

2. Referral criteria

The need for an RTW assessment is evaluated upon (i) the severity of the injury or medical condition and (ii) the job scope of the employee.

(i) Severity of injury or medical condition

The severity of the injury or medical condition can be estimated by the amount of medical leaves and/or light duties issued by the attending doctor. The medical leaves and/or light duties issued correlate to the doctor’s opinion on the severity or seriousness of the injury or medical condition respectively.

(ii) Job scope of the employee

The job scope of the employee can be functionally categorised into office work, normal physical work and safety critical physical work.

Office (or administrative work) is generally desk or counter bound, working with computers, filing, data entry, operating a photocopier, fax or telephone, receptionist duties, retail sales and cashier duties.

Normal physical work includes light manual material handling, operating a personal hand tool, cleaning duties, security duties, landscaping duties, pest management, driving duties (up to Class 3), vehicle or appliance repair and maintenance, craftsmanship with hand tools, assembly line work, warehouse stock picking, stocking shelves, hairdressing and kitchen/chef duties.

Safety critical physical work includes construction activities, shipyard repair, overhaul and fabrication activities, ship captains, pilots, operating a heavy tool or machine, operating vehicles (Class 4 and above) and heavy commercial vehicles (cranes, forklifts, excavators), heavy public transport operators (bus/ train/ ferry), working at height and working in confined spaces.

If the job scope of the employee straddles across different functional categories, the highest priority physical category should be considered.

The recommendations for RTW referral evaluated upon the severity of the injury or medical condition and the job scope of the employee are captured in Table 1.

Category	Total Medical Leave + Light Duties (ML+LD) in days	Office/ Admin Work	Physical Work (normal)	Physical work (safety critical)
INJURY	<3	NA	NA	Refer
	≥3	NA	Refer	Refer
	≥14	Refer	Refer	Refer
ACUTE MEDICAL CONDITION	<3	NA	NA	Supervisor/ Safety to assess if referral required
	≥3	NA	NA	Refer
	≥7	NA	Refer	Refer
	≥14	Refer	Refer	Refer
CHRONIC MEDICAL CONDITION	New diagnosis, no medication	NA	NA	Supervisor/ Safety to assess if referral required
	New diagnosis, started medication	NA	Refer	Refer
	Known diagnosis, new or change medication	NA	Refer	Refer
	Complications with ML/LD <3	NA	Supervisor/ Safety to assess if referral required	Supervisor/ Safety to assess if referral required
	Complications with ML/LD ≥3	NA	Refer	Refer
	Complications with ML/LD ≥14	Refer	Refer	Refer

Table 1: Recommendations for RTW referral.

Supplementary notes to Table 1:

- The number of days is a total of both medical leave and light duties, not just medical leave alone.
- “Refer” means to send the worker for an RTW assessment by an RTW Physician.
- “Supervisor/ safety to assess” means that in those situations, the employee would be asked if he is feeling well and his basic functions viewed to be satisfactory (alert, able to walk and use his limbs normally, not in pain etc.). If the supervisor/ safety officer has any doubts on the employee’s fitness, a referral should be made.

The recommendations for RTW referral in Table 1 serves as a guide for companies. The division of physical work between “normal” and “safety critical” is an arbitrary line that is provided to assist companies to reduce costs, at an acceptable risk level. There are companies that may choose not to differentiate between normal and safety critical work and define all physical work as safety critical. This is a superior approach and its practice is also encouraged.

It is also acceptable for a company to regard all cases of medical leave for RTW referral. Ultimately, the company has the prerogative to decide the criteria that best applies to them.

3. Referral time point

Initial assessment

The normal time point for an initial RTW assessment is usually in the rehabilitation phase or phase 3 of the injury life cycle (in phase 2 for exceptional cases). In general, the RTW assessment can be triggered after the initial treatment is completed.

If the initial medical leave period is short (up to two weeks), the RTW assessment would usually occur after the medical leaves are consumed. However, the company does not have to strictly wait for the completion of medical leaves before triggering the RTW assessment. This can happen when a long medical leave or restriction is given by the treating medical facility (e.g. “excuse heavy loads for three months” or “hospitalisation leave for three months”). Nonetheless, it is always a good practice to ensure that the employee is fit enough to travel to the clinic before triggering an RTW assessment.

If a long period of medical leave is given, the company can enquire if the period is for recuperation (i.e. phase 3 or rehabilitation phase) or still under active treatment e.g. chemotherapy for cancer (i.e. phase 2 or treatment phase).

When in doubt, the company can check with the RTW Physician if a referral at that point in time would be appropriate.

Final assessment

All final RTW assessments should ideally be done before the end of the medical leave/ light duties period and before the employee returns to a more permanent job scope at the workplace when maximal rehabilitation potential has been reached or has fully recovered (i.e. phase 4 or recovery phase).

For normal and safety critical physical work, the final RTW assessment should always be done before commencement of work, even if the employee claims that he is well and recovered. If the employee returns to the workplace before the final RTW assessment, he should continue with light duties until the assessment is completed.

For administrative and office work, if the final RTW assessment cannot be done before the end of the medical leave period, it is acceptable to conduct the assessment within two weeks of return to the workplace. During this interim period, the company will have to decide what duties would be appropriate for the employee.

4. Appointment of RTW physician

The RTW physician, as previously mentioned, is any SMC-registered doctor who is executing the role of determining an employee’s fitness status. He must be knowledgeable about the injury or medical condition, as well as the scope and demands of the job. The RTW physician role is usually fulfilled by the following doctors:

- (a) Occupational medicine specialists – These are doctors who specialise in RTW issues and can be identified with the MMED (OM), MSC (OM) or MPH (OM track) qualifications.
- (b) Designated workplace doctors (DWDs) – These are doctors who are registered with the Ministry of Manpower (MOM) to conduct statutory medical examinations. If they are familiar with the industry, they are also appropriate to function in the role of an RTW physician. They have the Dip. (OM) qualification.
- (c) Company in-house clinic doctor – These are doctors who are not DWDs, but they are appropriate to function in the role of an RTW physician as they usually have a good understanding of the various jobs and work processes in the company.

5. RTW procedures

The typical sequence for RTW procedures is outlined as follows:

Step 1: Initiation

The human resource (HR) or WSH department would initiate the RTW assessment usually. Line managers may also initiate depending on the company's arrangement.

Both the employee (the injured or sick) and the RTW physician are informed of and coordinated on the assessment.

