



RETURN TO WORK SCHEME

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# Impairment Assessment Guidelines



Government of  
South Australia



# IMPAIRMENT ASSESSMENT GUIDELINES

## Return to Work scheme

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# FOREWORD

The *Impairment Assessment Guidelines* (the Guidelines) are published under subsection 22(3) of the *Return to Work Act 2014* (the Act) for the purpose of assessing the degree of whole person impairment arising from a work injury that results in permanent impairment. The guidelines are intended to provide an objective, fair and consistent method for assessing permanent impairment arising from a work injury.

The Act requires that permanent impairment assessments are made in accordance with these Guidelines. Only medical practitioners who are trained in the use of the Guidelines and are accredited by the Minister to assess the degree of whole person impairment arising from a work injury can undertake permanent impairment assessments.

The Guidelines are based mainly on the *American Medical Association Guides to the evaluation of permanent impairment, 5th edition* (AMA5). AMA5 is the most authoritative and widely used source for the purpose of evaluating permanent impairment. However, extensive work by eminent medical specialists, representing medical colleges, has gone into reviewing AMA5 to ensure alignment with Australian clinical practice.

Section 22 of the Act and the Guidelines apply to the assessment of whole person impairment when a worker's entitlement to lump sum compensation is to be determined, from and after 1 July 2015.

Explanatory notes can be found in the back of the Guidelines.

# 1 INTRODUCTION

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# 1 INTRODUCTION

- 1.1 The *Impairment Assessment Guidelines* (the Guidelines) are published under subsection 22(3) of the *Return to Work Act 2014* (the Act).
- 1.2 The Guidelines are based mainly on the *American Medical Association Guides to the evaluation of permanent impairment, 5th edition* (AMA5). The chapter on Psychiatric Disorders is based on the *Guide to the Evaluation of Psychiatric Impairment by Clinicians* (GEPIC).
- 1.3 The Guidelines adopt AMA5 in most cases. Where there is any deviation, the difference is defined in the Guidelines. Where differences exist, the Guidelines are to be used as the modifying document. The procedures contained in the Guidelines are to prevail if there is any inconsistency with, or difference from, AMA5.
- 1.4 The Guidelines are to be used when there is a need to establish the degree of whole person impairment that results from a work injury. The assessment of whole person impairment is conducted for the purpose of assessing permanent impairment in a consistent and medically objective manner.
- 1.5 Before undertaking an assessment of whole person impairment, users of the Guidelines must be familiar with the introductory section of the Guidelines and chapters 1 and 2 of AMA5 regarding the purpose of, applications and methods for performing and reporting impairment evaluations.
- 1.6 The Guidelines apply to all whole person impairment assessments conducted on or after 1 July 2015 unless the assessment relates to a notice of dispute lodged before 1 July 2015. Evaluating permanent impairment involves clinical assessment on the day of assessment, determining:
  - whether the worker's work injury has resulted in impairment
  - whether the resultant impairment is permanent
  - whether the work injury has reached maximum medical improvement (MMI)
  - the degree of permanent impairment that results from the work injury(ies),
  - the degree of whole person impairment, and
  - if relevant, the proportion of permanent impairment resulting from any previous injury (work-related or otherwise) to the same part of the body or region.

The assessment of whole person impairment should be in accordance with diagnostic and other objective criteria as detailed in the Guidelines.

- 1.7 The Guidelines are designed to support assessors who are accredited by the Minister to assess whole person impairment. By the time a whole person impairment assessment is required, the question of liability for the work injury(ies) would normally have been determined. The person who makes the request for an assessment of whole person impairment (the requestor) is to confirm the work injury for which compensability has either been accepted or is in dispute. If an assessor identifies an impairment caused by a medical condition not identified in the request, the assessor is to describe the causal connection, if any, between the work injury for which liability is accepted or disputed and the newly identified impairment. As such, this newly identified impairment is not to be rated on this occasion.
- 1.8 In the case of a complex work injury, where different accredited assessors are required to assess different body systems, the relevant compensating authority will appoint a Lead Assessor. This will usually be the assessor assessing the worker's primary or main injury. The Lead Assessor will provide a report that summarises the other assessments and calculate the final percentage of whole person impairment (% WPI) resulting from the individual permanent impairment assessments.
- 1.9 The relevant compensating authority is responsible for assessing the compliance of the reports submitted to the Lead Assessor with the Guidelines.

### **Body systems covered by the Guidelines**

- 1.10 The Guidelines refer to the assessable body systems. The Pain chapter in AMA5 (chapter 18) is excluded. The Mental and Behavioural Disorders chapter (chapter 14) is excluded and replaced by chapter 16 of the Guidelines, which incorporates the *Guide to the Evaluation of Psychiatric Impairment for Clinicians* (GEPIC). The visual system assessment adopts the relevant chapter from AMA4, not AMA5. Evaluation of whole person impairment due to hearing loss adopts the methodology indicated in the Guidelines (chapter 9) with some reference to chapter 11, AMA5 (pp245–251), but uses National Acoustic Laboratory (NAL) tables from the NAL Report No 118, *Improved procedure for determining percentage loss of hearing*, January 1988.
- 1.11 As the Pain chapter in AMA5 (chapter 18) is excluded, no separate assessment can or should be made for pain except in the specific circumstances described for diagnosed Complex Regional Pain Syndrome and in the assessment of peripheral nerve injuries as described in the upper and lower extremity chapters of the Guidelines. Impairments that may be accompanied by pain are assessable as described in chapters 3–17, AMA5, as modified by the Guidelines in the upper and lower extremities chapters.

## Legislative requirements

1.12 The Act outlines specific requirements when assessing whole person impairment, as identified in the Guidelines. The requestor has the responsibility to provide clear guidance to the assessor to meet those requirements.

## Permanent impairment – maximum medical improvement

1.13 Assessments are only to be conducted when the injury has stabilised and the assessor considers that the degree of whole person impairment of the worker is fully ascertainable. Whole person impairment is fully ascertainable where the assessor believes the worker has attained maximum medical improvement (MMI). MMI is when the worker's condition has been medically stable for the previous three months and is unlikely to change in the foreseeable future, with or without further medical treatment. With MMI, further recovery or deterioration is not anticipated, but can include temporary fluctuations. The exception is neurological damage (e.g. peripheral nerve injury), which should not be assessed until symptoms have persisted for 12 months.

1.14 If the assessor thinks that MMI has not been achieved, the assessment must be deferred and an explanation provided as to why.

## Psychiatric impairments

1.15 The Act requires psychiatric injuries to be assessed separately from physical injuries (refer to subsection 22(8)(d) of the Act). This means they are not combined to determine one whole person impairment assessment (% WPI). A psychiatric injury (pure mental harm) is distinguished from a psychiatric injury which arises as a consequence of, or secondary to, a work related condition e.g. depression associated with a back injury (consequential mental harm).

1.16 The requestor will identify the psychiatric injury to be assessed in the assessment request. The requestor will need to consider whether workers with a traumatic brain injury require assessments for psychiatric impairment and neurological impairment.

1.17 No whole person impairment assessment is to be made for consequential mental harm, as required by subsection 22(8)(e) of the Act.

## Multiple impairments

1.18 The Act requires that impairments arising from injuries which occurred on different dates are to be assessed chronologically by the date of injury (refer to subsection 22(8)(a) of the Act) and are not to be combined. Note: This subsection of the Act does not relate to sequelae of work injuries. For example, if a worker suffers a work injury comprising an injury to a lower lumbar disc and subsequently develops sciatica as a normal progression of the disc injury, the latter is treated as part of the disc injury.

- 1.19 Impairments resulting from more than one injury caused by the same trauma are to be assessed together and combined to arrive at the degree of permanent impairment of the worker (refer to subsection 22(8)(c) of the Act).
- 1.20 The requestor will indicate the injuries that are to be assessed, the relevant dates of injury and assessment of which injuries must be combined.

### **Previous injuries, pre-existing conditions and unrelated injuries**

- 1.21 The Act requires that injuries are assessed, not assessed or deducted, depending on specific requirements. For example:
- *“Impairments from unrelated injuries or causes are to be disregarded in making an assessment”* (subsection 22(8)(b) of the Act).
  - *“any portion of an impairment that is due to a previous injury (whether or not a work injury or whether because of a pre-existing condition) that caused the worker to suffer an impairment before the relevant work injury is to be deducted for the purposes of an assessment...”* (subsection 22(8)(g) of the Act).
- 1.22 A worker may have existing injuries to other parts of the body that are not required to be assessed. The requestor needs to identify such injuries and advise the assessor not to include these injuries in the assessment.
- 1.23 If the unrelated or previous injury is to the same part of the body as the work injury and is not related to the work injury, the requestor will ask the assessor to disregard the unrelated or previous injury, which means that the current permanent impairment attributable to both injuries is assessed but the degree of impairment attributable to the unrelated or previous injury is then deducted. If, at the time of the request, the requestor is uncertain as to whether there are any previous injuries, they may ask the assessor to identify and disregard any previous injuries. This should be appropriately documented in the assessment report.
- 1.24 If the requestor asks for any injuries to a part of the body to be ‘deducted’, the assessor assesses the permanent impairment of the affected part of the body by applying the methodology in the Guidelines then deducts the permanent impairment % attributable to such injury. If there is no impairment from the previous unrelated injury or cause then there is nothing to deduct and this should be appropriately documented in the assessment report.
- 1.25 In some cases the requestor will ask that the assessor provide a whole person assessment for all specified injuries as well as a whole person impairment assessment specifically relating to the work injury only. If a relevant whole person impairment assessment for the worker has been completed previously and is to be included in the assessment, the requestor will provide the results of that previous assessment to the assessor and indicate that the assessment should be deducted. The assessor should then include that assessment in their report and deduct that assessment as instructed. This allows the case manager to determine the correct entitlement(s) for the worker.

1.26 The requestor will, if known, provide instruction to the assessor identifying:

- which injury impairment(s) should not be included in the assessment
- which injury impairment(s) should be combined to create a whole person impairment
- which injury impairment(s) should be assessed separately
- which injury impairment(s) should be deducted
- which injuries are not to be assessed, and
- any information from previous assessments of relevance to calculating the % WPI.

1.27 Where the requestor has indicated that impairments are to be assessed together, the Combined Values Chart, AMA5 (pp604–606), should be used to calculate the degree of whole person impairment of the worker. An explanation of its use is found on pp9–10, AMA5. The exception to this rule is detailed in 1.18 in this chapter. Please note that there is an error in the chart combining 95 and 34 – this should be 97 rather than 96.

1.28 When combining more than two impairments, the assessor must commence with the highest impairment and combine with the next highest and so on.

1.29 When a pre-existing injury needs to be considered, there should be objective evidence to support the assessment of impairment caused by that injury (e.g. clinical evidence, medical records and reports, the worker’s history, etc) and this must be carefully documented in the report. The impairment rating of the pre-existing injury is determined by applying the methodology in the Guidelines. The impairment from the pre-existing injury is then subtracted from the overall impairment rating. There cannot be a negative rating, that is, below 0%. If a worker suffers an impairment caused by a pre-existing unrelated injury which has already been assessed in accordance with the Guidelines or previous Guidelines, the assessor can deduct that impairment from the overall impairment which reflects the effect of both injuries.

NOTE: Requests for an assessment of permanent impairment and % WPI in respect of noise induced hearing loss will consider, in addition to section 22 of the Act, the requirements of subsections 188(2) and 188(3) of the Act. The requestor will consider these requirements and include relevant instructions in the request.

### **Deductions for prior payment under subsections 58(7) and 56(6) of the Act**

1.30 If a current work injury consists of an aggravation, acceleration, exacerbation, deterioration or recurrence of a previous work injury and the worker had an entitlement to, and was paid, compensation under section 58 of the Act (or a corresponding previous enactment) for that prior work injury, the assessor is to provide a % WPI of the combined effect of the current and prior work injuries. The worker will have the lump sum payable reduced by the dollar amount of the previous payment as required by subsection 58(7) of the Act.

This assessment will also be applied for the purpose of determining a worker’s entitlement to a lump sum for economic loss under section 56 of the Act.

## Refusal of treatment

1.31 If the worker has been offered, but refused or not undertaken, additional or alternative medical treatment that the assessor considers is likely to improve the worker's condition, the assessor should evaluate the current condition and treat it as 'stable', without consideration of potential changes associated with the proposed treatment. The assessor should note the potential for improvement in the worker's condition in the evaluation report, and the reasons for refusal by the worker, but should not adjust the degree of impairment on the basis of the worker's decision.

## Future deterioration of a condition

1.32 If an assessor forms the opinion the worker's condition is stable for the foreseeable future, but it is expected to deteriorate in the long term, the assessor should make no allowance for this deterioration, but note its likelihood in the report.

## Information required for assessments

1.33 The assessor should be provided with all relevant medical and allied health information, including results of all clinical investigations and previous assessments related to the work injury in question, with the assessment request.

1.34 The assessor should not undertake a whole person impairment assessment unless all relevant information is provided by a claims agent, self-insured employer or ReturnToWorkSA, and in the case of a referral by the South Australian Employment Tribunal (the Tribunal), by the Tribunal. If the worker has relevant information to include, they should provide it to the requestor. In that event, or if in doubt, the assessor should contact the requestor to ensure they have or are provided with all relevant information.

1.35 If the assessor is unclear about the assessment of unrelated injuries in a particular case, the requestor should be asked to provide clear instructions before the assessment is undertaken. Notes for the requestor can be found in Appendix 1 of the Guidelines.

1.36 The degree of permanent impairment that results from the work injury must be determined using the tables, graphs and methodology provided in the Guidelines and AMA5 (or AMA4 for the Visual system or The NAL Report, No 118 for Hearing). Most importantly, assessors must have relevant information about the onset of the injury, subsequent treatment, relevant diagnostic tests and functional assessments, if any, of the worker. The absence of required information could result in an assessment being discontinued or deferred. Section 1.5 of chapter 1 of AMA5 (p10) applies to the conduct of assessments and expands on this concept.

1.37 The Guidelines and AMA5 (or AMA4 for the Visual system or the NAL report, No 188 for Hearing) set out the information and investigations necessary to diagnose and measure whole person impairment. Assessors must apply the approach outlined in the Guidelines. Requestors must read these documents to understand the information that they need to provide for the assessor to be able to conduct a comprehensive evaluation.

1.38 The Guidelines and AMA5 may specify more than one equally valid, applicable method that assessors can use to establish the degree of an injured person's permanent impairment. In that case, assessors should use the method(s) that results in the highest degree of permanent impairment.

### **Adjustment for the effects of orthoses and prostheses**

1.39 Assessments of whole person impairment must be conducted without orthoses and/or prostheses, except where these cannot reasonably be removed for examination purposes (e.g. as with a cochlear implant). Further details can be found in the relevant chapters of the Guidelines and AMA5.

1.40 In some cases, there may need to be allowance for a pre-existing use of an orthosis or prosthesis. For example, impairment of vision should be measured with the worker wearing their prescribed corrective spectacles and/or contact lenses, if this was usual for the worker before the work injury occurred. If, as a result of the work injury, the worker has been prescribed corrective spectacles and/or contact lenses for the first time, or different spectacles and/or contact lenses than those prescribed previously, the difference should be accounted for in the assessment of whole person impairment.

### **Adjustment for the effects of treatment**

1.41 Where the effective long-term treatment of a work injury results in apparent substantial reduction or total elimination of the worker's whole person impairment, but the worker is likely to revert to the original degree of impairment if treatment is withdrawn, the assessor may increase the percentage of whole person impairment by 1, 2 or 3% WPI. This does not apply to the use of:

- analgesics
- anti-inflammatory medication for pain relief, or
- other symptom-relieving therapies, such as physiotherapy treatment and massage.

This does apply to impairment-altering therapies such as the effects of insulin in reducing impairment that would otherwise be present in diabetes. The assessor should document the % WPI increase, if applied, and document the reasoning in the report.