The referral time point for initial RTW assessment should also be noted (see section 3 above).

Step 2: RTW assessment

The RTW assessment is conducted by the RTW physician or the Hospital-based RTW co-ordinator and involves the physician or RTW co-ordinator seeing the employee at the clinic. The physician may also request and arrange for a workplace visit.

The RTW physician would normally complete the assessment by submitting a written RTW assessment report, which details the fitness status of the employee, including any restrictions or recommendations on job modifications.

See Chapter 7 on RTW Assessment for more information.

Step 3: Disseminating RTW assessment report

The RTW assessment report contains confidential medical information. Only the authorised person (identified by the company) should receive it from the RTW physician.

Following the receipt of the report, the authorised person can only disseminate it to the people who need to know, such as the manager and/or supervisor. The full report is normally accessible by a small number of people in the company due to confidentiality reasons. The

fitness status of the employee may be communicated more widely but the diagnosis and actual details of the employee's condition should be restricted to a selected small group.

Step 4: Monitoring of RTW recommendations

RTW recommendations on job modifications or job restrictions should be monitored for implementation and compliance. As line supervisors may deviate from or ignore RTW recommendations, it necessitates that a monitoring mechanism be put in place. Such monitoring can be performed by the WSH officer to ensure that the recommendations are being adhered to. The WSH officer should then hold the list of all employees on light or restricted duties to facilitate their duties. Monitoring can be performed by interviewing the affected employees and/or observing them at work.

DO YOU KNOW?

In 2017, the **hospital-based RTW co-ordinators** function was established by the MOM. RTW Co-ordinators are primarily occupational therapists, physiotherapists, nurses or medical social workers who are trained to facilitate the re-integration of employees with permanent disability back to the workplace. These RTW co-ordinators exist only in the public hospitals (therefore they have no visibility over cases under private specialist care) and support employees in phases 3 and 4 of the injury life cycle.

Presently, the RTW co-ordinators will identify and flag out injured employees who may potentially require assistance returning to work. The co-ordinators will then contact the company directly to discuss the re-integration of the employee back to the workplace and aid in job modification.

Moving forward, employers and employees are encouraged to trigger the hospital-based RTW co-ordinators directly if they would require assistance in facilitating the RTW process. The contact details of the seven public hospitals are given in Annex A.



7 Return-To-Work Assessment

The RTW assessment is a medical assessment conducted by the RTW physician to ascertain the fitness status of the employee. The assessment will then determine if the employee is fit to return to his original job scope or requires (temporary or permanent) modification to his job scope.

It is usually conducted during phase 3 of the injury life cycle and sometimes in phase 2 for exceptional cases. The RTW assessment can be repeated several times until a stable permanent fitness status has been reached.

Assessment components

The RTW assessment comprises the following components typically.

- a. Clinical history
 - i. History of the injury/ medical condition, including past and current treatment.
 - ii. Medical history.
 - iii. Medication history.
 - iv. Social history (smoking/ alcohol).
 - v. Family history (if relevant to the medical condition).
- b. Clinical examination
 - i. Current signs e.g. musculoskeletal pain at rest/ on exertion.
 - ii. Functional capacity e.g. ranges of joint motion, lifting/ grip strength, mobility, exercise capacity.
- c. Occupational history (current job)
 - i. Detailed job scope and description.
 - ii. Job hazards e.g. safety, physical, biological, chemical, ergonomic, etc.
 - iii. Job demands e.g. overseas travel, shift work, personal protective equipment (PPE), etc.
 - iv. Employee's opinion on which elements of his job he can perform.
- d. Workplace assessment (optional, usually when the work is complex or when the RTW physician is unsure about what the job description entails.)
 - i. Assess the employee at the workplace to ascertain which elements of his job he can perform. Considerations include job tasks, environmental conditions and PPE requirements.
 - ii. Assess opportunities for workplace modifications.

Fundamentals

From the perspective of the RTW physician, the assessment should be based on the fundamental principles of occupational medicine (OM) practice. However, these principles should not be to replace the appropriate OM training or relevant industry experience of the physician. The physician must also be aware of his limitations in relation to the complexity of the case.

The fundamental principles underlying the assessment of fitness relate to the condition of the employee and the job scope. The employee's condition will have an impact on his ability to perform the job scope, and the job scope will also influence the employee's condition.

(i) Employee's condition

When assessing the condition of the employee, the following must always be considered:

- Current temporary or permanent functional disability
E.g. An employee with a back injury such as a prolapsed intervertebral disc (PID) may be temporarily unable to lift heavy loads until resolution of the acute condition. Even after resolution, there may be permanent functional disability where he is unable to carry loads above a certain weight.
- Physiological effects and limitations of the medical condition
E.g. An employee with diabetes may have gradual loss of sensation in his hands or feet. If he is a driver of heavy vehicles or is required to make fine adjustments to machinery with precise finger inputs, he may be neither safe to drive nor operate the machinery.
- Side effect of medication or treatment
E.g. An employee is on a diuretic medication (a type of medication that increases urination). This medication may not be compatible with large port/ dockside container crane operators due to the distance to toileting facilities. In such a case, the doctor may wish to explore alternative medication for the condition in order to preserve work compatibility.

(ii) Job scope

When assessing the job scope, the RTW physician must have knowledge of the following 2 key aspects:

- Job hazards
 - Physical: work at height, work in confined space, noise, vibration
 - Chemical: vapours (fumes, gases), liquids
 - Biological: blood products, animal waste
 - Ergonomic: forceful exertions, awkward/static postures, repetitive movements
 - Radiative: ionising radiation
 - Psychosocial: work-related mental stress, remote or isolated work, driver fatigue

If the RTW physician is unsure of the job hazards, he should either conduct a workplace visit and assessment or discuss the job scope with the company.

- Job demands

Common job demands include lifting loads of a certain weight, pushing or pulling loads (trolleys/ hydraulic jacks), use of hand tools, operating a foot or hand safety switch and operating powered tools (grinders/ polishers). The demands of PPE must also be considered. For example, the use of N95 masks and self-contained breathing apparatus (SCBA) may have respiratory implications. Swelling or deformity of the hands and upper limbs may have implications on glove use.

Special consideration should be given to shift work, especially when there are night shift schedules. Shift work is both a job hazard and a job demand. Consideration is often given for medical conditions such as diabetes, migraine, sleep disorders and thyroid disease. The impact of shift work on pregnancy and mature workers is further discussed below.

(iii) Impact of employee's condition (on the job)

The first consideration is the safety of the employee and his colleagues while on the job. The employee should not be returned to a role whereby his condition can result in harm to himself and others around him. The assessment should consider if the medical condition, disability or medication side effect would influence the safe conduct of operations.

Next is the consideration of productivity. It would not be fair to the company to return an employee to a role where he cannot be reasonably productive. While there is no yard stick to gauge acceptable productivity, it is reasonable to use the following rule of thumb. The productivity of an employee can be considered acceptable if:

- he can perform 70% of his original job scope;
- he can perform 90% of a modified job scope; or
- he can be deployed appropriately under a light duties' restriction.

These rules serve as a reference; the company should discuss with the RTW physician to determine them suitably based on the nature of the disability, expected time to full recovery and the long-term implications of the employee's condition.

(iv) Impact of job scope (on employee's condition)

The job should not exacerbate or worsen the condition of the employee. It would be valuable to solicit feedback from the worker during follow up sessions to assess if the employee's condition is impacted by the return to work. The job scope (original or modified) may need to be revisited following the feedback by the employee after return to work.

The fundamentals are summarised in the following figure:

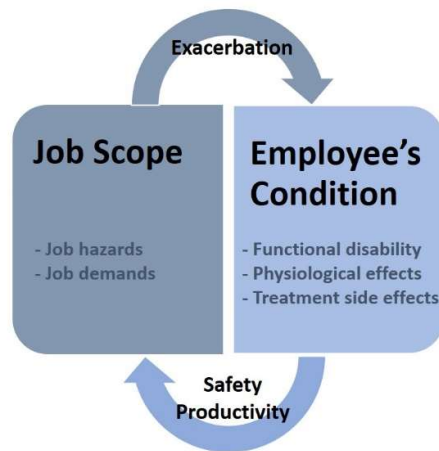


Figure 3: RTW fundamentals.

Considerations

(i) Chronic diseases

The management of chronic diseases can follow the injury life cycle in Chapter 5 with some differences due to the nature of such diseases.

Phase 1 for chronic diseases is often the point of diagnosis, where the employee learns that he has a chronic medical condition such as diabetes or hypertension (high blood pressure). However, unlike for acute injury or medical events, the employee may not have significant symptoms at this phase. If he has not started on medication and is asymptomatic, the employee is often able to continue with his original job.

If the employee has started on medication (Phase 2), the RTW physician may need to assess if the treatment or medication is compatible with the employee's job. Common job interactions to look out for include drugs that are sedative, predispose to hypoglycaemia (low sugar), predispose to dehydration or cause visual disturbances. If the employee is starting on new medication, he should be monitored for possible side effects within the first two weeks of starting the medication. Side effects that can affect work include headaches, dizziness and nausea. Diarrhoea and stomach discomfort may occasionally be severe enough to temporarily restrict the employee. If the employee requires dialysis, appropriate modification to his work schedule may be required to accommodate his dialysis schedule.

The main consideration for chronic diseases is the management of complications of the disease. For example, diabetes has multi-organ effects that can affect cardiac, renal, eye, skin and nerve function. Unlike acute events which tend to have a recovery point, the complications of chronic diseases may not only appear insidiously but also progress over time. Hence the assessment of fitness for employees with chronic diseases may not necessarily be a single point decision but a series of reviews over a period, with periodic fitness decisions.

It is not uncommon for employees with chronic diseases to experience multiple episodes where he is found unfit for work. While well controlled chronic diseases often have minimal impact on productivity, there are occasions where an employee's condition is severe and/or progressive and will require monitoring and periodic fitness review.

Most chronic diseases are compatible with long-term employment, usually with minimal work modifications. The RTW physician should strive to retain the employee at work for as long a period as possible.

Employees with a malignancy (cancer) may sometimes be managed similarly as chronic diseases. This is especially true if the malignancy is associated with good long-term survival. The employee is usually unfit during initial treatment with chemotherapy but upon remission, he can be assessed with appropriate restrictions if necessary. Like chronic diseases, the malignancy can recur, and the treatment process may occur again.

(ii) Mature employees

Mature employees are those aged 40 and above. Considerations will be based on the effects of ageing in the absence of medical conditions.

- Physiological effects of ageing
Common examples include the inability to cope with shift work, inability to cope with circadian disruption and inability to cope with heavier loads. Other examples include presbyopia (age-related loss of near vision) and presbycusis (age-related hearing loss).
- Re-employment medical examination
The re-employment medical examination is normally conducted at age 62 but may differ depending on industry and company practice. Some considerations for assessment here include physical capacity (i.e. the 5 domain – eyesight, hearing, muscular strength, aerobic capacity and posture/ balance), mental capacity (i.e. ability to understand instructions, perform work and communicate), age-related conditions (e.g. osteoarthritis, lumbar spondylosis, temperature intolerance, etc.) and social capacity (i.e. social and emotional context of employee).

It is also important to note that for mature employees, they require a longer period of recovery following acute injuries.

(iii) Pregnant employees

Pregnancy should be considered as a temporary state, which can impact function and ability to work. Some common considerations include:

- Ergonomic: The pregnant employee may have difficulty bending, lifting loads and moving around. Balance and posture in the third trimester can have safety implications.
- Change in odour and taste tolerance: strong odours previously tolerated may now induce nausea and vomiting.
- Shift work: night or irregular shift work are associated with elevated risk of miscarriage, prematurity and low birth weight. Pregnant employees should be assigned to regular day shift work during their pregnancy.

Because pregnant employees have their job restricted/modified during their pregnancy, they should be re-assessed after their pregnancy prior returning to work.

Common Pitfalls

Some common pitfalls during the RTW assessment by the RTW physician are elaborated below:

(i) Premature assignment of permanent fitness status

The RTW physician should not rush to assign a permanent fitness status. If the employee is motivated to return to work, a temporary status is usually more appropriate as he is often not fit for 100% of his original job scope. This temporary fitness status is usually for a reduced original job scope or for modified work. In general, for acute injuries or acute medical events, a permanent status should not be assigned while the employee is still in a cast, recovering from an external wound, has temporary in-dwelling tubes (naso-gastric tube, urinary catheter, etc.), walking with crutches or requiring regular dressing for an open wound.