1.42 As previously indicated, where a worker has declined treatment which the assessor believes would be beneficial, the impairment rating should be neither increased nor decreased.

## Reports

- 1.43 A whole person impairment evaluation report should be accurate, comprehensive and fair. It should clearly address the question(s) being asked of the assessor. In general, the assessor will be requested to address issues such as:
- current clinical status and diagnosis, including the basis and evidence used for determining maximum medical improvement
  - reasoning as to how the assessor decided to allocate an injury to a particular class and selected a percentage within a percentage range, if applicable
  - the degree of whole person impairment that results from the injury, and
  - the proportion of whole person impairment due to any previous injury or cause, pre-existing condition or abnormality, if any, relevant to the injury being assessed.
- 1.44 The report should contain factual information based on the assessor's own history taking and clinical examination. If other reports or investigations are relied upon in arriving at an opinion, these should be appropriately referenced in the assessor's report.
- 1.45 The evaluation report should provide a rationale consistent with the methodology and content of the Guidelines. It should include a comparison of the evaluation's key findings with the impairment criteria in the Guidelines. In rare circumstances, where the evaluation is conducted in the absence of pertinent data or information, the assessor should indicate how the degree of impairment was determined with the limited data and justify this in detail in the report.
- 1.46 A standard report format including summary tables, which must be used by an assessor, is available on ReturnToWorkSA's website.
- 1.47 When using range of motion (ROM) for lower extremity and/or upper extremity for assessment, after recording the actual goniometric values, the assessor must find the listed values and interpolate, if necessary, for the actual measurements obtained on the day of examination. Example 16-15 in AMA5 on page 453 illustrates the interpolation process.
- 1.48 The assessed degree of impairment is to be expressed as a percentage of whole person impairment (% WPI). Regional body impairments, where used (e.g. percentage of upper extremity impairment), are to be indicated in the report and then converted to % WPI in the summary table.
- 1.49 The report should include the assessor's conclusion and the final % WPI. This is to be included in the final paragraph in the body of the report, and not as a separate report.
- 1.50 Reports are to be provided within 10 working days of the assessment being completed, or as agreed and documented between the requestor and the assessor. This should be noted in the report.
- 1.51 Reports requested by a claims agent or ReturnToWorkSA should be provided to ReturnToWorkSA for review of compliance. Once compliance is confirmed, the report will be sent to the requestor by ReturnToWorkSA.

## Ordering of additional investigations

- 1.52 Requestors are responsible for providing all the relevant information to the assessor for the whole person impairment assessment to be undertaken. The assessor should not order additional radiographic or other investigations purely for the purpose of assessing the degree of impairment.
- 1.53 If, however, the investigations previously undertaken are not as required by the Guidelines or AMA5 (or AMA4 in the case of visual etc.) or are inadequate for a proper assessment to be made, the assessor should consider whether to proceed with the evaluation without adequate investigations and advise the requestor accordingly.
- 1.54 Where the assessor considers that further investigation is essential for a complete evaluation to be undertaken and deferral of the evaluation would considerably inconvenience the worker (e.g. when the worker has travelled from a country region specifically for the assessment), the assessor may proceed to order the appropriate investigations, provided there is no undue risk in carrying out these investigations to the worker. Before proceeding, the assessor should call and obtain approval from the requestor.

## Conditions which are not covered by the Impairment Assessment Guidelines/AMA5 – equivalent or analogous conditions

- 1.55 AMA5 (p11) states: “Given the range, evolution and discovery of new medical conditions, the *Guides* cannot provide an impairment rating for all impairments.” In situations where impairment ratings are not provided, the *Guides* suggest that physicians use clinical judgment, comparing measurable impairment resulting from the unlisted condition to measurable impairment resulting from similar conditions with similar impairment of function in performing activities of daily living. Such a comparative process is referred to as carrying out an assessment using analogy.
- 1.56 The assessor must stay within the body part/region when using analogy.
- 1.57 Assessors applying clause 1.55 and 1.56 must refer to AMA5, section 1.5 (pp10-11). The assessor’s “judgment, based upon experience, training, skill, thoroughness in clinical evaluation, and ability to apply the *Guides* criteria as intended, will enable an appropriate and reproducible assessment to be made of clinical impairment.” (AMA5, p11)

## Inconsistent presentation

- 1.58 AMA5 (p19) states: “Consistency tests are designed to ensure reproducibility and greater accuracy. These measurements, such as one that checks the individual’s lumbosacral spine range of motion, are good but imperfect indicators of people’s efforts. The physician must use the entire range of clinical skill and judgment when assessing whether or not the measurements or test results are plausible and consistent with the impairment being evaluated. If, in spite of an observation or test result, the medical evidence appears insufficient to verify that an impairment of a certain magnitude exists, the physician may modify the impairment rating accordingly and then describe and explain the reason for the modification in writing.”

## Rounding

1.59 Occasionally the methods of the Guidelines will result in an impairment value which is not a whole number (e.g. an assessment of joint impairment in the upper extremity). All such values must be rounded to the nearest whole number before moving from one joint degree of impairment to the next (e.g. from DIP to PIP) or from a regional impairment to a WPI. Figures should also be rounded before using the Combined Values Chart, AMA5 (pp604-606). This will ensure that the final WPI will always be a whole number. The usual mathematical convention is followed where rounding occurs – values of less than 0.5 are rounded down to the nearest whole number and values of 0.5 and above are rounded up to the next whole number. Individual chapters may have specific provisions for rounding and these should be applied.

## Quality assurance

1.60 If it is not clear to the requestor that a report has been completed in accordance with the Guidelines, clarification may be sought from the assessor who prepared the report.

1.61 An assessor who frequently provides reports that are not in accordance with the Guidelines may be asked to show cause as to why their accreditation should not be removed (and name removed from the list of accredited permanent impairment assessors on the ReturnToWorkSA website). A process for managing assessor performance will be available at [www.rtwsa.com](http://www.rtwsa.com) once the Return to Work scheme commences.

1.62 Only requests that comply with the Guidelines may be used to determine worker entitlements.

## Code of conduct

1.63 Assessors are referred to the Medical Board of Australia's *Good Medical Practice: A Code of Conduct for Doctors in Australia*.

1.64 Assessors have an obligation to act in an ethical, professional and considerate manner when examining workers for assessment of whole person impairment.

1.65 Effective communication is vital to ensure that the worker is well-informed and able to cooperate in the process. Assessors should:

- ensure the worker understands who the assessor is and the assessor's role in the evaluation
- ensure the worker understands how the evaluation will proceed
- explain the need for any physical manipulation that is undertaken by the assessor when measuring range of movement
- take reasonable steps to preserve the privacy and modesty of the worker during the evaluation, and
- refrain from providing any opinion to the worker about the assessment or their claim.

1.66 Complaints received by ReturnToWorkSA in relation to an assessor's conduct during an evaluation will be investigated. Each complaint will be dealt with in a professional and confidential manner and the assessor will be provided with the opportunity to explain the issue from their perspective. If the initial review reveals a problem may exist or if complaints recur, the complaint will be referred to the relevant health care complaints body for investigation and appropriate action.

1.67 Assessors may be removed from the list of accredited assessors by the Minister if they:

- are the subject of frequent complaints, or
- persistently fail to apply the methodology set out in the Act, the Guidelines and AMA5, or
- fail to meet the service standards and conditions outlined within the *Impairment Assessor Accreditation Scheme*.

This would mean that the assessor could no longer be engaged for the provision of whole person impairment assessments for the Return to Work scheme.

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# 2 UPPER EXTREMITY

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## 2 UPPER EXTREMITY

Chapter 16, AMA5 (p433) applies to the assessment of permanent impairment of the upper extremities, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following:**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

### Introduction

- 2.1 This chapter provides guidelines on assessing whole person impairment involving the upper extremities. The upper extremities are also discussed in chapter 16, AMA5 (pp433–521). It is a complex chapter that requires an organised approach with careful documentation of findings.
- 2.2 When calculating impairment using loss of range of motion, it is most important always to compare measurements of the relevant joint(s) in both extremities. If a contralateral “normal/uninjured” joint has less than average mobility, the impairment value(s) obtained for the uninvolved joint serves as a baseline (‘normal’) and is subtracted from the calculated impairment for the involved joint. The rationale for this decision should be explained in the report (AMA5, p453, 16.4c).

### The approach to assessment of the upper extremity and hand

- 2.3 The impairment must be permanent and the work injury must be at MMI. The injured person will have a defined diagnosis that can be confirmed by clinical evaluation.
- 2.4 The assessed impairment of a part or region can never exceed the impairment due to amputation of that part or region. For an upper limb, therefore, the maximum evaluation is 60% WPI (the value for amputation through the shoulder). An exception to this is where there is a forequarter amputation, which is 70% WPI (chapter 16, AMA5, Table 16-4, p440). Where there is an impairment of another body system (e.g. skin/scarring) from the same injury, then each impairment should be rated and combined.

- 2.5 Although range of motion appears to be a suitable method for evaluating impairment, it can be subject to variation because of pain during motion at different times of examination and/or possible lack of co-operation by the person being assessed. Assessment of impairment from loss of range of motion of a joint should be done by measuring active range of motion, as follows:
- **A goniometer or inclinometer must be used.**
  - Passive range of motion is part of the clinical examination to ascertain clinical status of the joint, but motion impairment must be calculated using active range of motion measurements.
  - Active range of motion should be measured with several consistent repetitions. The highest consistent measurement obtained is then used. If there is inconsistency in range of motion then it must not be used as a valid parameter of impairment evaluation. Refer to section 1.58 of the Guidelines. Impairment values for degree measurements falling between those listed **must** be adjusted or interpolated proportionately in the corresponding interval.
- 2.6 To achieve an accurate and comprehensive assessment of the upper extremity, findings should be documented on a standard form. Figures 16-1a and 16-1b, AMA5 (pp436–437) are extremely useful, both to document findings and to guide the assessment process.
- 2.7 The hand and upper extremity are divided into regions: thumb, fingers, wrist, elbow, shoulder and forequarter. Close attention needs to be paid to the instructions in Figures 16-1a and 16-1b, AMA5 (pp436–437) regarding adding or combining impairments.
- 2.8 Table 16-3, AMA5 (p439) is used to convert upper extremity impairment to WPI. When the Combined Values Chart is used, the assessor must ensure that all values combined are in the same category of impairment (that is WPI with WPI, Upper extremity impairment % with Upper extremity impairment %, Hand impairment % with Hand impairment % and so on). Regional impairments of the same limb (e.g. several upper extremity impairments), should be combined **before** converting to percentage WPI. (Note that impairments relating to the joints of the thumb are added rather than combined as clearly indicated in AMA5 (p10) and in Figure 16-1a, AMA5 (p436).

## Specific interpretation of AMA5 – The hand and upper extremity

### Impairment of the upper extremity due to peripheral nerve disorders

- 2.9 If upper extremity impairment results solely from a peripheral nerve injury, the assessor should not also evaluate impairment(s) of abnormal motion for that upper extremity when the abnormal range of motion is caused by the peripheral nerve injury. Section 16.5, AMA5 (p480) should be used for evaluation of such impairments. Table 16-15, AMA5 (p492) together with Tables 16-10 and 16-11, AMA5 (pp482 and 484) are used for evaluation.

- 2.10 For loss of use of the nerve to a trapezius and/or sternomastoid muscle, the assessor should refer to 5.15 on p49 of the Nervous System Chapter in the Guidelines.
- 2.11 The assessment of carpal tunnel syndrome post-operatively is undertaken as set out in AMA5 except that Scenario 2 (AMA5, p495) is replaced by the following: Where there is normal sensibility and opposition strength with residual carpal tunnel syndrome symptoms, not meeting scenario 1 (AMA5, p495), an impairment rating not to exceed 5% of the upper extremity may be justified with rationale provided for allocation within the range.
- 2.12 When applying Tables 16-10, AMA5 (p482) and Table 16-11, AMA5 (p484) and the above, the assessor must use clinical judgement to estimate the appropriate percentage within the range of values shown for each severity grade. Rationale for the value selected must be provided in the report. The maximum value is NOT applied automatically.

### **Impairment due to other disorders of the upper extremity**

- 2.13 Section 16.7, AMA5, *Impairment of the Upper Extremities Due to Other Disorders* (pp498–507), should be used only when other criteria, as presented in sections 16.2–16.6, AMA5 (pp 441–498), have not adequately encompassed the extent of the impairments. Impairments from the disorders considered in section 16.7 are usually estimated using other criteria. The assessor must take care to avoid duplication of impairments.
- 2.14 Section 16.7, AMA5, *Impairment of the Upper Extremities Due to Other Disorders* (p498), notes “The severity of impairment due to these disorders is rated separately according to Table 16-19 through 16-30 (pp500-507) and then multiplied by the relative maximum value of the unit involved as specified in Table 16-18 (p499)”. This statement does not include Tables 16-25 (Carpal instability, p503), 16-26 (Shoulder instability, p505) and 16-27 (Arthroplasty, p506). These tables are already expressed in terms of upper extremity impairment.
- 2.15 Strength evaluation, as a method of upper extremity impairment assessment, should only be used in exceptional circumstances. Its use must be justified when loss of strength represents an impairing factor not adequately considered by more objective rating methods. If chosen as a method, the caveats (detailed in AMA5, p484 and pp507-510) under the headings ‘16.8a Principles’, ‘16.8b Grip and Pinch strength’ and ‘16.8c Manual Muscle Testing’, must be observed, i.e. decreased strength cannot be rated in the presence of decreased motion, painful conditions, deformities and absence of parts (e.g. thumb amputation) that prevent effective application of maximal force in the region being evaluated.

## Conditions affecting the shoulder region

2.16 All shoulder assessments must relate to a shoulder disorder and be clearly distinguished from symptoms due to referred pain from the neck or other structures.

- Most shoulder disorders with an abnormal range of motion are assessed according to AMA5 section 16.4 - Evaluating Abnormal Motion (pp450-479). Please note that AMA5 indicates that internal and external rotation of the shoulder are to be measured with the arm abducted in the coronal plane to 90 degrees. If this is not possible, symmetrical measurement of rotation is to be carried out at the point of maximal abduction. If a shoulder cannot be abducted to 90 degrees, a modified method can be applied to the injured and contralateral shoulder and described.
- In cases of rotator cuff injury, where the loss of shoulder motion does not reflect the severity of the tear and there is no associated pain, may be assessed according to section 16.8c, AMA5 - Strength evaluation. Refer 2.15.
- In Table 16-27, AMA5 (p506), the figure for resection arthroplasty of the distal clavicle (isolated) has been changed to 5% upper extremity impairment, and the figure for resection arthroplasty of the proximal clavicle (isolated) has been changed to 8% upper extremity impairment.
- If a resection arthroplasty is done as a part of another shoulder procedure and results in an anatomical loss evident on clinical examination or x-ray, then it can be combined with other impairment.
- In Table 16-18, AMA5 (p499) the maximum impairment values for the sternoclavicular joint have been changed from 5% UEI to 25% UEI and 3% WPI to 15% WPI.

2.17 **Ruptured long head of biceps** shall be assessed as 3% UEI or 2% WPI where it exists in isolation from other rotator cuff pathology. Impairment for ruptured long head of biceps cannot be combined with any other rotator cuff impairment or with loss of range of motion.

2.18 **Impingement:** Diagnosis of impingement is made on the basis of positive findings on appropriate provocative testing at the time of examination and is only to apply where there is no loss of range of motion. Symptoms must have been present for at least 12 months. An impairment rating of 3% UEI or 2% WPI shall apply.

## Fractures involving joints

2.19 Displaced fractures involving joint surfaces are generally to be rated by range of motion. If, however, this loss of range of motion is not sufficient to give an impairment rating; movement is accompanied by pain; and there is 2mm or more of displacement; allow 2% UEI (1% WPI).