(ii) Premature return to full original work duties

The RTW physician must be careful when assessing the scope of the original work. If there are elements of the job that may exacerbate the employee's condition or delay healing, then the employee should be restricted from that part of the job. A common oversight occurs when the employee is fit for almost all his tasks except for a sub task (which he should be excused from).

(iii) Associating fitness with compensation

A common mistake seen is to use the work injury compensation amount paid out under WICA as a gauge for the employee's fitness. This association should not be made. The compensation amount is determined based on the injury rather than the impact on the job scope. It does not always mean that the injury will prevent the employee from doing his original or modified job. The employee should be assessed by the RTW physician independently without being influenced by the quantum of the compensation.

8 Workplace Modifications

In recent years, many developed countries have adopted a new paradigm for work where the focus on injured employees is on what they can do instead of what they cannot do. This new paradigm allows the employee who has incapacity (either temporary or permanent) to be able to RTW at the earliest opportunity before full recovery. For the incapacitated employee to RTW, workplace modifications may be necessary to facilitate this. Recall from Chapter 5, such modifications are usually seen in phases 3 and 4 of the injury life cycle (possibly also in phase 2 for exceptional cases).

Workplace modifications will provide the support to the employee in the tasks he can do, as well as to ensure he is not tasked on work that he cannot perform yet. Workplace modifications also allow employees who have permanent disability to return to and continue employment at the workplace. The company must be willing to modify the job of the employee to accommodate his earlier RTW. Employees, on their part, must also work together with their employers for RTW to succeed. There are various possibilities and permutations for workplace modifications to facilitate an employee's early RTW.

Some areas where modifications at the workplace can be done are elaborated in the following sections. Modifications in one or more of these areas may be considered for the employee.

(i) Job scope

This is the most common form of workplace modification. Typical examples seen come in the form of job restrictions such as "Excused from carrying heavy loads". In the context of RTW, any required job modification or restriction must be specific and practicable for it to be useful.

When deciding on job restrictions, RTW physicians are encouraged to specify the specific duties that the employee is fit to perform first. Examples can include "Fit for general warehouse duties" and "Fit to operate machine ABC". Then, restrictions can be added to those specific duties. For example, "Fit for general warehouse duties but unfit for lifting loads greater than 5kg".

(ii) Equipment used

Equipment can be modified, and in some cases specially fitted or purchased to suit the employee's limitations. For instance, employees with hand or wrist problems may find it easier to use tools where the handle is angled to minimise flexing of the wrist. Those employees with hand or finger arthritis may find better grip comfort by using tools with larger handles.

Next, the choice of PPE may vary for employees with injury or medical condition. For example, an employee who has hand deformity following an injury may need a different-sized glove for his work. Employees with foot injury may find safety shoes (which are hard and have steel toe caps) uncomfortable. Safety shoes with increased padding and lighter polycarbonate toe caps should be explored.

(iii) Work hours

Restrictions can be made to work hours to accommodate employees with medical conditions. Shift work restrictions, which can be in the form of a restriction in participation in shift rotations, or just restriction in performing certain shifts, may be applied for employees with certain chronic conditions. For example, diabetes is known to be affected adversely by shift work due to the irregularity of meal times and medical requirements. Fatigue secondary to insufficient sleep is also an issue associated with shift work, which affects diabetes control. Another chronic condition, epilepsy, can also be affected by shift work, where seizures are triggered by fatigue or insufficient sleep. Decisions on restrictions of shift work therefore must take into consideration the complete shift dynamics (such as speed and direction of shift rotation), total working hours (including start and end times) and the condition and fitness of the employee, amongst other things.

Flexi hours or reduced working hours is another form of modification to work hours. This is commonly applied in cases where the employee's mobility is an issue e.g. following a fracture or musculoskeletal injury. Adjustments or arrangements can be made for the employee's commute to and from work.

(iv) Work environment

Modifications to the work environment is possible in cases where the company is willing to do so. There are various ways where such modifications can be made depending on the circumstances of the case. For example, a technician with plantar fasciitis (chronic foot pain) had issue with prolonged standing. The company allowed him to sit on a high stool to perform his work (he had to stand previously while at work). While this resulted in lowered work productivity and slower performance of the technician, the company accepted the trade-offs and the employee could continue employment.

Other examples of workplace adjustments include the purchase of standing tables for employees who have problems with prolonged sitting, and the installation of ramps for employees who are temporarily or permanently wheelchair-bound.

9 Specific Guidance for Doctors

This chapter is targeted primarily at doctors who are functioning in the role of the RTW physician. It presents the common fitness recommendations and restrictions associated with selected examples of injuries and medical conditions (both acute and chronic). Suggestions for workplace modifications are included where possible. Selected jobs and roles are also presented separately, flagging out associated areas of concern which could impact the employee's fitness in his RTW.

As alluded to in the preceding chapters, the possibilities for workplace modifications to facilitate RTW are bounded by the experience and knowledge of the physician and employer and modulated by the considerations of practicality and cost. The decision to accept and implement those workplace modifications to facilitate the employee's RTW lies with the employer ultimately.

Table 1: Fitness recommendations and restrictions for selected acute injuries.

Acute Injury	Fitness Recommendations and Restrictions
Fracture – cast or ORIF [open reduction & internal fixation] (Upper Limb)	<p>Unfit all physical work while on cast. Light duties possible while on cast. Assess upper limb mobility and strength before return to unrestricted physical work. Restrict weight limits as required until full recovery.</p> <p>For ORIF, a general rule would still be unfit for physical work based on “if it was casted” time. Functional testing can reduce this timing as appropriate.</p> <p>Gross strength can be assessed with free weights or kettle bells. Forearm strength can be assessed with a hand-held dynamometer.</p> <p>For workers doing fine manipulation, assembly work or operating machinery requiring finger strength, strength assessment using a handheld dynamometer is usually advised.</p>
Fracture – cast or ORIF [open reduction & internal fixation] (Lower Limb)	<p>Unfit all physical work while on cast. Light duties possible while on cast. Assess gait, balance, lower limb mobility and strength before return to unrestricted physical work. Restrict weight limits as required until full recovery.</p> <p>For ORIF, a general rule would still be unfit for physical work based on “if it was casted” time. Functional testing can reduce this timing as appropriate.</p> <p>In general, the worker should be able to bear his own weight without discomfort before return to physical work.</p> <p>For heavy vehicle drivers, assess if they can manipulate the foot pedals and controls without pain.</p>

	For foot fractures, the worker may not be able to tolerate heavy, hard, steel toe cap safety shoes for some time (3-12 months). Rather than immediately excuse all safety shoes, the RTW physician can propose to the company to trial lighter, softer, polycarbonate toe cap safety shoes for the injured worker.
Fracture – external fixation	Unfit all physical work until external fixator is removed. Assess limb function before return to unrestricted physical work. Restrict weight limits as required until full recovery.
Cuts/ lacerations (no stitches)	Restriction from physical work may not be necessary. Occasionally, light duties for a day or two may be appropriate.
Cuts/ lacerations (with stitches)	Restriction will vary depending on severity, location and number of stitches. If laceration is superficial with only a few stitches, can usually return to full duties before all stitches are removed. Light duties for a day or two may be appropriate. If the wound is large, deep, many stitches or across a mobile joint, light duties may be appropriate until stitches are removed.
Closed Head injury (no loss of consciousness)	Light duties for 1-7 days after discharge may be appropriate even if asymptomatic. If returned immediately to physical work, consider restricting for 1-7 days from working at heights, operating heavy machinery or driving forklifts and heavy vehicles.
Closed Head injury (with loss of consciousness but no residual deficits)	Light duties for 7-14 days after discharge may be appropriate even if asymptomatic.
Head injury (with functional deficits)	Full assessment required to assess extent of functional deficits. Restricted from all physical work or light duties until all restrictions and/or job modifications are clearly defined. On-site assessment usually required to assess ability to do original job safely and to structure job modifications.
Open Laparotomy	Unfit all physical work for 6-12 weeks following discharge. Light duties in some situations possible after week 6. Restrict weight limits as required until full recovery. May have difficulty climbing ladders and other tasks involving trunk strength for up to six months due to remodelling and adhesions. For heavy vehicle drivers, assess if they can ingress/ egress the cabin and manipulate the foot pedals and controls without pain.
Back injury – ligament or muscle injury	Functional testing for strength and mobility advised. Usually unfit physical work in the initial acute presentation. Highly variable thereafter depending on extent of injury.

	<p>If injury to the interspinous ligaments or significant paravertebral oedema is suspected, an MRI is warranted to guide fitness prognosis.</p> <p>Back brace can be used by injured workers upon re-introduction to physical work to provide support and reduce discomfort.</p>
Back injury – prolapsed intervertebral disc	<p>If treated conservatively (medication, rest and physiotherapy), unfit physical work for 6-12 weeks is typical.</p> <p>If treated surgically (minimally invasive spine surgery), the worker may be asymptomatic within four weeks. However, it is recommended that they remain unfit for physical work (especially weight bearing) for at least a further four weeks.</p> <p>In cases of recurrent prolapsed discs or severe multi-level disease, consider permanent unfit heavy loads.</p>

Table 2: Fitness recommendations and restrictions for selected acute medical conditions.

Acute Medical Condition	Fitness Recommendations and Restrictions
Excision of abscess, sebaceous cysts, lipomas	Keep wound clean until closure. Restrict contact of area from wet work.
Excision of in-grown toe nail	<p>Restrict from safety shoes for two weeks (up to two months is possible if procedure requires destruction of the nail bed).</p> <p>For jobs requiring prolonged standing, generally unfit standing work until primary wound is healed (two to four weeks).</p>
Appendicectomy	Unfit physical work for three (laparoscopic) to six weeks (open). Light duties possible at week three, requires assessment.
Carpal Tunnel Syndrome/ De Quervains Tenosynovitis	Unfit typing, assembly work, hand tools and vibrating tools until resolution of symptoms. Weight restriction often required for a period after recovery. Hand strength should be assessed with a dynamometer prior to return to work. There should be no/ minimal residual numbness.
Acute Myocardial Infarction	<p>Unfit physical work for minimum eight weeks post event.</p> <p>Cardiac rehabilitation and mandatory functional assessment before return to physical work. Clinical examination, ECG, CXR and TMX (or MIBI) required as part of assessment. TMX (Bruce protocol) can be used to estimate functional capacity in METS. Staged re-introduction to physical work advised, starting at 50% workload and increasing over three to six months.</p> <p>Permanently unfit shift work (night shifts), hot/ humid environments (incl. hot works), and exposure to carbon</p>

	monoxide, carbon disulphide, halogenated hydrocarbons, lead, cadmium, mercury and arsenic. Unfit exposure to electromagnetic fields if pacemaker is inserted.
Cerebrovascular accident (stroke)	Wide variety of deficits possible. Return to physical work requires full functional assessment including upper limb, lower limb, gait, balance and cognitive assessments. Mild strokes with no residual deficits are usually unfit physical work for eight to twelve weeks post event as a minimum.

Table 3: Fitness recommendations and restrictions for selected chronic medical conditions.

Chronic Medical Condition	Fitness Recommendations and Restrictions
Hypertension	Assess for side effects of treatment including dizziness and postural hypotension. Restrict from working at heights for one week following introduction of medication is advised to monitor for side effects.
Diabetes Mellitus	Caution is advised in prescribing potentially hypoglycaemic agents (e.g. sulphonylureas) for workers operating heavy machinery, heavy vehicles or working at heights. Unfit shift work (night shifts) in general due to negative effect on blood glucose control. Complications of disease to be monitored for especially eye, feet, nerve and ischaemic heart disease.
Epilepsy	Permanently unfit driving (all vehicles), operating heavy machinery, working at heights, working in confined spaces and working alone.
Asthma	Asthma must be well controlled, by clinical definition, (regardless of severity) in order to operate heavy machinery, heavy vehicles and working at heights. Must be assessed specifically for use of respiratory PPE (e.g. N95 masks). If asthma is consistently triggered by a workplace allergen (e.g. flour/ wood dust/ isocyanates), the worker is deemed permanently unfit to work in the vicinity of these allergens.
Kidney failure (with dialysis)	Permanently unfit all safety critical physical work generally. Permanently unfit heavy loads. Will require dialysis 3x/week. Job modifications often required to accommodate the dialysis schedule. Fatigue post dialysis is also a factor to be considered. Most have difficulty with continued physical work.
Heart failure	Only NYHA Class IA can be considered for continued physical work. All other grades are permanently unfit

	physical work. Most can continue to drive Class III vehicles.
Cancer (all)	<p>Generally unfit physical work during active treatment (chemotherapy or radiotherapy). Excessive fatigue during treatment is common and may limit even office or administrative work.</p> <p>Generally unfit shift work (night shift).</p> <p>Current evidence does not impose restrictions on lymphoedema, although discomfort in standing work for lower limb lymphoedema may occur.</p> <p>If immunosuppressed, avoid contact with soil, animal/human secretions and faeces and inorganic dusts (including construction sites).</p>
Migraine	If frequent, may be restricted from exposure to triggers such as bright lights, heat, strong odours and loud noises.
G6PD deficiency	Permanently unfit exposure to aniline, naphthalene and trinitrotoluene (TNT).