## Epicondylitis of the elbow

2.20 This condition is rated as 2% UEI (1 % WPI). Symptoms must have been present for at least 18 months. Localised tenderness at the epicondyle must be present and provocative tests must also be positive. Section 16.7d, AMA5 (p507) refers to tendon rupture or surgical procedures. If there is an associated loss of range of motion, these figures are not combined, but the method giving the highest rating is used.

## Resurfacing procedures

2.21 No additional impairment is to be assessed for resurfacing procedures used in the treatment of localised cartilage lesions and defects in major joints.

## Complex Regional Pain Syndrome

2.22 For Complex Regional Pain Syndrome (CPRS) to be present for the purposes of assessment:

- the diagnosis is to be confirmed by criteria in Table 2.1 below – each of the four boxes must be addressed
- the diagnosis must have been present for at least one year (to ensure accuracy of the diagnosis and to permit adequate time to achieve MMI)
- the diagnosis must have been verified by more than one examining physician, and
- other possible diagnoses must have been excluded.

Note: The diagnosis of CRPS should be a clinical one, based on history and physical signs at the time of the evaluation. Although changes such as Sudek's atrophy may be detectable on x-ray, such changes are adjunctive evidence and not a necessary part of the diagnostic criteria for CRPS.

**Table 2.1: Diagnostic criteria for complex regional pain syndrome (CRPS) types I and II in the upper extremity**

1	Continuing pain as defined in section 16.5e, Paragraph 1, AMA5 (p495)
2	<p>Must report at least one <b>symptom</b> relating to the affected part in each of the following four categories:</p> <p><b>Sensory:</b> (usually persistent)</p> <ul style="list-style-type: none"> <li>• Persistent hypoaesthesia</li> <li>• Mechanical allodynia</li> </ul> <p><b>Motor/trophic:</b> (usually persistent)</p> <ul style="list-style-type: none"> <li>• Decreased range of joint motion</li> <li>• Motor changes - weakness, wasting</li> <li>• Trophic changes - hair, nails, skin</li> </ul> <p><b>Vasomotor</b> (often intermittent):</p> <ul style="list-style-type: none"> <li>• Temperature asymmetry</li> <li>• Skin colour changes</li> <li>• Skin colour asymmetry</li> </ul> <p><b>Sudomotor</b> (often intermittent):</p> <ul style="list-style-type: none"> <li>• Oedema</li> <li>• Sweating increase or decrease</li> <li>• Sweating asymmetry</li> </ul>
3	<p><u>At the time of evaluation</u> at least one <b>physical sign</b> must be elicited in the affected part in each of the following four categories:</p> <p><b>Sensory: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• <i>Hypoaesthesia</i> to sensory stimulus</li> <li>• <i>Mechanical allodynia</i> to deep somatic pressure and/or joint movement</li> </ul> <p><b>Motor/trophic: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Joint stiffness and decreased passive motion</li> <li>• Motor weakness</li> <li>• Wasting</li> <li>• Motor dysfunction – tremor, dystonia</li> <li>• Trophic changes – hair, nails, skin</li> </ul> <p><b>Vasomotor: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Temperature asymmetry</li> <li>• Asymmetric skin colour changes</li> </ul> <p><b>Sudomotor: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Oedema</li> <li>• Sweating asymmetry</li> </ul>
4	<b>There is no other diagnosis that better explains the signs and symptoms.</b>

2.23 CRPS I is to be assessed as follows:

- Apply the diagnostic criteria for CRPS I (Table 2.1).
- If the criteria in each of the sections 1, 2, 3 and 4 in Table 2-1 are satisfied, the diagnosis of CRPS I may be made.
- Follow the procedure outlined in AMA5 (p496), noting that there is no multiplier used and that the figures you determine from Table 16-10a represent UEI%.

### Complex regional pain syndrome (CRPS II) - causalgia

2.24 For CRPS II, the mechanism is an injury to a specific nerve. The methodology in AMA5 (pp496-497) is to be followed:

- If the criteria in each of the sections 1, 2, 3 and 4 in Table 2-1 of the Guidelines are satisfied and there is objective evidence of an injury to a specific nerve, the diagnosis of CRPS II may be made.
- Follow the evaluation process outlined in AMA5 (pp496-97).

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# 3 LOWER EXTREMITY

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## 3 LOWER EXTREMITY

Chapter 17, AMA5 (p523) applies to the assessment of permanent impairment of the lower extremities, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

### Introduction

- 3.1 The lower extremities are discussed in Chapter 17, AMA5 (pp523–564). This section is complex and provides a number of alternative methods of assessing whole person impairment in the lower extremities. An organised approach is essential and findings should be carefully documented on a worksheet.
- 3.2 When calculating impairment for loss of range of motion, it is most important always to compare measurements of the relevant joint(s) in both extremities. If a contralateral ‘normal/uninjured’ joint has less than average mobility, the impairment value(s) corresponding to the uninvolved joint serves as a baseline (‘normal’) and is subtracted from the calculated impairment for the involved joint. The rationale for this decision should be explained in the report (AMA5, p2, 1.2a). Passive range of motion is part of the clinical examination to ascertain clinical status of the joint, but motion impairment must be calculated using active range of motion measurements.

### The approach to assessment of the lower extremity

- 3.3 Assessment of the lower extremity involves clinical evaluation, which can use a variety of methods. In general, the method that most specifically addresses the impairment should be used.
- 3.4 There are several different forms of evaluation that can be used, as indicated in sections 17.2b to 17.2n, AMA5 (pp528–554). Table 17-2, AMA5 (p526) indicates which evaluation methods can be combined and which cannot. It may be possible to perform several different evaluations as long as they are reproducible and meet the conditions specified below and in AMA5. The most specific method of impairment assessment should be used. If several specific methods can be used and a variety of combinations are possible, then 3.6 below indicates which value is to be used.

- 3.5 It is possible to use an algorithm to aid in the assessment of lower extremity impairment. Use of the worksheet (Table 3.4 (p38)) is advised.
- 3.6 In the assessment process, having used the most appropriate and specific methods, the evaluation giving the highest impairment rating is selected. That may be a combined impairment in some cases, in accordance with the Table 17-2, AMA5 (p526) – *Guide to the Appropriate Combination of Evaluation Methods*, using the Combined Values Chart (AMA5, pp604–606). Please note, with regard to “ROM Ankylosis” in Table 17-2, this refers to range of motion or ankylosis.
- 3.7 When the Combined Values Chart is used, the assessor must ensure that all values combined are in the same category of impairment rating (i.e. % WPI, LEI, or FI). To convert from FI to LEI, refer to Section 17.2a, AMA5 (p527). Regional impairments of the same limb (e.g. several lower extremity impairments) should be combined before converting to % WPI.
- 3.8 Refer to Table 17-2, AMA5 (p526) to determine which impairments can be combined and which cannot. This table allows the assessor to assess impairment accurately without ‘double dipping’. For example, if an injury to a knee manifests as assessable impairments of range of motion, diagnosis-based estimates and arthritis, then Table 17-2 is used to determine whether any combination of these impairments is allowable. If not, then the single, most appropriate impairment that gives the highest rating is chosen. The assessed impairment of a part or region can never exceed the impairment due to amputation of that part or region. For the lower limb, therefore, the maximum evaluation is 40% WPI, the value for hip disarticulation. An exception to this is where there is a hemipelvectomy, which is 50% WPI. Where there is an impairment assessed under another body system (e.g. skin) from the same injury then each impairment should be rated and combined.

## Specific interpretation of AMA5 – the lower extremity

### Leg length discrepancy

- 3.9 When true leg length discrepancy is determined clinically (section 17.2b, AMA5, p528), the method used must be indicated (e.g. tape measure from anterior superior iliac spine to the medial malleolus). Clinical assessment of leg length discrepancy is an acceptable method, but if full length computerised tomography films are available they should be used in preference. Such an examination should not be ordered solely for determining leg lengths.
- 3.10 When applying Table 17-4, AMA5 (p528), the element of choice has been removed. Refer Table 17-4 in the Guidelines (p25).

**Table 17-4 Impairment due to limb length discrepancy**

Discrepancy (cm)	Lower extremity [% LEI]	
	Whole Person Impairment (% WPI)	
0 – 1.9	[0]	(0)
2 – 2.9	[8]	(3)
3 – 3.9	[13]	(5)
4 – 4.9	[18]	(7)
5+	[19]	(8)

### Gait derangement

- 3.11 Assessment of gait derangement is only to be used as a method of last resort. Methods of impairment assessment most fitting the nature of the disorder should always be used in preference. If gait derangement (section 17.2c, AMA5, p529) is used, it cannot be combined with any other evaluation in the lower extremity section of AMA5.
- 3.12 Any walking aid used by the subject must be a permanent requirement and not temporary.
- 3.13 In the application of Table 17-5, AMA5 (p529), delete item ‘b’, as the Trendelenburg sign is not sufficiently reliable.

### Muscle atrophy (unilateral)

- 3.14 Section 17.2d, AMA5 (p530) is not applicable if the limb other than that being assessed is abnormal (e.g. if varicose veins cause swelling, or if there is another injury or condition which has contributed to the disparity in size).
- 3.15 In the use of Table 17-6, AMA5 (p530), the element of choice is removed in the impairment rating and only the higher figure used as outlined in the Table below.
- Note that the figures for lower limb impairment in Table 17-6, AMA5 (p530) are incorrect and the correct figures are shown below.

**Table 17-6 Impairment due to unilateral leg muscle atrophy**

Difference in circumference (cm)	Impairment degree	Lower extremity [% LEI]	Whole person Impairment (% WPI)
<b>a. Thigh:</b> The circumference is measured 10cm above the patella with the knee fully extended and the muscles relaxed.			
0 – 0.9	None	[0]	(0)
1 – 1.9	Mild	[6]	(2)
2 – 2.9	Moderate	[11]	(4)
3+	Severe	[12]	(5)
<b>b. Calf:</b> The maximum circumference on the normal side is compared with the circumference at the same level on the affected side.			
0 – 0.9	None	[0]	(0)
1 – 1.9	Mild	[6]	(2)
2 – 2.9	Moderate	[11]	(4)
3+	Severe	[12]	(5)

### Manual muscle strength testing

3.16 The Medical Research Council (MRC) gradings for muscle strength are universally accepted. They are not linear in their application, but ordinal. Only the six grades (0–5) should be used, as they are reproducible among experienced assessors. The descriptions in Table 17-7, AMA5 (p531) are correct. The results of electrodiagnostic methods and tests are not to be considered in the evaluation of muscle testing which is to be performed manually. Table 17-8, AMA5 (p532) is to be used for this method of evaluation.

### Range of motion

3.17 Although range of motion (ROM), section 17.2f, AMA5 (pp533–538) appears to be a suitable method for evaluating impairment, it may be subject to variation because of pain during motion at different times of examination, possible lack of cooperation by the person being assessed and inconsistency. If there is such inconsistency then ROM cannot be used as a valid parameter of impairment evaluation.

3.18 If range of motion is used as an assessment measure, then Tables 17-9 to 17-14, AMA5 (p537) are selected for the joint or joints being tested. If a joint has more than one plane of motion, the impairment assessments for the different planes should be added. For example, any impairments of the six principal directions of motion of the hip joint are added (AMA5, p533).

3.19 Table 17-10 on page 537 (Knee Impairment) is potentially confusing as it has valgus and varus deformity in the same table as restriction of motion. This should be approached in the same way as Ankle Motion Impairment Tables 17-11 and 17-13 in which that these impairments may be combined. Valgus and varus knee angulation are to be measured in a weight-bearing position using a goniometer. It is also important always to compare with the opposite knee in the same way as described in 3.2 in this chapter.

It is important to bear in mind that varus and/or valgus alignments of the knee may be constitutional. It is also important always to compare with the opposite knee in the same way as described in 3.2 in this chapter.

3.20 In Table 17-10, Knee Impairment, the sentence should read “Deformity measured by femoral-tibial angle; 3° to 9° valgus is considered normal”.

### Measurement of selected joint motion

3.21 When measuring dorsiflexion at the ankle, the test is carried out initially with the knee in extension and then repeated with the knee flexed to 45°. The average of the maximum angles represents the dorsiflexion [extension] range of motion (Figure 17-5, AMA5, p535) to be used in Table 17-11, AMA5 (p537).

The same process is used for measuring plantar flexion.

3.22 Please note that in Table 17-11, AMA5 (p537), Ankle motion impairment estimates the range for mild flexion contracture should be 1° to 10°, for moderate flexion contracture should be 11° to 19°, and the figure for severe flexion contracture should be 20° plus.

### Ankylosis

3.23 Ankylosis is the equivalent to arthrodesis in impairment terms only. For the assessment of impairment when a joint is ankylosed (section 17.2g, AMA5, pp538–543), the calculation to be applied is to select the impairment if the joint is ankylosed in optimum position (see Table 3.1 below), and then if not ankylosed in the optimum position by adding (not combining) the values of % WPI using Tables 17-15 to 17-30, AMA5 (pp538–543).

**Table 3.1 Impairment for ankylosis in the optimum position**

Joint	Whole person	Lower extremity	Ankle or foot
Hip	20%	50%	–
Knee	27%	67%	–
Pantalar	19%	47%	67%
Ankle	15%	37%	53%
Triple	6%	15%	21%
Subtalar	4%	10%	14%

Note that the figures in Table 3.1 suggested for ankle impairment are greater than those suggested in AMA5.

### Impairment for ankylosis in variation from the optimum position

Ankylosis of the ankle in the optimum position equates with 15 (37) [53] % impairment as per Table 3.1. Table 3.1(a) is provided below as guidance to evaluate additional impairment owing to variation from the optimum position. The additional amounts at the top of each column are added to the figure for impairment in the optimum position. In keeping with AMA5 (p541), the maximum impairment for ankylosis of the ankle remains at 25 (62) [88] % impairment.

**Table 3.1(a) Impairment for ankylosis in variation from the optimum position**

	WPI % (LEI %) [foot %] impairment			
	2 (5) [7]	4 (10) [14]	7 (17) [24]	10 (25) [35]
Position				
Dorsiflexion	5 - 9°	10 - 19°	20 - 29°	30° +
Plantar flexion		10 - 19°	20 - 29°	30° +
Varus	5 - 9°	10 - 19°	20 - 29°	30° +
Valgus		10 - 19°	20 - 29°	30° +
Internal rotation	0 - 9°	10 - 19°	20 - 29°	30° +
External rotation	15 - 19°	20 - 29°	30 - 39°	40° +

## Arthritis

- 3.24 Impairment due to arthritis (section 17.2h, AMA5, pp544–545) following a work injury is uncommon, but may occur in isolated cases. The presence of arthritis may indicate a pre-existing condition and this should be assessed as noted in Chapter 1 of the Guidelines.
- 3.25 The presence of osteoarthritis is defined as cartilage loss. Cartilage loss can be measured by a properly aligned plain x-ray or by direct vision (arthroscopy), but impairment can only be assessed by the radiologically determined cartilage loss intervals in Table 17-31, AMA5 (p544).
- When assessing impairment of the knee joint, which has three compartments, only the compartment with the major impairment is used in the assessment. That is, measured impairments in the different compartments cannot be added or combined.
- 3.26 Detecting the subtle changes of cartilage loss on plain radiography requires comparison with the normal side. All joints should be imaged directly through the joint space, with no overlapping of bones. If comparison views are not available, Table 17-31, AMA5 (p544) is used as a guide to joint space narrowing.
- 3.27 Assessors should be cautious in making a diagnosis of cartilage loss on plain radiography if secondary features of osteoarthritis, such as osteophytes, subarticular cysts or subchondral sclerosis are lacking, unless the other side is available for comparison. The presence of an intra-articular fracture with a step in the articular margin in the weight-bearing area implies cartilage loss.
- 3.28 The accurate radiographic assessment of joints always requires at least two views. In some cases, further supplementary views will optimise the detection of joint space narrowing or the secondary signs of osteoarthritis.