Table 4: Fitness recommendations and considerations for selected jobs/roles.

Job/ Role	Medical Condition	Areas of Concern
Driver (Heavy vehicle, bus)	<p>Musculoskeletal problems</p> <ul style="list-style-type: none"> - Lower limb (knee, ankle, foot) - Back - Upper limb 	<p>Ability to control vehicle is main concern, whether movement restrictions of symptoms affect ability to operate pedals and steering.</p> <p>Consider whether vehicle is manual or automatic. Manual vehicles require use of clutch pedal which may require inputting of several kilograms of force with left leg. Manual transmission vehicles also require operating a gear shift, which may require some degree of strength in the upper limbs.</p> <p>The steering wheel may also require some degree of exertion of the upper limbs, especially shoulder and wrist. These should be queried, and actual assessment done on site in the presence of the driver's supervisor (who is aware of the requirements to drive).</p> <p>*In addition to the actual driving duties, questions should be asked of the driver's other duties e.g. loading/unloading of</p>

		goods, checking tie-downs/lashings and for trailer drivers, hitching and unhitching the trailer, and any other tasks which are more physically strenuous than the actual driving task. These tasks may be the limiting factor in the company being able to accept a driver with musculoskeletal problems. Finally, also query if the driver has problems climbing into the cab, if it is a large vehicle.
	Diabetes	<p>Generally fit to drive so long as well controlled on oral medication.</p> <p>Consideration to be given to possibility of hypoglycaemia caused by medication, so driver needs to be properly educated about mealtimes. This is important as some heavy vehicle drivers' schedules are unpredictable, and meal times are irregular.</p> <p>Special effort may be required to ensure diet control. There may also be shift work requirements, so this should be considered.</p> <p>Visual assessment should be assessed to ensure adequate visual function, including visual fields and ability to see at night.</p> <p>Neurological complications like neuropathy need to be assessed on a case-by-case basis for functional ability to control vehicle.</p>
	Hypertension	<p>Generally fit to drive.</p> <p>Consider requirement for shift work and impact on mealtimes, medication schedule and diet (if any).</p>
	Migraine	Assess severity, frequency, and whether any known trigger factors. If disabling visual or neurological symptoms are present, usually unfit to drive, unless trigger factors are clearly known and can be avoided during work.
	Asthma/Lung diseases like COPD	Generally fit if well controlled. Consider job requirement for additional physical duties as mentioned in the MSK section above.
	Coronary Artery Disease (CAD)	Unfit if having unstable angina. If symptom-free, require Exercise Stress Testing.

		<p>For post-AMI, unfit for minimum 2 months. If symptom-free, require Exercise Stress Testing. See also Table 2 above.</p> <p>Angioplasty – unfit driving 2 weeks. Coronary stents – unfit driving for 2 months. If symptom-free, require Exercise Stress Testing to required standard.</p> <p>Arrhythmia – if symptomatic, unfit.</p> <p>Pacemaker – recommend unfit permanently.</p> <p>Generally for all cardiac conditions, unfit if condition is unstable or causing symptoms. If treated and stable, cardiac assessments such as Holter, Exercise Stress Testing should be performed as part of the RTW assessment.</p>
	Neurological conditions/Cerebrovascular Accidents (CVA)	<p>Assess physical functions, and functional ability to operate vehicle controls.</p> <p>For CVA, generally unfit driving vocations for 12 months.</p>
	Epilepsy	<p>All epileptics on medication (even if well controlled) will be unfit for driving vocations.</p> <p>For single episode of adult-onset seizure, or 2 or more seizures within 24-hour period with an identifiable and reversible cause, can be fit for driving after 1 year without seizure (and EEG normal).</p> <p>For unprovoked seizure or epilepsy, unfit to drive unless seizure-free and not on medication for 10 years.</p> <p>Traumatic Brain Injury (TBI) carries a risk of Post-Traumatic Epilepsy (PTE). If TBI is classified as “severe”, patient will be unfit for driving for at least 2 years (if there is no neurological deficit or cognitive impairment, the risk if of PTE). For mild TBI,</p>

		<p>unfit driving for 6-12 months depending on assessment of recovery.</p> <p>Post-concussion syndrome usually lasts days to weeks, but may extend to months, and may further impair ability to drive.</p>
Crane operator	Musculoskeletal problems	<p>Tower crane operators have to climb up the crane into the cab, which may be as high as a hundred metres.</p> <p>Once there, they may be required to sit for several hours, with no ability to get up and rest or take a walk. A patient with back problems and inability to sit for prolonged periods may not be fit to work, assuming they are able to climb up the tower to get into the cab.</p> <p>Manual dexterity is required to operate the crane with precision. A person with hand problems – be it arthritis (pain, movement restrictions of fingers), amputated digits, or neurological conditions such as neuropathies or carpal tunnel syndrome may need to be functionally assessed for ability to operate the hand controls before being returned to work.</p>
	Urological or GI problems	Frequency of passing urine (prostate conditions, or urinary tract infection), or frequent bowel movements due to Irritable Bowel Disease may impede ability to perform this work.
	Visual problems	Visual field defects may render a person unfit to be a crane operator.
	Psychological problems	Besides the obvious acrophobia (fear of heights) or claustrophobia (fear of enclosed spaces), anxiety and depression will be unfit, both from the actual condition itself, as well as possible side effects of medication.
	Diabetes, Hypertension, CAD	Similar recommendations as for drivers. Additional consideration for requirement to climb up to crane cab (physical exertion) in those with CAD.
	Neurological conditions/Cerebrovascular Accidents (CVA)/ Epilepsy	Assess physical functions, and functional ability to operate vehicle controls.