**Sacro-iliac joints:** Being a complex joint, modest alterations are not detected on radiographs, and cross-sectional imaging may be required. Radiographic manifestations accompany pathological alterations. The joint space measures between 2mm and 5mm. Osteophyte formation is a prominent characteristic of osteoarthritis of the sacro-iliac joint.

**Hip:** An anteroposterior view of the pelvis and a lateral view of the affected hip are ideal. If the affected hip joint space is narrower than the asymptomatic side, cartilage loss is regarded as being present. If the anteroposterior view of pelvis has been obtained with the patient supine, it is important to compare the medial joint space of each hip as well as superior joint space, as this may be the only site of apparent change. If both sides are symmetrical, then other features, such as osteophytes, subarticular cyst formation, and calcar thickening should be taken into account to make a diagnosis of osteoarthritis.

## **Knee:**

- **Tibio-femoral joint:** The best view for assessment of cartilage loss in the knee is usually the erect intercondylar projection, as this profiles and stresses the major weight-bearing area of the joint which lies posterior to the centre of the long axis. The ideal x-ray is a posteroanterior view with the patient standing, knees slightly flexed, and the x-ray beam angled parallel to the tibial plateau. Both knees can readily be assessed with the one exposure. In the knee it should be recognised that joint space narrowing does not necessarily equate with articular cartilage loss, as deficiency or displacement of the menisci can also have this effect. Secondary features, such as subchondral bone change and the past surgical history, must also be taken into account.
- **Patello-femoral joint:** Should be assessed in the 'skyline' view, again preferably with the other side for comparison. The x-ray should be taken with 30 degrees of knee flexion to ensure that the patella is load-bearing and has engaged the articular surface femoral groove.

### **Footnote to Table 17-31, AMA5 (p544) regarding patello-femoral pain and crepitation:**

This item is only to be used if there is a history of direct injury to the front of the knee or, in cases of patellar translocation/dislocation, without there being external direct anterior trauma. This item cannot be used as an additional impairment when assessing arthritis of the knee joint itself, of which it forms a component. If patello-femoral crepitus occurs in isolation (i.e. no other signs of arthritis) following anterior knee trauma, then it can be combined with other diagnosis based estimates (Table 17-33, AMA5, p546). Signs of crepitus need to be present at least one year post injury.

Note: Osteoarthritis of the patellofemoral joint cannot be used as an additional impairment when assessing arthritis of the knee joint itself, of which it forms a component.

**Ankle:** The ankle should be assessed in the mortice view (preferably weight-bearing), with comparison views of the other side, although this is not as necessary as with the hip and knee.

**Subtalar:** This joint is better assessed by CT (in the coronal plane) than by plain radiography. The complex nature of the joint does not lend itself to accurate and easy plain x-ray assessment of osteoarthritis.

**Talonavicular and calcaneocuboid:** Anteroposterior and lateral views are necessary. Osteophytes may assist in making the diagnosis.

**Intercuneiform and other intertarsal joints:** Joint space narrowing may be difficult to assess on plain radiography. CT (in the axial plane) may be required. Associated osteophytes and subarticular cysts are useful adjuncts to making the diagnosis of osteoarthritis in these small joints.

**Great toe metatarsophalangeal:** Anteroposterior and lateral views are required. Comparison with the other side may be necessary. Secondary signs may be useful.

**Interphalangeal:** It is difficult to assess small joints without taking secondary signs into account. In a foot with flexed toes, the plantar–dorsal view may be required to get through the joints.

- 3.29 If arthritis is used as the basis for assessing impairment, the rating cannot be combined with gait disturbance, muscle atrophy, muscle strength or range of motion assessments. It can be combined with a diagnosis-based estimate (Table 17-2, AMA5, p526).

## Amputation

- 3.30 Where there has been amputation of part of a lower extremity, Table 17-32, AMA5 (p545) applies. In that table, the references to 3 inches for below-the-knee amputation should be converted to 7.5cm.

## Diagnosis-based estimates (lower extremity)

- 3.31 Section 17.2j, AMA5 (pp545–549) lists a number of conditions that fit a category of diagnosis-based estimates (DBE). They are listed in Tables 17-33, 17-34 and 17-35, AMA5 (pp546–549). When using this table it is essential to read the footnotes carefully. The category of mild cruciate and collateral ligament laxity has inadvertently been omitted in Table 17-33. The appropriate rating is 5 (12) % WPI (lower extremity).

- 3.32 It is possible to combine impairments from Tables 17-33, 17-34 and 17-35 for diagnosis-related estimates with other components (e.g. nerve injury) using the Combined Values Chart (AMA5, pp604–606) after first referring to Table 17-2, AMA5 (p526) – Guide to the appropriate combination of evaluation methods table.

- 3.33 **Pelvic fractures:** Pelvic fractures are to be assessed as per Table 4.3 in the Spine chapter of the Guidelines (p46) and not by using the references to the pelvis in Table 17-33, AMA5 (p546).

### 3.34 Femoral osteotomy:

Good result: 25% LEI (10% WPI)

Poor result: Estimate according to examination and arthritic degeneration

This is based on the rating for proximal tibial osteotomy as described in Table 17-33 of AMA5 (p547).

- 3.35 **Patello-femoral joint replacement:** The DBE for patello-femoral joint replacement is 9% WPI (22% LEI) for isolated patella-femoral joint replacement. If other knee assessments are rateable, make sure their use is allowable by referring to Table 17-2, AMA5 (p526).

### 3.36 Total ankle replacement:

**Table 17-35: rating ankle replacement results**

The point system for rating total ankle replacement is similar to methods used for total hip and total knee replacements, with the following impairment ratings:

		(LEI)	WPI %
Good result:	85-100 points	(30)	12
Fair result:	50-84 points	(40)	16
Poor result:	<50 points	(50)	20

		Number of points
<b>a.</b>	<b>Pain</b>	
	None	50
	Slight: Stairs only	40
	Walking and stairs	30
	Moderate: Occasional	20
	Continual	10
	Severe	0
<b>b.</b>	<b>Range of motion</b>	
i. Flexion:	>20°	15
	11° - 20°	10
	5° - 10°	5
	<5°	0
ii. Extension	>10°	10
	5° - 10°	5
	<5°	0
<b>c.</b>	<b>Function</b>	
i. Limp		
	None	10
	Slight	7
	Moderate	4
	Severe	0
ii. Supportive device (constant use of)		
	None	5
	Cane	3
	One crutch	1
	Two crutches	0
iii. Distance walked		
	Unlimited	5
	600m	4
	300m	3
	Limited to indoors	2
	Confined to bed or chair	0
iv. Stairs		
	Normal	5
	Using rail	4
	One at a time	2
	Unable to climb	0
<b>Sub-total:</b>		

	Number of points
<b>Deductions (minus) d and e</b>	
<b>d. Varus</b>	
<5°	0
5° - 10°	10
>10°	15
<b>e. Valgus</b>	
<5°	0
5° - 10°	10
>10°	15
<b>Sub-total:</b>	

**Tibia-os calcis angle:** The table given below for the impairment of loss of the tibia-os calcis angle is to replace Table 17-29, AMA5 (p542) and the section in Table 17-33, AMA5 (p546) dealing with loss of tibia-os calcis angle. These two sections are contradictory and neither gives a full range of loss of angle.

**Table 3.2: Impairment for the loss of the tibia-os calcis angle**

Angle (degree)	Foot (lower extremity) [whole person] impairment (%)
110-100	17 (12) [5]
99-90	28 (20) [8]
<90	+3 (2) [1] per ° up to 54 (37) [15]

- 3.37 **Hindfoot – Intra-articular fractures:** In the interpretation of Table 17-33, AMA5 (p547), reference to the hindfoot, intra-articular fractures, the words subtalar bone, talonavicular bone and calcaneocuboid bone imply that the bone is displaced on one or both sides of the joint mentioned. To avoid the risk of double-assessment, if avascular necrosis with collapse is used as the basis of impairment assessment, it cannot be combined with the relevant intra-articular fracture in Table 17-33, column 2. In Table 17-33, column 2, metatarsal fracture with loss of weight transfer means dorsal displacement of the metatarsal head.
- 3.38 **Plantar fasciitis:** If there are persistent symptoms and clinical findings after 18 months, this is rated as 2% lower extremity impairment (1% WPI).
- 3.39 **Resurfacing procedures:** No additional impairment is to be awarded for resurfacing procedures used in the treatment of localised cartilage lesions and defects in major joints.

3.40 Table 17-34 and Table 17-35, AMA5 (pp548–549) use a different concept of evaluation. A point score system is applied, and then the total of points calculated for the hip (or knee) joint is converted to an impairment rating from Table 17-33. Tables 17-34 and 17-35 refer to the hip and knee joint replacement respectively. Note that, while all the points are added in Table 17-34, some points are deducted when Table 17-35 is used.

3.41 In respect of ‘distance walked’ under ‘b. Function’ in Table 17-34, AMA5 (p548), the distance of six blocks should be construed as 600m, and three blocks as 300m.

Note that Table 17-35, AMA5 (p549) is incorrect. The correct table is shown below.

**Table 17-35 Rating knee replacement results**

		Number of points
<b>a. Pain</b>		
	None	50
	Mild or occasional	45
	Stairs only	40
	Walking and stairs	30
Moderate:	Occasional	20
	Continual	10
	Severe	0
<b>b. Range of motion</b>		
	Add 1 point per 5° up to 125°	25 (maximum)
<b>c. Stability</b>		
	(maximum movement in any position)	
Anteroposterior	< 5 mm	10
	5-9 mm	5
	> 9 mm	0
Mediolateral	5°	15
	6-9°	10
	10-14°	5
	> 14°	0
	<b>Sub-total</b>	
	<b>Deductions (minus) d, e, f</b>	
<b>d. Flexion contracture</b>		
	5-9°	2
	10-15°	5
	16-20°	10
	> 20°	20
<b>e. Extension lag</b>		
	0°	0
	1-9°	5
	10-20°	10
	> 20°	15
<b>f. Tibio-femoral alignment*</b>		
	>15° valgus	20
	10-15° valgus	3 points per degree of difference from normal
	3-9° valgus	0 (normal)
	0-2° valgus	3 points per degree of difference from normal
	Any varus	9 points + 3 points per degree of varus above 0 to a max of 21
	<b>Deductions subtotal</b>	

\*Refer to the unaffected limb to take into account any constitutional variation.

## Skin loss (lower extremity)

3.42 Skin loss (AMA5, p550) can only be included in the calculation of impairment if it is in certain sites and meets the criteria listed in Table 17-36, AMA5 (p550).

## Peripheral nerve injuries (lower extremity)

3.43 When assessing the impairment due to peripheral nerve injury (AMA5, pp550–552), assessors should read the text in this section. Note that the separate impairments for the motor, sensory and dysaesthetic components of nerve dysfunction in Table 17-37, AMA5 (p552) are to be combined. This table is for complete motor or sensory loss, but if the loss is partial, use methods outlined in the upper extremity chapter with Tables 16-10 and 16-11, AMA5 (pp482-484).

3.44 Note the (posterior) tibial nerve is not included in Table 17-37, but its contribution can be calculated by subtracting ratings of common peroneal nerve from sciatic nerve ratings.

3.45 Peripheral nerve injury impairments can be combined with other impairments, but not those for gait derangement, muscle atrophy, muscle strength or complex regional pain syndrome, as shown in Table 17-2, AMA5 (p526). Motor and sensory impairments given in Table 17-37 are for complete loss of function and assessors must still use Table 16-10 and 16-11 in association with Table 17-37.

## Complex regional pain syndrome (lower extremity)

3.46 Section 17.2m, AMA5 (p553) – Causalgia and complex regional pain syndrome (reflex sympathetic dystrophy) should not be used. Complex regional pain syndrome (CRPS) involving the lower extremity should be evaluated in the same way as the upper limb using the method described in section 16.5e, AMA5 (pp495–497). This section provides a detailed method that is in keeping with current terminology and understanding of the condition. Use of the same methods of impairment assessment for complex regional pain syndrome involving either the upper or lower extremity also will improve the consistency of the Guidelines.

3.47 For CRPS to be present for the purposes of assessment:

- the diagnosis is to be confirmed by criteria in Table 3.3 below (each of the four boxes must be addressed)
- the diagnosis must have been present for at least one year (to ensure accuracy of the diagnosis and to permit adequate time to achieve MMI)
- the diagnosis must have been verified by more than one examining physician, and
- other possible diagnoses have been excluded.

Note: The diagnosis of CRPS should be a clinical one based on history and physical signs at the time of the evaluation. Although changes such as Sudek's atrophy may be detectable on x-ray, such changes are adjunctive evidence and not a necessary part of the diagnostic criteria for CRPS.

**Table 3.3: Diagnostic criteria for complex regional pain syndrome (CRPS) types I and II in the lower limb**

1	Continuing pain as defined in Paragraph 1, section 16.5e, AMA5 (p495)
2	<p>Must report at least one <b>symptom</b> relating to the affected part in each of the following four categories:</p> <p><b>Sensory:</b> (usually persistent)</p> <ul style="list-style-type: none"> <li>• Persistent hypoaesthesia</li> <li>• Mechanical allodynia</li> </ul> <p><b>Motor/trophic:</b> (usually persistent)</p> <ul style="list-style-type: none"> <li>• Decreased range of joint motion</li> <li>• Motor changes - weakness, wasting</li> <li>• Trophic changes - hair, nails, skin</li> </ul> <p><b>Vasomotor</b> (often intermittent):</p> <ul style="list-style-type: none"> <li>• Temperature asymmetry</li> <li>• Skin colour changes</li> <li>• Skin colour asymmetry</li> </ul> <p><b>Sudomotor</b> (often intermittent):</p> <ul style="list-style-type: none"> <li>• Oedema</li> <li>• Sweating increase or decrease</li> <li>• Sweating asymmetry</li> </ul>
3	<p><u>At the time of evaluation</u> at least one <b>physical sign</b> must be elicited in the affected part in each of the following four categories:</p> <p><b>Sensory: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Hypoaesthesia to sensory stimulus</li> <li>• Mechanical allodynia to deep somatic pressure and/or joint movement</li> </ul> <p><b>Motor/trophic: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Joint stiffness and decreased passive motion</li> <li>• Motor weakness</li> <li>• Wasting</li> <li>• Motor dysfunction – tremor, dystonia</li> <li>• Trophic changes – hair, nails, skin</li> </ul> <p><b>Vasomotor: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Temperature asymmetry</li> <li>• Asymmetric skin colour changes</li> </ul> <p><b>Sudomotor: Evidence of:</b></p> <ul style="list-style-type: none"> <li>• Oedema</li> <li>• Sweating asymmetry</li> </ul>
4	<b>There is no other diagnosis that better explains the signs and symptoms.</b>

3.48 CRPS I is to be assessed as follows:

- Apply the diagnostic criteria for CRPS I (Table 3.3).
- If the criteria in each of the sections 1, 2, 3 and 4 in Table 3-3 are satisfied, the diagnosis of CRPS I may be made.
- Follow the procedure outlined in AMA5 (p496), noting that there is no multiplier used, and that the figures you determined from Table 16-10a represent LEI %.

### Complex regional pain syndrome (CRPS II) - causalgia

3.49 For CRPS II, the mechanism is an injury to a specific nerve. The methodology in AMA5 (pp496-497) is to be followed:

- If the criteria in each of the sections 1, 2, 3 and 4 in Table 3.3 of the Guidelines are satisfied and there is objective evidence of an injury to a specific nerve, the diagnosis of CRPS II may be made.
- Follow the evaluation process outlined in AMA5 on page 496-97.

### Peripheral vascular disease (lower extremity)

3.50 Lower extremity impairment due to vascular disorders (AMA5, pp553–554) is evaluated using Table 17-38, AMA5 (p554). Note that Table 17-38 gives values for lower extremity impairment, ***not whole person impairment***. In that table there is a range of lower extremity impairments within each of the classes 1 to 5. As there is a clinical description of which conditions place a person's lower extremity in a particular class, the assessor has a choice of impairment rating within a class, the value of which is left to the clinical judgement of the assessor and must be explained in the report.

**Table 3.4: Lower extremity worksheet**

Item	Impairment	Table	AMA5 Page; Guidelines ref.	Potential impairment(s)	Selected impairment(s)
1	Limb length discrepancy	17-4, AMA5	528; 3.9-3.10 Guidelines		
2	Gait derangement	17-5, AMA5	529; 3.11-3.13 Guidelines		
3	Unilateral muscle atrophy	17-6, AMA5	530; 3.14-3.15 Guidelines		
4	Muscle weakness	17-8, AMA5	532		
5	Range of motion	17-9 to 17-14, AMA5	537		
6	Joint ankylosis	17-15 to 17-30, AMA5	538-543		
7	Arthritis	17-31, AMA5	544		
8	Amputation	17-32, AMA5	545		
9	Diagnosis-based estimates	17-33 to 17-35, AMA5 3.2, Tibia-os calcis angle, Guidelines (p33), TKR (p32)	546-549; Tibia-os calcis angle 3.36; Rating TKR use, 3.40 Guidelines		
10	Skin loss	17-36, AMA5	550		
11	Peripheral nerve deficit	17-37, AMA5	550-552		
12	Complex regional pain syndrome	3.3 Guidelines (p36)	3.45-3.48 Guidelines		
13	Vascular disorders	17-38, AMA5	554		
<b>Combined impairment rating</b> (refer to Table 17-2, AMA5, p526 for permissible combinations)					

Potential impairment is the impairment percentage for that method of assessment. Selected impairment is the impairment or impairments selected that can be legitimately combined with other lower extremity impairments to give a final lower extremity impairment rating.

# 4 SPINE

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## 4 SPINE

Chapter 15, AMA5 (p373) applies to the assessment of permanent impairment of the spine, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following:**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

### Introduction

- 4.1 The spine is discussed in Chapter 15, AMA5 (pp373–431). That chapter presents two methods of assessment, the diagnosis-related estimates method and the range of motion method. Evaluation of impairment of the spine is only to be done using **diagnosis-related estimates (DREs)** (AMA5 sections 15.3-15.6, pp381-395). This chapter also includes evaluation of impairment related to spinal cord or cauda equina damage under section 15.7, AMA5 (p395). AMA5 refers to pelvic injuries under section 15.14, AMA5 (pp427-428). Traumatic pelvic injuries and fractures are to be assessed under Table 4.3 of the Guidelines (p46) and not AMA5.
- 4.2 The DRE method relies especially on evidence of neurological deficits and less common adverse structural changes such as fractures and dislocations. Using this method, DREs are differentiated according to clinical findings that can be verified by standard medical procedures.

### Assessment of the spine

- 4.3 The assessment should include:
- a comprehensive, accurate history
  - a review of all pertinent records available at the assessment
  - a comprehensive description of the individual's current symptoms and their relationship to daily activities
  - a careful and thorough physical examination, and
  - all findings of relevant laboratory, imaging, diagnostic and ancillary tests available at the assessment.

Imaging findings that are used to support the impairment rating should be concordant with symptoms and findings on examination. The assessor should record whether diagnostic tests and radiographs were seen or whether they relied solely on reports. All assessors should be familiar with section 15.1a, AMA5 (pp374–377), which is a valuable summary of history and physical examination.

- 4.4 Box 15-1, AMA5 (pp382-383) provides definitions of clinical findings used to place an individual in a DRE category. The Guidelines provide further clarification of DREII and radiculopathy.
- 4.5 The DRE model for assessment of spinal impairment must be used.
- 4.6 The Range of Motion method (sections 15.8–15.13 inclusive, AMA5, pp398–427) must not be used.
- 4.7 Common developmental findings such as spondylolysis, spondylolisthesis and disc protrusions without radiculopathy occur in 7%, 3%, and up to 30% respectively in individuals up to the age of 40 (AMA5, p383). Their presence does not in itself mean that the individual has an impairment due to injury.
- 4.8 The cauda equina syndrome is defined in chapter 15, Box 15.1, AMA5 (p383) as “manifested by bowel or bladder dysfunction, saddle anaesthesia and variable loss of motor and sensory function in the lower extremities.” For a cauda equina syndrome to be present, there must be bilateral neurological signs in the lower limbs and sacral region. Additionally, there must be a radiological study which demonstrates a lesion in the spinal canal causing a mass effect on the cauda equina with compression of multiple nerve roots. The mass effect would be expected to be large and significant. A lumbar MRI scan is the diagnostic investigation of choice for this condition.  
  
If a person has spinal cord or cauda equina damage, including bowel, bladder and/or sexual dysfunction, he or she is assessed according to the method described in section 15.7 and Table 15.6 (a) to (g), AMA5 (pp395–397). For an assessment of neurological impairment of bowel or bladder, there must be objective evidence of spinal cord or cauda equina injury.  
  
A cauda equina syndrome may occasionally complicate lumbar spine surgery when a mass lesion will not be present in the spinal canal on radiological investigation.
- 4.9 All spinal impairments are only to be expressed as a percentage of WPI.
- 4.10 The assessor must include in the report a description of how the impairment rating was calculated, with reference to the relevant tables and/or figures used.
- 4.11 The optimal method to measure the percentage compression of a vertebral body is a well-centred plain x-ray. Assessors must state the method they have used. The loss of vertebral height should be measured at the most compressed part and must be documented in the impairment evaluation report. The estimated normal height of the compressed vertebra should be determined where possible by averaging the heights of the two adjacent (unaffected and normal) vertebrae. The assessment of a vertebral fracture is to be based upon a report of trauma resulting in an acquired injury, and not on developmental or degenerative changes. Justification must be provided in the report.

## Specific interpretation of AMA5

- 4.12 Motion segment integrity alteration can be either increased translational or angular motion, or decreased motion resulting from developmental changes, fusion, fracture healing, healed infection or surgical arthrodesis. Motion of the individual spine segments cannot be determined by a physical examination, but is evaluated with flexion and extension radiography.
- 4.13 The assessment of altered motion segment integrity is to be based upon a report of trauma resulting in an injury, and not on developmental or degenerative changes.
- 4.14 When routine imaging is normal and severe trauma is absent, motion segment disturbance is rare. Thus, flexion and extension imaging is indicated only when a history of trauma or other imaging leads the physician to suspect alteration of motion segment integrity.

## DRE definitions of clinical findings

- 4.15 DRE II is a clinical diagnosis based upon the features of the history of the injury and clinical features. Clinical features which are consistent with DRE II and which are present at the time of assessment include muscle guarding or spasm, asymmetric loss of range of movement or non-verifiable radicular complaints. Localised (not generalised) tenderness may be present. In the lumbar spine additional features include a reversal of the lumbosacral rhythm when straightening from the flexed position and compensatory movement for an immobile spine such as all flexion occurring from the hips. In assigning category DRE II, the assessor must provide detailed reasons why the category was chosen.

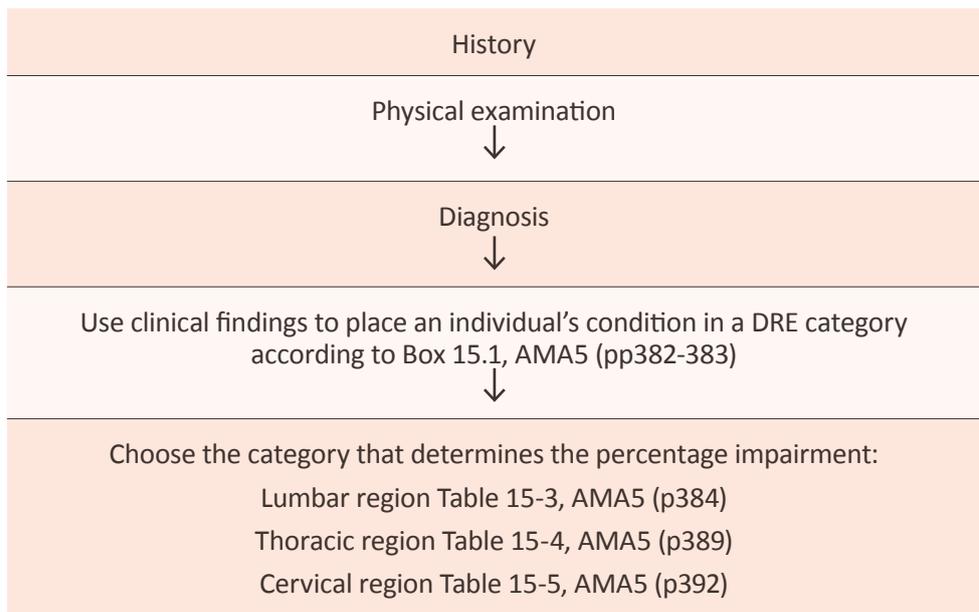
While imaging and other studies may assist assessors in making a diagnosis, the presence of a morphological variation from 'normal' in an imaging study does not make the diagnosis. Approximately 30% of people who have never had back pain will have an imaging study that can be interpreted as 'positive' for a herniated disc, and 50% or more will have bulging discs. The prevalence of degenerative changes, bulges and herniations increases with advancing age. To be of diagnostic value, imaging findings must be concordant with clinical symptoms and signs. In other words, an imaging test is useful to confirm a diagnosis, but an imaging result alone is insufficient to qualify for a DRE category.

- 4.16 The clinical findings used to place an individual in a DRE category are described in Box 15-1, AMA5 (pp382–383). The reference to 'electrodiagnostic verification of radiculopathy' should be disregarded.

## Applying the DRE method

- 4.17 Table 4.1 is a simplified version of section 15.3, AMA5 (p381) indicating the steps that should be followed to evaluate impairment of the spine.

**Table 4.1 Procedures in evaluating impairment of the spine by the DRE method**



4.18 **Loss of sexual function** must only be assessed where there is other objective evidence of spinal cord, cauda equina or bilateral nerve root dysfunction. The ratings are described in Table 15-6, AMA5 (pp396–397). Loss of sexual function is not assessed as an activity of daily living.

4.19 **Radiculopathy** is the impairment caused by malfunction of a spinal nerve root or nerve roots. In general, in order to conclude that radiculopathy is present, two or more of the following criteria must be present, one of which must be major (major criteria in bold):

- **Loss or asymmetry of tendon reflexes anatomically related to injury.**
- **Muscle weakness that is anatomically localised to the appropriate spinal nerve root distribution.**
- **Reproducible impairment of sensation that is anatomically localised to the appropriate spinal nerve root distribution.**
- Positive nerve root tension (Box 15-1, AMA5, p382).
- Muscle wasting – atrophy (Box 15-1, AMA5, p382). Atrophy, for the purposes of assessing radiculopathy, is measured differently from the lower extremity method.
- Findings on an imaging study consistent with the clinical signs (Box 15-1, AMA5, p382).

4.20 Note that radicular complaints of pain or sensory features that follow anatomical pathways but cannot be verified by neurological findings (somatic pain, non-verifiable radicular pain) do not alone constitute radiculopathy.

4.21 Global weakness of a limb related to pain or inhibition or other factors does not constitute weakness due to spinal nerve malfunction.

4.22 **Vertebral body fractures** and/or dislocations at more than one vertebral level are to be assessed as follows:

- Measure the percentage loss of vertebral height at the most compressed part for each vertebra
- Add the percentage loss at each level:
  - Total loss of more than 50% = DRE IV
  - Total loss of 25% to 50% = DRE III
  - Total loss of less than 25% = DRE II
- If radiculopathy is present then the person is assigned one DRE category higher.

One or more end plate fractures in a single spinal region without measurable compression of the vertebral body are assessed as DRE category II.

Posterior element (i.e. lamina, pars and pedicle) fractures at a single level are assessed as DRE II and at multiple levels are assessed as DRE III.

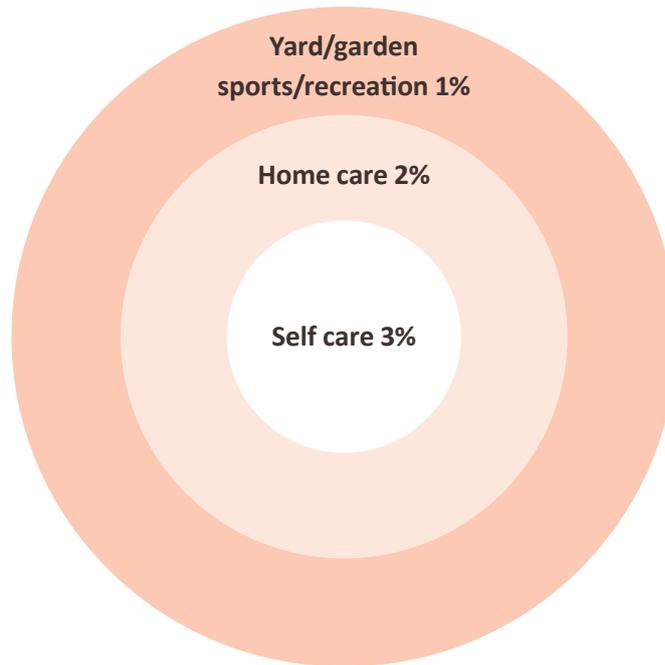
Displaced fractures of transverse or spinous processes at one or more levels are assessed as DRE Category II because the fracture does not disrupt the spinal canal (AMA5, p385) and does not cause multilevel structural compromise.

4.23 Within a spinal region (cervical, thoracic or lumbar), separate spinal impairments are not combined. The highest DRE category is chosen. Impairments in different spinal regions are combined using the combination tables:

- If there are adjacent vertebral fractures at the transition zones (C7/T1, T12/L1), the methodology in 4.22 is to be adopted. For fractures of C7 and T1, use the WPI ratings for the cervical spine (Chapter 15, Table 15.5, AMA5, p392). For fractures of T12 and L1 use the WPI rating for the thoracic spine (Chapter 15, Table 15.4, p389, AMA5).
- Disc lesions at the transition zones C7/T1 are rated in the cervical spine.  
Disc lesions at the transition zones T12/L1 are rated in the thoracic spine.  
Disc lesions at the transition zones L5/S1 are rated in the lumbar spine.

4.24 **Impact of Activities of Daily Living (ADL).** Tables 15-3, 15-4 and 15-5, AMA5 give an impairment range for DREs II-V. Within the range 0, 1, 2 or 3% WPI may be assessed using 4.25, 4.26 and 4.27 below. Hence, for example, for an injury which is rated DRE Category II, the impairment is 5%, to which may be added an amount of up to 3% for the effect of the injury on the worker's ADL. The determination of the impact on ADL is not solely dependent on self-reporting, but is an assessment based on all clinical findings and other reports.

4.25 The following diagram should be used **as a guide** to determine whether 0, 1, 2, or 3% WPI should be added to the bottom of the appropriate impairment range. This is only to be added if there is a difference in activity level as recorded and compared to the worker's status prior to the injury.



4.26 The diagram is to be interpreted as follows:

Increase base impairment by:

- 3% WPI if worker's capacity to undertake personal care activities such as dressing, washing, toileting and shaving has been affected
- 2% WPI if the worker can manage personal care, but is restricted with usual household tasks such as cooking, vacuuming, making beds or tasks of equal magnitude such as shopping, climbing stairs or walking reasonable distances
- 1% WPI for those able to cope with the above, but unable to get back to previous sporting or recreational activities such as gardening, running and active hobbies.

4.27 Impact on ADL can increase the base impairment caused by spinal injury by a maximum of 3% WPI. For a single injury, where there has been more than one spinal region injured, the effect of the injury on ADL is assessed once only.