		<p>Also assess functional ability to climb up to crane cab.</p> <p>Apply recommendations as for driver.</p>
Working at heights	All conditions	<p>Ascertain the height of the work. For risk of falling from sudden incapacitation (such as epilepsy), even falls from heights as low as 1.5m can be fatal or lead to serious head injuries. In general, “no working at heights” would cover all work $\geq 1.5\text{m}$ above ground.</p> <p>Assess functional ability and mobility. If there is no impairment of normal movement and function (e.g. limping, balance), then employee will be fit to work at heights.</p>
	<p>Musculoskeletal problems</p> <ul style="list-style-type: none"> - Lower limb (knee, ankle, foot) - Back 	<p>Assess functional ability to climb to heights.</p> <p>If physically able, and no impairment of normal movement (limp, balance), then fit to work at heights.</p>
	Epilepsy	<p>Unfit for work at heights if on medication.</p> <p>For Traumatic Brain Injury (TBI), see above as for Driver.</p>
	Psychological problems	Unfit if acrophobia (fear of heights) or acute depression. Also assess possible side effects of medication.
Working with respirator	Asthma/Lung Diseases	<p>Assess triggering factors – the reason for using respirator/mask (i.e. chemical/dust particles in environment) may be the precipitant for asthma or respiratory irritation leading to symptoms. If this is so, the worker is unfit to work with the material.</p> <p>For fitness to wear respirator, asthma should be well-controlled. Similarly, any respiratory disease (e.g. COPD) should be well-controlled, with good effort tolerance. If necessary, conduct a functional test with respirator in question, performing actual task.</p>
	Coronary Artery Disease	Assessment of effort tolerance is necessary to ensure ability to use respirators and still perform required work.

		If condition is not optimum, use of respirators may trigger decompensation due to increased physical effort required.
	Skin Condition/Acne	<p>Unfit to wear respirators if acute skin lesions on face. Such as severe acne or dermatitis.</p> <p>If dermatitis is caused by allergy to respirator material, then generally will be unfit.</p>
Manual material handling	<p>Musculoskeletal (MSK) problems</p> <ul style="list-style-type: none"> - Lower limb (knee, ankle, foot) - Back - Upper limb 	<p>Depending on type of goods that needs to be lifted, and factors like weight, distance, frequency, different MSK issues will impact fitness for work differently.</p> <p>Obvious conditions such as fractures will result in being unfit for work as per recommendations in Table 1.</p> <p>For back, if manual lifting is a critical element of the work, PID can be managed as per Table 1.</p> <p>For foot and hand conditions, even if symptoms are minimal, recovered or in the late stages of recovery (Such conditions can include residual deformities.) need to consider and assess ability to wear essential PPEs such as safety boots and gloves.</p>
	Coronary Artery Disease /Hypertension	<p>If controlled, and asymptomatic, fit to continue working. If symptoms are uncertain, Exercise Stress Testing can be conducted.</p> <p>If symptomatic or unstable – unfit for manual handling work until managed appropriately.</p> <p>Post-AMI/stenting/ angioplasty, can use similar criteria as for driver. Exercise Stress Testing prior to final clearance to determine effort tolerance.</p>
	Laparotomy or chest operations	<p>Unfit for 6-12 weeks minimally. If heavy physical work is performed, may be unfit for longer, depending on effectiveness of recovery and physical rehabilitation.</p> <p>Consideration should be given not just for</p>

		the actual condition, but the time required for physical reconditioning before returning to heavy manual work.
Shift work (includes night shift for the midnight to 6am window)	All conditions	It is assumed that all shift work will incur sleep debt, especially during the transition between different shifts. Depending on how well the worker adapts to the changing circadian rhythm, this sleep debt can be incurred over one to several days. Concerns over fitness to perform shift work relate to whether the stress of constantly changing circadian cycles affect the control of the medical condition.
	Diabetes	<p>Blood sugar levels are known to be adversely affected by shift work, leading to deteriorating diabetic control. For Type 2 diabetes, a worker should be unfit for night shift work for at least 3 months when newly diagnosed. After stabilisation on lifestyle changes or even oral medication, the diabetic worker can be returned to night shift work but has to be taught discipline in adjusting his diet and meals when the shift changes. Uncontrolled Type II diabetes is generally unfit for night shift work.</p> <p>For Type 1 diabetes, the worker is generally unfit for night shift work.</p>
	Coronary Artery Disease /Hypertension	<p>Generally, someone with symptomatic cardiovascular disease e.g. angina, decreased effort tolerance would be unfit for shift work. Besides the changing shift cycles being a major stressor, there is also the consideration that night shift generally has fewer persons (or sometimes no one else) at work. This would create problems if the worker developed symptoms or collapsed and there was no one to assist to call for help. (i.e. working alone)</p> <p>For cardiovascular disease that is well controlled and asymptomatic, the worker can be fit for shift work.</p>
	Epilepsy	Generally would be unfit night shift work.

		<p>Consideration for trigger factors. Sleep debt can be a trigger for seizures, even those controlled by medication.</p> <p>Changing shift cycles can also affect dosing of medication.</p>
	Psychological conditions	<p>Depression, psychosis can be acute or not yet stabilised can be aggravated by sleep debt, and stressors of shift work. Dosing of medication may also be affected. Unless critical, persons with such conditions will be unfit for night shift work.</p> <p>If condition is under control and stable, can be considered for return to night shift work. Need to work in consultation with psychiatrist.</p>
Working in isolation	<p>Conditions such as:</p> <p>Epilepsy/ Unstable coronary artery disease Poorly controlled cardiac arrhythmias</p>	<p>Consideration would be for conditions which can be suddenly incapacitating, where there would be no witnesses if this were to happen, and no one would be able to render assistance to call for help.</p> <p>If the conditions were so unstable that there is a significant enough risk of an attack or deterioration leading to incapacitation, the worker should be made unfit for duties that put them in isolation (e.g. security guard on patrol) until it can be assured their condition is stabilised and controlled.</p>

Table 5: Work-related metabolic equivalents (METS)

METS	Work Activity
1 - 2	Seated occupational activities (typing, clerical work)
2 - 3	Standing occupational activities (mechanic, bartender) Walking (4kmh)
4 – 5	Doing heavy cleaning (scrubbing floor) Walking 6.5kmh (level), 4.8kmh (5% gradient) Bicycle ride (16 km/h)
6 – 7	Light digging, using a hoe/ spade Stair climbing. Jogging 8 km/h (level), 5.5 km/h (5% gradient)
8 - 9	Active occupational activities (sawing wood, digging ditches, shovelling)

	Bike riding (19-22 km/h), stair climbing (more than 27 ft/min = 8 m/min, about 42 steps, about 5 flights of stairs) Running 16 km/h (level), 4.8 km/h (15% gradient)
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10 Case Examples

The case examples featured in this chapter attempt to highlight and reinforce some of the RTW concepts and principles when applied to real world scenarios.