For injuries to one spinal region on different dates, the effect of the injury on ADL is assessed for the first injury. If, following the second injury, there is a worsening in ADL, the appropriate adjustments are made within the range. For example, if 1% WPI for ADL is assessed following the first injury and 3% after the second injury, then 2% WPI is assessed for the ADL for the second injury.

For injuries to different spinal regions on different dates where there is a worsening of ADL after the second injury, additional impairment may be assessed. For example, if, for an injury to the cervical spine, 1% for ADL was assessed, and, following a subsequent injury to the lumbar spine, 3% WPI was assessed, then 2% WPI is assessed for the lumbar injury.

## Effect of spinal surgery

4.28 Tables 15-3, 15-4 and 15-5, AMA5 (pp384, 389 and 392), do not adequately account for the effect of surgery upon the impairment rating for certain disorders of the spine.

- Surgical decompression for spinal stenosis is DRE III.
- Operations resulting in the resolution of the radiculopathy are considered under the DRE category III (AMA5, Tables 15-3, 15-4, 15-5).
- Operations with surgical arthrodesis (fusion) are considered under DRE categories IV (AMA5, Tables 15-3, 15-4, 15-5).
- Radiculopathy present after spinal surgery is not adequately accounted for in category III of each of those tables and therefore Table 4.2 was developed to rectify this anomaly.

Table 4.2 indicates the additional ratings which should be combined with the rating determined under DRE III, using the DRE method where an operation has been performed and where there is a residual radiculopathy.

Example 15-4, AMA5 (p386) should therefore be ignored.

4.29 In summary, to calculate WPI for radiculopathy (as per definition) present following spinal surgery:

- select the appropriate DRE category from Table 15-3, 15-4 or 15-5
- determine the WPI value within the allowed range in Table 15-3, 15-4 or 15-5 according to the impact on the worker's activities of daily living
- if DRE category III or IV select the modifiers from Table 4.2 below. If there are multiple applicable modifiers within Table 4.2, these are added together
- combine this value from Table 4.2 with the selected value from the appropriate DRE category to determine the final WPI.

Category V already takes into account residual neurological loss, whether cortico-spinal or radicular, so no modifier is necessary. Cortico-spinal damage is dealt with under section 15.7, AMA5 (pp395-398).

**Table 4.2: Modifiers for DRE III and IV where radiculopathy persists after surgery**

Procedures	Cervical	Thoracic	Lumbar
Spinal surgery with residual radicular signs and symptoms	3% WPI	2% WPI	3% WPI
Second and further levels operated on	1% WPI each additional level	1% WPI each additional level	1% WPI each additional level
A second operation at the same level	2% WPI	2% WPI	2% WPI
Third and subsequent operations	1% WPI each	1% WPI each	1% WPI each

4.30 **Disc replacement surgery:** The impairment resulting from this procedure is to be equated to that from a spinal fusion.

4.31 **Posterior spacing or stabilisation devices:** The insertion of such devices does not warrant any addition to WPI.

4.32 **Spinal cord stimulator or similar device:** The insertion of such devices does not warrant any addition to WPI.

4.33 Impairment due to **pelvic fractures** should be evaluated with reference to the following table which replaces Table 15-19, AMA5 (p428).

**Table 4.3: Pelvic fractures**

Disorder	% WPI
1. Non-displaced, healed fractures	0
2. Fractures of the pelvic bones (including sacrum)	
• maximum residual displacement <1cm	2
• maximum residual displacement 1 to 2 cm	5
• maximum residual displacement >2cm	8
• bilateral pubic rami fractures, as determined by the most displaced fragment	
◦ maximum residual displacement ≤2cm	5
◦ maximum residual displacement >2cm	8
3. Traumatic separation of the pubic symphysis	
• <1cm	5
• 1 to 2 cm	8
• >2cm	12
• Internal fixation/ankylosis	5
4. Sacro-iliac joint dislocations or fracture dislocations	
• maximum residual displacement ≤1cm	8
• maximum residual displacement >1cm	12
• Internal fixation/ankylosis	5
5. If two out of three joints are internally fixed/ankylosed	8
If all three joints are internally fixed/ankylosed	10
6. Fractures of the coccyx	
• healed, (and truly) displaced fracture	1
• excision of the coccyx	5
7. Fractures of the acetabulum	
Evaluate based on restricted range of hip motion	

The rating of WPI is evaluated based on radiological appearance at maximum medical improvement, whether or not surgery has been performed. Multiple injuries of the pelvis should be assessed separately and combined. The maximum WPI for pelvic fractures is 20%.

4.34 **Arthritis:** See sections 3.24–3.29 of chapter 3 of the Guidelines.

# 5 NERVOUS SYSTEM

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# 5 NERVOUS SYSTEM

Chapter 13, AMA5 (p305) applies to the assessment of permanent impairment of the central and peripheral nervous system, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

- 5.1 Chapter 13, AMA5 (pp305–356) on the central and peripheral nervous system provides guidelines on methods of assessing whole person impairment involving the central nervous system. It is logically structured and consistent with the usual sequence of examination of the nervous system. Cerebral functions are discussed first, followed by the cranial nerves, station, gait and movement disorders, the upper extremities related to central impairment, the brain stem, the spinal cord and the peripheral nervous system, including neuromuscular junction and muscular system. A summary concludes the chapter.
- 5.2 If a person has spinal injury with spinal cord or cauda equina, bilateral nerve root or lumbosacral plexus injury causing bowel, bladder and/or sexual dysfunction, they are assessed according to the method described in section 15.7 and Table 15.6 (a) to (g), AMA5 (p395–398). An assessor must be accredited for the Spine to rate spinal injury using the DRE categories (refer chapter 4 of the Guidelines).
- 5.3 Section 15.7 of AMA5 deals with rating corticospinal tract damage. Table 15.6 in chapter 15, AMA5 (pp396-397) is to be used for evaluation of spinal cord injuries. The impairments, once selected, are then combined with the corresponding additional spinal impairment from DRE Categories II-V for cervical and lumbar impairment and Categories II-IV for thoracic impairment to obtain an exact total value. The assessor must be accredited in both the central and peripheral nervous system and the spine to undertake this assessment.
- 5.4 The relevant parts of the upper extremity, lower extremity and spine sections of chapter 13, AMA5 must be used to evaluate impairments of the peripheral nervous system.

## The approach to assessment of permanent neurological impairment

5.5 Chapter 13, AMA5 disallows combination of cerebral impairments. However, for the purpose of the Guidelines, cerebral impairments should be evaluated and combined as follows:

- consciousness and awareness
- mental status, cognition and highest integrative function
- aphasia and communication disorders, and
- emotional and behavioural impairments relating to a verifiable neurological impairment.

The assessor should take care to be as specific as possible and not to double-rate the same impairment, particularly in the mental status and behavioural categories.

These impairments are to be combined using the Combined Values Chart, AMA5 (pp604–606). The resultant impairment should then be combined with any or multiple distinct neurological impairments listed in Table 13-1, AMA5 (p308).

5.6 AMA5 sections 13.5 and 13.6 (pp 336-340) should be used for cerebral, basal ganglia, cerebellar or brain stem impairments. This section covers hemiplegia, monoplegia (arm or leg) and upper or lower limb impairment arising from incoordination or movement disorder due to brain injury.

5.7 Complex regional pain syndromes are to be assessed using the methods indicated in the upper and lower extremities chapters of the Guidelines. The assessor must be accredited for the relevant system (upper or lower extremity) to undertake assessment for complex regional pain syndrome.

5.8 Chapter 13, AMA5 on the nervous system lists many impairments where the range for the associated WPI is 0–9% or 0–14%. Where there is a range of impairment percentages listed, the assessor should nominate an impairment percentage within the range based on the complete clinical circumstances revealed during the consultation and in relation to all other available information and provide rationale for this decision in the report.

## Specific interpretation of AMA5

5.9 In assessing disturbances in the level of consciousness and/or awareness, arousal and sleep disorders, mental status, cognition and highest integrative functioning, communication impairments (dysphasia and aphasia) and emotional or behavioural impairments (sections 13.3a, 13.3c, 13.3d, 13.3e, 13.3f, AMA5 pp309-311, 317-327), the assessor should make ratings based on clinical assessment and the results of neuropsychological testing where available.

Neuropsychological testing should be conducted by a registered psychologist who specialises in clinical neuropsychology. Neuropsychological tests are to be considered in the context of the overall clinical history, examination and radiological findings, not in isolation.

5.10 For traumatic brain injury, there should be evidence of a severe impact to the head or that the injury involved a high energy impact.

In order to consider the impairment assessment of traumatic brain injury, at least one of the following must be confirmed:

- clinically documented abnormalities in initial post injury Glasgow Coma Scale score of nine or below
- significant duration of post traumatic amnesia, greater than 12 hours, or
- significant intracranial pathology on CT scan or MRI.

5.11 Assessment of **arousal and sleep disorders** (section 13.3c, AMA5, pp317–319) refers to assessment of sleep disorders due to neurological injury. The assessor should make ratings of arousal and sleep disorders based on the clinical assessment that would normally have been done for clinically significant disorders of this type (i.e. sleep studies or similar tests).

5.12 **Olfaction and taste:** The assessor should use Chapter 11, section 11.4c, AMA5 (p262) and Table 11-10 (pp272–275) to assess olfaction and taste, for which a maximum of 5% WPI is allowable for total loss of each sense. The effect of the loss on activities of daily living should be considered in allocating the degree of impairment within the range and detailed in the report. The assessor should also consider the information provided in Table 6.3 of the ear, nose and throat chapter of the Guidelines, which is a partial reproduction of Table 11-10.

5.13 **Visual impairment** assessment using Chapter 10 of the Guidelines:  
An ophthalmologist must assess all impairments of visual acuity, visual fields, extra-ocular movements or diplopia.

5.14 **Trigeminal nerve** assessment using AMA5 (p331): Sensory impairments of the trigeminal nerve should be assessed with reference to Table 13-11, AMA5 (p331). The words 'sensory loss or dysaesthesia' should be added to the table after the words 'neuralgic pain' in each instance. Impairment percentages for the three divisions of the trigeminal nerve should be apportioned with extra weighting for the first division (e.g. V<sup>I</sup> 40%, V<sup>II</sup> 30%, V<sup>III</sup> 30% applied against Table 13-11). If present, motor loss for the trigeminal nerve should be assessed in terms of its impact on mastication and deglutition (AMA5, p262).

For bilateral injury to the trigeminal nerves, assess each side separately and combine the assessed whole person impairments.

5.15 **Spinal accessory nerve:** AMA5 provides insufficient reference to the spinal accessory nerve (cranial nerve XI). This nerve supplies the sternomastoid and partial motor supply to trapezius. For loss of use of the spinal accessory nerve, the assessor can rate up to a maximum of 8% WPI. This can be combined with any effects on swallowing and speech.

5.16 **Impairment of sexual function** caused by severe traumatic brain injury is to be assessed by using Table 13.21, AMA5 (p342). For spinal cord or cauda equina, bilateral nerve root or lumbosacral plexus injury causing bowel, bladder and/or sexual dysfunction, sexual impairment should only be assessed using Table 15.6(f), AMA5 (p397) provided there is appropriate objective evidence of neurological damage (e.g. spinal cord, cauda equina or bilateral nerve root dysfunction).

5.17 Impairment due to **miscellaneous peripheral nerve injury** should be evaluated with reference to Table 5.1 below.

**Table 5.1 Criteria for rating miscellaneous peripheral nerve injury not specifically covered in AMA5**

Peripheral nerve	Whole person impairment rating			
	0%	1%	2% – 3%	4% – 5%
	No neurogenic pain No sensory loss	Sensory loss only in an anatomic distribution	Mild to moderate neurogenic pain in an anatomic distribution	Severe neurogenic pain in an anatomic distribution
Greater occipital nerve				
Lesser occipital nerve				
Greater auricular nerve				
Intercostal nerve				
Genitofemoral				
Ilioinguinal				
Iliohypogastric				
Pudendal				

# 6 EAR, NOSE, THROAT AND RELATED STRUCTURES

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# 6 EAR, NOSE, THROAT AND RELATED STRUCTURES

Chapter 11, AMA5 (p245) applies to the assessment of permanent impairment of the ear (with the exception of hearing impairment), nose, throat and related structures, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following:**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

- 6.1 Chapter 11, AMA5 (pp245–275) details the assessment of the ear, nose, throat and related structures. **With the exception of hearing impairment, which is dealt with in Chapter 9 of the Guidelines**, Chapter 11, AMA5 should be followed in assessing whole person impairment, with the variations included below.
- 6.2 The degree of impairment arising from conditions that are not caused by a work injury must be assessed and considered when determining the degree of whole person impairment. The degree to which pre-existing conditions and lifestyle activities such as smoking contribute to the degree of permanent impairment requires judgment on the part of the clinician undertaking the impairment assessment. Any deductions for these conditions need to be recorded and reasoning provided in the assessor's report.

## The ear

- 6.3 Hearing is assessed under Chapter 9 in the Guidelines.
- 6.4 Before undertaking a hearing assessment, consider the information in Table 11-10, AMA5 (pp272–275) under Hearing Impairment, noting that only the last column is not relevant.

## The face

- 6.5 AMA5 (pp255–259) relates to the face. Table 11-5, AMA5 (p256) should be replaced with Table 6.1 when assessing whole person impairment due to facial disorders and/or disfigurement.

**Table 6.1: Criteria for rating permanent impairment due to facial disorders and/or disfigurement**

<b>Class 1</b> <b>0%–5%</b> <b>impairment of the whole person</b>	<b>Class 2</b> <b>6%–10%</b> <b>impairment of the whole person</b>	<b>Class 3</b> <b>11%–15%</b> <b>impairment of the whole person</b>	<b>Class 4</b> <b>16%–50%</b> <b>impairment of the whole person</b>
Facial abnormality limited to disorder of cutaneous structures, such as visible simple scars (not hypertrophic or atrophic) or abnormal pigmentation or mild, unilateral, facial paralysis affecting most branches or nasal distortion that affects physical appearance or partial loss or deformity of the outer ear	Facial abnormality involves loss of supporting structure of part of face, with or without cutaneous disorder (e.g. depressed cheek, nasal, or frontal bones) or near complete loss of definition of the outer ear or hypertrophic or atrophic scar	Facial abnormality involves absence of normal anatomic part or area of face, such as loss of eye or loss of part of nose, with resulting cosmetic deformity, combine with any functional loss, e.g. vision (Chapter 12, AMA5) or severe unilateral facial paralysis affecting most branches or mild, bilateral, facial paralysis affecting most branches	Massive or total distortion of normal facial anatomy with disfigurement so severe that it precludes social acceptance, or severe, bilateral, facial paralysis affecting most branches or loss of a major portion of or entire nose

Note: Tables used to classify the examples in section 11.3, AMA5 (pp256–259) should also be ignored and assessors should refer to the modified table above for classification.

- 6.6 Visual impairment related to eye disorders causing disfigurement, such as enophthalmos, must be assessed by an ophthalmologist.

## **The nose, throat and related structures**

### Respiration (section 11.4a, AMA5, pp259–261)

- 6.7 With regard to sleep apnoea (3rd paragraph, section 11.4a, AMA5, p259), a sleep study and an examination by an ear, nose and throat specialist is mandatory before assessment by an approved assessor.
- 6.8 The assessment of sleep apnoea is addressed in section 5.6, AMA5 (p105) and assessors should refer to this chapter, as well as sections 8.10–8.12 in the Guidelines.
- 6.9 Table 11-6, AMA5 (p260), Criteria for rating impairment due to air passage defects: this table should be replaced with Table 6.2, below, when assessing whole person impairment due to air passage defects.