Case Example A – No Clutch Please, Only Automatic

Mr Amir is a heavy vehicle driver in his fifties. He first complained of left knee pain, which he consulted his family doctor. After an X-ray and initial conservative treatment, he was referred to an orthopaedic specialist who diagnosed the condition as chronic meniscus injury. Conservative management was continued. He put up with the pain and carried on with his driving duties. Not soon after, he developed swelling in the knee and was given seven days of medical leave. After the medical leave period, he still had difficulty with his duties and took several more stretches of medical leave over the next three months. Upon exhaustion of his medical leave entitlement, he was finally referred by the company to an occupational medicine (OM) specialist for an RTW assessment.

[Note (for employers): In the scenario described above, given the job scope of the driver, he would have benefited from an earlier RTW referral. Following his initial seven days of medical leave, a referral would have been appropriate (see Chapter 6 under referral criteria), rather than waiting for exhaustion of his medical leave entitlement.]

The OM specialist began by assessing the scope of Mr Amir's job. Besides the core task of driving, he was required to climb several steps up the back of the vehicle to check on the goods he is transporting to make sure they were lashed securely. He also had to climb up and down several steps to access the vehicle's cabin. The knee pain affected his ability to climb and might affect his safety when he is hauling himself up into the cabin or checking the lashings.

The company has vehicles with automatic and manual transmissions. Mr Amir has no issue driving vehicles with automatic transmission. However, for vehicles with manual transmission, the repeated flexion and extension of the left leg to depress the clutch pedal trigger painful symptoms of the left knee. Several kilograms of force need to be applied for every clutch depression.

Mr Amir had requested for conservative management of his condition as he was not keen for surgery. During the workplace assessment, it was found that while he could manage the two to three steps to get into the cabin, it was unsafe for him to climb to the back of the vehicle to check on the lashings or to perform tie-downs on the goods. Mr Amir was hence restricted from climbing to check the goods. The alternative arrangement was for a co-worker to assist with the checks. In addition, Mr Amir was restricted from driving vehicles with manual transmission. The company concurred with this transitional work arrangement.

[Note (for employers): See Chapter 5 under phase 3 of the injury life cycle on rehabilitation. Ultimately, the preservation of productivity can often be achieved with the support of the company and the consent of the employee.]

After several months of conservative management, Mr Amir decided to undergo surgery for his left knee. Following the surgery, he was on hospitalisation leave for six weeks. After a short period of rehabilitation, his left knee returned to near-full function with no symptom of pain. He was then reassessed by the RTW physician and recommended fit to return to full duties including all climbing tasks and driving of manual-transmission vehicles.

[Note (for doctors): This case highlights the necessity to obtain a thorough occupational history of the employee to assess his fitness for work, regardless of how “common” his occupation might seem. While the job title of “driver” may appear to be easily understood, it is still necessary to enquire in full details about the other ancillary tasks that the employee is required to do. It is not unusual for drivers to operate and multi-task alone in their jobs. Besides driving the vehicle, many drivers need to perform loading and unloading of goods, and they require good physique to do so.]

Case Example B – The Anxious Traveller

Anthony is a field technician in the maritime industry whose job requires him to be deployed at short notice to different parts of the world, some of which are very remote, to repair machinery that his company had sold to clients. He recently developed anxiety and panic attacks, some of which occurred while at work, and was under the follow up of a psychiatrist. He had specifically asked the psychiatrist if he could travel for work and had obtained a note stating that he was fit.

Subsequently, Anthony had a major attack of anxiety while he was in a small town in northern Norway during winter. Unfortunately, the town was caught in a severe snowstorm which cut off transport for several days. As there was no hospital in town, he was seen by a Norwegian family doctor who did his best to manage him. After four days, the weather cleared up and Anthony got a flight out. He flew back to Singapore to seek treatment and this was when an RTW assessment was made.

The RTW physician contacted the psychiatrist to understand the background behind the original “fit to travel” note, given the fact that Anthony’s condition had not stabilised and he was still suffering from recurrence of attacks. The psychiatrist revealed that she had not delved deeper into Anthony’s history of travel and had assumed that “travel for work” would be the “usual places” such as big cities. When informed of the types of places Anthony was required to travel to, she rescinded the “fit to travel” note.

The RTW physician then worked with the psychiatrist, Anthony and his supervisor to formulate a plan to restrict his travel to only major cities that have tertiary medical facilities. For more remote locations, the RTW physician would work with the supervisor to determine the level of medical care (in particular psychiatric) available there. Such information could either be obtained online or through various service providers, or even through the client that the company was supporting while Anthony’s trip was being arranged.

This work arrangement was put in place for six months, allowing Anthony to travel, which was an integral part of his job, while his condition was being stabilised by medication and therapy. Following stabilisation, with no recurrence of anxiety attacks, Anthony was cleared by both the psychiatrist and the RTW physician to unrestricted travel.

[Note (for employers and doctors): In this case, while the medical condition did not routinely directly affect the ability to work, it had effects on an integral part of the job requirement i.e. travel. It is also important not to assume the job requirements, and to probe with specific questions about the specific travel destinations as in this case. The RTW physician should also conduct the RTW assessment to include the enquiry about those tasks that are to be done while on travel.]

DRAFT

Annex A – Hospitals’ Contact Details

No.	Hospital	Contact Number	Email Address
1	Changi General Hospital	6788 8833	Return_To_Work@cgh.com.sg
2	Khoo Teck Puat Hospital	6555 8000	ktph_returntowork@ktph.com.sg
3	Ng Teng Fong General Hospital	6716 2000	JHCampus_RTW@nuhs.edu.sg
4	National University Hospital	6772 2002	nuhrtwe@nuhs.edu.sg
5	Sengkang General Hospital	6930 6000	rtw@skh.com.sg
6	Singapore General Hospital	6326 6353/ 6321 4377	occupational.health@sgh.com.sg
7	Tan Tock Seng Hospital	6357 8339	occupational_therapy@ttsh.com.sg

For more information, go to www.wshc.sg/returntowork