**Table 6.2: Criteria for rating permanent impairment due to air passage defects**

Percentage impairment of the whole person					
Class 1a	Class 1	Class 2	Class 3	Class 4	Class 5
0%–5%	0%–10%	11%–29%	30%–49%	50%–89%	90%+
There are symptoms of significant difficulty in breathing through the nose. Examination reveals significant partial obstruction of the right and/or left nasal cavity or nasopharynx or significant septal perforation	Dyspnoea does not occur at rest and dyspnoea is not produced by walking freely on a level surface, climbing stairs freely, or performance of other usual activities of daily living and dyspnoea is not produced by stress, prolonged exertion, hurrying, hill-climbing, or recreational or similar activities requiring intensive effort* and examination reveals partial obstruction of the oropharynx, laryngopharynx, larynx, upper trachea (to the fourth cartilaginous ring), lower trachea, bronchi, or complete (bilateral) obstruction of the nose or nasopharynx	Dyspnoea does not occur at rest and dyspnoea is not produced by walking freely on a level surface, climbing one flight of stairs, or performance of other usual activities of daily living <b>but</b> dyspnoea is produced by stress, prolonged exertion, hurrying, hillclimbing, or recreational or similar activities (except sedentary forms) and examination reveals partial obstruction of the oropharynx, laryngopharynx, larynx, upper trachea (to the fourth cartilaginous ring), lower trachea, bronchi, or complete (bilateral) obstruction of the nose or nasopharynx	Dyspnoea does not occur at rest <b>but</b> dyspnoea is produced by walking freely more than one or two level blocks, climbing one flight of stairs even with periods of rest, or performance of other usual activities of daily living and dyspnoea is produced by stress, prolonged exertion, hurrying, hillclimbing, or recreational or similar activities and examination reveals partial obstruction of the oropharynx, laryngopharynx, larynx, upper trachea (to the fourth cartilaginous ring), lower trachea or bronchi	Dyspnoea occurs at rest, although individual is not necessarily bedridden and dyspnoea is aggravated by the performance of any of the usual activities of daily living (beyond personal cleansing, dressing or grooming) and examination reveals partial obstruction of the oropharynx, laryngopharynx, larynx, upper trachea (to the fourth cartilaginous ring), lower trachea, and/or bronchi	Severe dyspnoea occurs at rest and spontaneous respiration is inadequate and respiratory ventilation is required and examination reveals partial obstruction of the oropharynx, laryngopharynx, larynx, upper trachea (to the fourth cartilaginous ring), lower trachea or bronchi

\*Prophylactic restriction of activity, such as strenuous competitive sport, does not exclude subject from class 1.

Note: Individuals with successful permanent tracheostomy or stoma should be rated at 25% impairment of the whole person. Example 11-16, AMA5 (p261): Partial obstruction of the larynx affecting only one vocal cord is better linked to voice (section 11.4e, AMA5).

6.10 When using Table 11-7, AMA5 (p262) on the relationship of dietary restrictions to permanent impairment, consider percentage impairment of the whole person – first category to be 0–19%, not 5–19%.

## Speech (AMA5, pp262–264)

- 6.11 With regard to the first sentence of the ‘Examining procedure’ subsection (pp263–264), the examiner should have sufficient hearing for the purpose – disregard “normal hearing as defined in the earlier section of this chapter on hearing”.
- 6.12 Examining procedure (pp263–264), second paragraph: “The examiner should base judgments of impairment on two kinds of evidence: (1) attention to and observation of the individual’s speech in the office (e.g. during conversation, during the interview, and while reading and counting aloud) and (2) reports pertaining to the individual’s performance in everyday living situations”. Disregard the next sentence: “The reports or the evidence should be supplied by reliable observers who know the person well.”
- 6.13 Examining procedure (pp263–264): where the word ‘American’ appears as a reference, substitute ‘Australian’, and change measurements to the metric system (e.g. 8.5 inch = 21.6cm).

## The voice (section 11.4e, AMA5, pp264–267)

- 6.14 Substitute the word ‘laryngopharyngeal’ for ‘gastroesophageal’ in all examples where it appears.
- 6.15 Example 11.25 (Impairment Rating, p269), second sentence: add the underlined phrase “Combine with appropriate ratings due to other impairments including respiratory impairment to determine whole person impairment.”

## Ear, nose, throat and related structures impairment evaluation summary

- 6.16 Table 11-10, AMA5 (pp272–275): Do not use this table, except for impairment of olfaction and/or taste, and hearing impairment as determined in the Guidelines.

## Olfaction and taste

- 6.17 Before undertaking impairment of olfaction and/or taste, consider the information in Table 11-10, AMA5 (pp274) under Impairment of Olfaction and/or Taste or refer partial Table 6.3 below.

**Table 6.3 Impairment evaluation summary for ear, nose and throat and olfaction and taste**

Disorder	History, including selected relevant symptoms	Examination record	Assessment of physical function	Physical findings	Diagnosis	Degree of impairment
General	Ear, nose and throat symptoms (e.g. hearing loss, dizziness or vertigo) and general symptoms; impact of symptoms on function and ability to do daily activities; prognosis if change anticipated; review medical history and any resulting limitation of physical function	Comprehensive physical examination; detailed relevant system assessment	Data derived from relevant studies (e.g. audiometry)	Assessment of sequelae including end-organ damage and impairment	Record all pertinent diagnoses; note if they are at maximum medical improvement; if not, discuss under what conditions and when stability is expected	Criteria outlined in chapter 11 AMA5
Hearing Impairment	Comprehensive history including family history, developmental history of trauma, noise and drug exposure; surgical procedures; symptoms of imbalance (e.g. unsteadiness or vertigo); ear-popping; history of tinnitus; age; associated metabolic and/or endocrine disorders	General physical examination; ear, nose and throat examination; findings from pneumotoscopy, tuning-fork tests, hearing tests, balance function tests and radiographic tests; metabolic evaluation	Otologic examination on tuning-fork tests; tympanometry; behavioural, audiometry and auditory brain (evoked) response tests; electrocochleography tests; electroystagmography; metabolic and endocrine studies as necessary	Assess relevant organs; external ear and middle ear functions; Eustachian tube function; status of hearing by audiometry; status of electrophysiologic tests as applicable	Conductive, sensorineural, mixed and functional hearing loss; tinnitus; Meniere's disease	<i>Assessed as per the Hearing chapter of the Guidelines</i>
Impairment of Olfaction and Taste	Ear, nose and throat infections; head trauma; structural or foreign body nasal obstruction; nasal allergy; infections of nose and sinuses; history of head and neck tumours, drug use	Tests for odour identification; tests for taste identification; results of x-rays and head and neck; results of MRI and CT studies of head and neck; allergy tests	Subjective tests for odour identification; subjective tests for taste identification; electrical taste tests; x-rays of head and neck; MRI and CT studies of head; cranial nerve function tests; test for nasal allergens	Nasal obstruction due to mucosal oedema, nasal polyps, septal or turbinate occlusion of airway or nasal tumour; physical findings may be normal except for presenting symptom; surgery sequel	Nasal septal deviation; nasal airway occlusion by turbinate bone; allergic rhinitis; nasal polyps; sinusitis; foreign body in nose; traumatic anosmia; drug toxicity; dermoid exophaloele; meningocoele; intracranial or other tumour	See Olfaction and taste (section 1.1.4c AMA5)

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# 7 URINARY AND REPRODUCTIVE SYSTEMS

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# 7 URINARY AND REPRODUCTIVE SYSTEMS

Chapter 7, AMA5 (p143) applies to the assessment of permanent impairment of the urinary and reproductive systems, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

- 7.1 Chapter 7, AMA5 (pp143–171) provides clear details for assessment of the urinary and reproductive systems. Overall the chapter should be followed in assessing whole person impairment, with the variations included below.
- 7.2 Neurogenic bladder and cauda equina syndrome are assessed as indicated in the Spine chapter of the Guidelines, paragraph 4.8 (p40).
- 7.3 The assessor needs to be quite clear as to the cause of the urological dysfunction. If due to primary dysfunction of the urinary system, this chapter applies, but if due to a spinal cord injury, the Spine chapter would apply, or if due to a neurological disorder, the Neurological chapter would apply.
- 7.4 For both male and female sexual dysfunction, identifiable pathology should be present for an impairment percentage to be given.

## Urinary diversion

- 7.5 Table 7-2, AMA5 (p150) should be replaced with Table 7.1, below, when assessing whole person impairment due to urinary diversion disorders. This table includes ratings for neobladder and continent urinary diversion.
- 7.6 **Continent urinary diversion** is defined as a continent urinary reservoir constructed of small or large bowel with a narrow catheterisable cutaneous stoma through which it must be emptied several times a day.

**Table 7.1: Criteria for rating permanent impairment due to urinary diversion disorders**

Diversion type	% Impairment of the whole person
Ureterointestinal	10%
Cutaneous ureterostomy	10%
Nephrostomy	15%
Neobladder/replacement cystoplast	15%
Continent urinary diversion	20%

## Bladder

7.7 Table 7-3, AMA5 (p151) should be replaced with Table 7.2, below, when assessing impairment due to bladder disease. This table includes ratings involving urge and total incontinence. Urge urinary incontinence is the involuntary loss of urine associated with a strong desire to void. This table also should be used for examples of mixed urge and stress incontinence, examples of nocturnal enuresis or wetting bed, or examples of total incontinence.

**Table 7.2: Criteria for rating permanent impairment due to bladder disease**

Class 1 0%–15% WPI	Class 2 16%–40% WPI	Class 3 41%–70% WPI
Symptoms and signs of bladder disorder and requires intermittent treatment and normal functioning between malfunctioning episodes	Symptoms and signs of bladder disorder e.g. urinary frequency (urinating more than every two hours); severe nocturia (urinating more than three times a night); urge incontinence more than once a week and requires continuous treatment	Abnormal (i.e. under or over) reflex activity (e.g. intermittent urine dribbling, loss of control, urinary urgency and urge incontinence once or more each day) and/or no voluntary control of micturition; reflex or areflexic bladder on urodynamics and/or total incontinence (e.g. fistula)

- 7.8 Example 7-16, AMA5 (p151) should be reclassified as an example of Class 2, as the urinary frequency is more than every two hours and continuous treatment would be expected.
- 7.9 Examples 7-18, 7-19, 7-20, AMA5 (pp152-153) are all examples of bladder dysfunction secondary to neurological disease. In the case of example 7-18, the impairment of bladder function should be assessed using Table 13-19, AMA5 (p341). In the case of examples 7-19 and 7-20, the impairment of bladder function should be assessed using Table 15-6d, AMA5 (p397).

## Urethra

7.10 Table 7-4, AMA5 (p153) should be replaced with Table 7.3, below, when assessing impairment due to urethral disease. This table includes ratings involving stress incontinence. Stress urinary incontinence is the involuntary loss of urine occurring with clinically demonstrable raised intra-abdominal pressure. It is expected that urinary incontinence should be of a regular or severe nature (necessitating the use of protective pads or appliances).

**Table 7.3: Criteria for rating permanent impairment due to urethral disease**

<b>Class 1</b> <b>0%–10% WPI</b>	<b>Class 2</b> <b>11%–20% WPI</b>	<b>Class 3</b> <b>21%–40% WPI</b>
Symptoms and signs of urethral disorder and requires intermittent therapy for control	Symptoms and signs of urethral disorder; stress urinary incontinence more than three times a week and cannot effectively be controlled by treatment	Urethral dysfunction resulting in intermittent urine dribbling, or stress urinary incontinence at least daily

## Male reproductive organs

### Penis

7.11 In AMA5, p157, the box labelled ‘Class 3, 21–35%’ should read ‘Class 3, 20% impairment of the whole person’ as the descriptor ‘No sexual function possible’ does not allow a range (the correct value is shown in Table 7-5), p156. Note, however, that there is a loading for age, so a rating higher than 20% is possible (AMA5, section 7.7, p156).

### Testicles, epididymides and spermatic cords

7.12 Table 7-7, AMA5 (p159) should be replaced with Table 7.4, below, when assessing impairment due to testicular, epididymal and spermatic cord disease. This table includes rating for infertility and equates impairment with female infertility (see Table 7.6 in this chapter of the Guidelines).

7.13 **Male infertility** is defined as azoospermia or other cause of inability to cause impregnation even with assisted conception techniques.

7.14 Loss of sexual function **related to spinal injury** should only be assessed as an impairment where there is other objective evidence of spinal cord, cauda equina or bilateral nerve root dysfunction. The ratings described in Table 13-21, AMA5 (p342) are used in this instance. There is no additional impairment rating system for loss of sexual function in the absence of objective clinical findings.

**Table 7.4: Criteria for rating permanent impairment due to testicular, epididymal and spermatic cord disease**

<b>Class 1</b> <b>0%–10% WPI</b>	<b>Class 2</b> <b>11%–15% WPI</b>	<b>Class 3</b> <b>16%–35% WPI</b>
Testicular, epididymal or spermatic cord disease symptoms and signs and anatomic alteration and no continuous treatment required and no seminal or hormonal function or abnormalities or solitary testicle*	Testicular, epididymal or spermatic cord disease symptoms and signs and anatomic alteration and cannot effectively be controlled by treatment and detectable seminal or hormonal abnormalities	Trauma or disease produces bilateral anatomic loss of the primary sex organs or no detectable seminal or hormonal function or infertility
<i>*Loss of one testicle should be assessed as class 1, 10% WPI</i>		

## Female reproductive organs

### Fallopian tubes and ovaries

7.15 Table 7-11, AMA5 (p167) should be replaced with Table 7.6, below, when assessing impairment due to fallopian tube and ovarian disease. This table includes rating for infertility and equates impairment with male infertility (see Table 7.4, above).

7.16 **Female infertility:** a woman in the childbearing age is infertile when she is unable to conceive naturally. This may be due to anovulation, tubal blockage, cervical or vaginal blockage or an impairment of the uterus.

7.17 Table 7.5 below replaces AMA5 Table 7-10 (p165) for the assessment of cervical and uterine disease.

**Table 7.5: Criteria for rating permanent impairment due to cervical and uterine disease**

<b>Class 1</b> <b>0%–10% WPI</b>	<b>Class 2</b> <b>11%–15% WPI</b>	<b>Class 3</b> <b>16%–35% WPI</b>
Cervical or uterine disease or deformity symptoms and signs do not require continuous treatment or cervical stenosis, if present, requires no treatment or anatomic cervical or uterine loss in the post-menopausal period	Cervical or uterine disease or deformity symptoms and signs require continuous treatment or cervical stenosis, if present, requires periodic treatment	Cervical or uterine disease or deformity symptoms and signs are not controlled by treatment or complete cervical stenosis or anatomic or complete functional cervical or uterine loss in the premenopausal period

**Table 7.6: Criteria for rating permanent impairment due to fallopian tube and ovarian disease**

<b>Class 1</b> <b>0%–10% WPI</b>	<b>Class 2</b> <b>11%–15% WPI</b>	<b>Class 3</b> <b>16%–35% WPI</b>
<p>Fallopian tube or ovarian disease or deformity symptoms and signs do not require continuous treatment</p> <p>or</p> <p>only one functioning fallopian tube and/or ovary in the premenopausal period*</p> <p>or</p> <p>bilateral fallopian tube or ovarian functional loss in the postmenopausal period</p>	<p>Fallopian tube or ovarian disease or deformity symptoms and signs require continuous treatment, but tubal patency persists and ovulation is possible</p>	<p>Fallopian tube or ovarian disease or deformity symptoms and signs</p> <p>and</p> <p>total tubal patency loss or failure to produce ova in the premenopausal period</p> <p>or</p> <p>bilateral fallopian tube or bilateral ovarian loss in the premenopausal period; infertility</p>
<p><i>*the loss of an ovary and/or fallopian tube should be assessed as class 1, 10% WPI.</i></p>		

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# 8 RESPIRATORY SYSTEM

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## 8 RESPIRATORY SYSTEM

Chapter 5, AMA5 (p87) applies to the assessment of permanent impairment of the respiratory system, subject to the modifications set out below.

Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following:

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

### Introduction

- 8.1 Chapter 5, AMA5 (pp87–115) provides a useful summary of the methods for assessing whole person impairment arising from respiratory disorders.
- 8.2 The degree of impairment arising from conditions not caused by a work injury must be assessed and considered in determining the degree of permanent impairment, and recorded in the report. The degree to which pre-existing conditions and lifestyle activities such as smoking contribute to the degree of permanent impairment requires judgment on the part of the assessor. The manner in which any deduction for these is applied needs to be recorded in the assessor's report.

### Examinations, clinical studies and other tests for evaluating respiratory disease (section 5.4, AMA5)

- 8.3 The predicted lower limit values provided in the accredited laboratory tests (to Thoracic Society of Australia and NZ (TSANZ) standards) are applied in Table 5-12, AMA5 (p107), to determine the impairment classification for respiratory disorders. AMA5 Tables 5-2b, 5-3b, 5-4b, 5-5b, 5-6b and 5-7b should not be used.
- 8.4 Table 5-12, AMA5 (p107) should be used to assess whole person impairment for respiratory disorders other than occupational asthma. The pulmonary function tests listed in Table 5-12 must be performed to TSANZ standards by a pulmonary function laboratory. Exercise testing is not required.
- 8.5 Classes 2, 3 and 4 in Table 5-12, AMA5 (p107) list ranges of whole person impairment. The assessor should nominate the nearest whole percentage based on the complete clinical circumstances when selecting within the range, giving reasons to support the % WPI selected in the report.
- 8.6 An isolated abnormal diffusing capacity for carbon monoxide ( $D_LCO$ ) in the presence of otherwise normal results of lung function testing should be interpreted with caution and its aetiology should be clarified. Where the  $D_LCO$  is the key parameter used to rate impairment, its relationship to the work injury must be explained.

## **Asthma (section 5.5, AMA5, p102-104)**

- 8.7 In assessing whole person impairment arising from occupational asthma, the assessor will require evidence from the treating physician that:
- an appropriate diagnosis has been established based on clinical history, physical examination and spirometry with at least one appropriate lung function test conducted by a laboratory accredited by TSANZ
  - the clinical status has been confirmed over time with repeated spirometry, and
  - the worker has received optimal treatment and is compliant with their medication regimen.
- 8.8 Bronchial challenge testing should not be performed as part of the impairment assessment. In Table 5-9, AMA5 (p104) ignore column 4 (PC20 mg/mL or equivalent, etc.).
- 8.9 Permanent impairment due to asthma is rated by the score for the best post-bronchodilator forced expiratory volume in one second (FEV1) (score in Table 5–9, AMA5, column 2) plus % of FEV1 (score in column 3) plus minimum medication required (score in column 5). The total score derived is then used to assess the % impairment in Table 5-10, AMA5 (p104). The same approach to determining the actual impairment within the range of % WPI discussed in 8.5 should be adopted.

## **Obstructive sleep apnoea (section 5.6, AMA5, p105)**

- 8.10 This section needs to be read in conjunction with section 11.4, AMA5 (p259) and section 13.3c, AMA5 (p317).
- 8.11 Before permanent impairment can be assessed, the person must have appropriate assessment and treatment by an ear, nose and throat surgeon and a respiratory physician who specialises in sleep disorders.
- 8.12 Degree of permanent impairment due to sleep apnoea should be calculated with reference to Table 13-4, AMA5 (p317).

## **Hypersensitivity pneumonitis (section 5.7, AMA5, p105)**

- 8.13 Whole person impairment arising from disorders included in this section is assessed according to the impairment classification in Table 5-12, AMA5 (p107).

## **Lung cancer (section 5.9, AMA5, p106)**

- 8.14 Whole person impairment due to lung cancer should be assessed using Table 5-12, AMA5 (p107) (not Table 5-11).
- 8.15 Persons with residual lung cancer after treatment are classified in Respiratory Impairment Class 4 (Table 5-12).

# 9 HEARING

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# 9 HEARING

Chapter 11, AMA5 (p245) applies to the assessment of permanent impairment of hearing, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following:**

- the Introduction in the Guidelines
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the National Acoustic Laboratory (NAL) Guide.

The Guidelines take precedence over AMA5.

## Assessment of hearing impairment (hearing loss)

9.1 A worker may present for hearing loss assessment before having undergone all or any of the health investigations that generally occur before assessment of whole person impairment. For this reason and to ensure that conditions other than 'occupational hearing impairment' are precluded, the medical assessment should be undertaken by an ear, nose and throat specialist or other appropriately qualified specialist. The medical assessment needs to be undertaken in accordance with Table 9.1 below. The assessor performing the assessment must examine the worker. The assessment must be based on medical history and ear, nose and throat examination, evaluation of relevant audiological tests and evaluation of other relevant investigations available to the assessor. Only an ear, nose and throat specialist or other appropriately qualified specialist can issue permanent impairment reports for assessment of hearing impairment.

Some of the relevant tests are discussed in the hearing impairment evaluation summary below.

**Table 9.1 Impairment Evaluation Summary for Hearing**

Disorder	History, including selected relevant symptoms	Examination record	Assessment of physical function	Physical findings	Diagnosis	Degree of impairment
Hearing impairment	Comprehensive history including family history, developmental history of trauma, noise and drug exposure; surgical procedures; symptoms of imbalance (e.g. unsteadiness or vertigo); ear-popping; history of tinnitus; age; associated metabolic and/or endocrine disorders	General physical examination; ear, nose and throat examination; findings from pneumonotomography, tuning-fork tests, hearing tests, balance function tests and radiographic tests; metabolic evaluation	Otologic examination on tuning-fork tests; tympanometry; behavioural, audiometry and auditory brain (evoked) response tests; electrocochleography tests; electrostagnography; metabolic and endocrine studies as necessary	Assess relevant organs; external ear and middle ear functions; Eustachian tube function; status of hearing by audiometry; status of electrophysiologic tests as applicable	Conductive, sensorineural, mixed and functional hearing loss; tinnitus; Meniere's disease	Assessed as per the the Guidelines

9.2 The degree of hearing impairment not caused by exposure to noise is assessed and considered when determining the degree of noise induced/work-related hearing impairment. While this requires medical judgement on the part of the examining assessor, any non-work-related impairment should be recorded in the report.

9.3 Do not use Tables 11–1, 11–2, 11–3, AMA5 (pp247–250). For the purposes of the Guidelines, National Acoustic Laboratory (NAL) tables from the NAL Report No. 118, *Improved procedure for determining percentage loss of hearing* (January 1988) are adopted as follows:

- Tables RB 500–4000 (pp11–16)
- Tables RM 500–4000 (pp18–23)
- Appendix 1 and 2 (pp8–9)
- Appendix 5 and 6 (pp24–26)
- Tables EB 4000–8000 (pp28–30) (the extension tables)
- Tables EM 4000–8000 (pp32–34) (the extension tables)

When an assessor uses the extension tables, they must provide an explanation of the worker's special requirement to be able to hear at frequencies above 4000Hz.

In the presence of significant conduction hearing loss, the extension tables do not apply.

Table 11–3, AMA5 is replaced by Table 9.2 in this chapter.

9.4 It is noted that there are some arithmetical errors in the NAL tables, however, the impact of these errors is minimal and assessors should use these tables, rather than any other programs, for consistency.

9.5 Where the assessor is using ranges outside the usual 2000-4000Hz NIHL frequencies, detailed explanation must be given.

## Hearing impairment

- 9.6 Impairment of a worker's hearing is determined according to evaluation of the individual's binaural hearing impairment.
- 9.7 **Permanent hearing impairment** should be evaluated when the condition is stable. Prosthetic devices (such as hearing aids) must not be worn (or must be switched off) during the evaluation of hearing acuity.
- 9.8 **Hearing threshold level for pure tones** is defined as the number of decibels above standard audiometric zero for a given frequency at which the listener's threshold of hearing lies when tested in a suitable sound attenuated environment. It is the reading on the hearing level dial of an audiometer that is calibrated according to Australian Standard AS IEC 60645.1-2002.
- 9.9 **Evaluation of binaural hearing impairment:** Binaural hearing impairment is determined by using the tables in the 1988 NAL publication with allowance for presbycusis according to the presbycusis correction table, if applicable, in the same publication.

The Binaural Tables RB 500–4000 (NAL report no. 118, pp11-16) are to be used. The extension Tables EB 4000-8000 (pp28-30) may be used when the worker has 'a special requirement to be able to hear above frequencies above 4000Hz' (NAL report no. 118, p6). Where an assessor uses the extension tables, they must provide an explanation of the worker's special requirement to be able to hear at frequencies above 4000Hz.

Where it is necessary to use the monaural tables, the binaural hearing impairment (BHI) is determined by the formula:

$$\text{BHI} = \frac{[4 \times (\text{better ear hearing loss})] + \text{worse ear hearing loss}}{5}$$

- 9.10 **Presbycusis correction table** (Appendix 5, NAL publication, p24) only applies to occupational hearing loss contracted by gradual process – for example, occupational noise induced hearing loss and/or occupational solvent induced hearing loss. Please note when calculating by formula for presbycusis correction (e.g. when the worker is above 81 years) the formula is correct as long as the correct numerator is used, that is **b=-1.79059\*(age)** (page 26, NAL) and **not** (b) 1.79509 (page 25, NAL).
- 9.11 **Binaural hearing impairment and severe tinnitus:** Up to 5% may be added to the work-related binaural hearing impairment for severe tinnitus caused by a work injury:
- after presbycusis correction, if applicable, and
  - before determining WPI.

The severity of tinnitus is determined by the accredited assessor.

9.12 **Only hearing ear:** A worker has an 'only hearing ear' if he or she has suffered a non-work-related severe or profound sensorineural hearing loss in the other ear. If a worker suffers a work injury causing a hearing loss in the only hearing ear of x dBHL at a relevant frequency, the worker's work-related binaural hearing impairment at that frequency is calculated from the binaural tables using x dB as the hearing threshold level in both ears. Deduction for presbycusis if applicable and addition for severe tinnitus is undertaken according to this guide.

9.13 When necessary, binaural hearing impairment figures should be rounded to the nearest 0.1%. Rounding up should occur if equal to or greater than .05%, and rounding down should occur if equal to or less than .04%.

9.14 Table 9.2 is used to convert binaural hearing impairment, after deduction for presbycusis if applicable and after addition for severe tinnitus, to WPI.

9.15 The assessment of permanent impairment and % WPI in respect of noise induced hearing loss needs to be assessed consistently with the particular requirements of subsections 188(2) and (3) of the Act which provide:

*“(2) Subject to this section, where a claim is made under this Act in respect of noise induced hearing loss by a worker (not being a person who has retired from employment on account of age or ill health), the **whole of the loss will be taken to have occurred immediately before notice of the injury was given** and, subject to any proof to the contrary, to have arisen out of employment in which the worker was last exposed to noise capable of causing noise induced hearing loss.*

*(3) If a claim is made under this Act in respect of noise induced hearing loss by a person who has retired from employment on account of age or ill-health, **the whole of the loss will be taken to have occurred immediately before the person retired** and, subject to any proof to the contrary, to have arisen out of employment in which the person was last exposed to noise capable of causing noise induced hearing loss.”*

The requestor is responsible for providing clear guidelines to an assessor regarding the assessment of impairment in such cases.

**Table 9.2: Relationship of binaural hearing impairment to whole person impairment**

% Binaural hearing impairment	% Whole person impairment	% Binaural hearing impairment	% Whole person impairment
0.0 – 5.9	0	51.1 – 53.0	26
6.0 – 6.7	3	53.1 – 55.0	27
6.8 – 8.7	4	55.1 – 57.0	28
8.8 – 10.6	5	57.1 – 59.0	29
10.7 – 12.5	6	59.1 – 61.0	30
12.6 – 14.4	7	61.1 – 63.0	31
14.5 – 16.3	8	63.1 – 65.0	32
16.4 – 18.3	9	65.1 – 67.0	33
18.4 – 20.4	10	67.1 – 69.0	34
20.5 – 22.7	11	69.1 – 71.0	35
22.8 – 25.0	12	71.1 – 73.0	36
25.1 – 27.0	13	73.1 – 75.0	37
27.1 – 29.0	14	75.1 – 77.0	38
29.1 – 31.0	15	77.1 – 79.0	39
31.1 – 33.0	16	79.1 – 81.0	40
33.1 – 35.0	17	81.1 – 83.0	41
35.1 – 37.0	18	83.1 – 85.0	42
37.1 – 39.0	19	85.1 – 87.0	43
39.1 – 41.0	20	87.1 – 89.0	44
41.1 – 43.0	21	89.1 – 91.0	45
43.1 – 45.0	22	91.1 – 93.0	46
45.1 – 47.0	23	93.1 – 95.0	47
47.1 – 49.0	24	95.1 – 97.0	48
49.1 – 51.0	25	97.1 – 99.0	49
		99.1 – 100	50

9.16 Examples 11.1, 11.2, 11.3, AMA5 (pp250–251) are replaced by examples 9.1–9.7, below.

**Table 9.3: Medical assessment elements in examples**

Element	Example No.
General use of binaural table – NAL 1988	1,2
‘Better ear’ – ‘worse ear’ crossover	1,2
Assessable audiometric frequencies	7 – also 1,2,4,5,6
Tinnitus	1,2,3,4
Presbycusis	All examples
Binaural hearing impairment	All examples
Conversion to whole person impairment	All examples
Gradual process injury	3
Noise-induced hearing loss	1,2,3,5,6,7
Solvent-induced hearing loss	3
Acute occupational hearing loss	4,5
Acute acoustic trauma	5
Pre-existing non-occupational hearing loss	6
Only hearing ear	6
NAL 1988 Extension Table Use	7
Multiple Causes of Hearing Loss	3,5,6
Head injury	4

### Example 9.1: Occupational noise-induced hearing loss and moderately severe tinnitus

A 55 year-old man, a boilermaker for 30 years, gave a history of progressive hearing loss and tinnitus. The tinnitus was present most days, interfering with concentration and occasionally interfering with sleep when it could not be dampened with extraneous noise. The assessor has assessed the tinnitus as moderately severe. The external auditory canals and tympanic membranes were normal. Rinne test was positive (air conduction better than bone conduction) bilaterally and the Weber test result was central. Clinical assessment of hearing was consistent with results of pure tone audiometry, which showed a bilateral sensorineural hearing loss consistent with the dose and duration of significant noise. The assessor diagnosed noise induced hearing loss (NIHL) with moderately severe tinnitus. The assessor included all frequencies in this assessment as there was no other explanation identified to account for this symmetrical loss apart from NIHL. Presbycusis correction does not apply because the worker is less than 56 years of age.

#### Pure tone audiometry

Frequency (Hz)	Left (dB HL)	Right (dB HL)	Binaural hearing impairment (% BHI)
500	15	10	0
1000	20	20	0.8
1500	25	25	1.4
2000	35	35	3.4
3000	60	60	6.3
4000	75	75	8.2
6000	30	30	-
8000	20	20	-
Total % BHI			20.1
No Presbycusis correction			0
Add 4.0% BHI for severe tinnitus			4
Adjusted total % BHI			24.1
Resultant total BHI of 24.1% = 12% WPI (Table 9.2 in the Guidelines)			

**Example 9.2: Occupational noise-induced hearing loss and mild tinnitus**

A 55-year-old man, a steelworker for 30 years, gave a history of increasing difficulties with hearing and tinnitus. In the first 20 years of his career little attention was paid to hearing protection. There was no family history of deafness and no past history of recreational noise, illness or medication that could impact upon hearing. The assessor diagnosed occupational noise-induced hearing loss with intermittent mild tinnitus that had no impact on ADLs and was often forgotten during the day and night. The assessor had no other explanation for the frequency loss at 1500 and 2000Hz and given the noise dose and duration included these frequencies in the NIHL assessment.

**Pure tone audiometry**

Frequency (Hz)	Left (dB HL)	Right (dB HL)	Binaural hearing impairment (% BHI)
500	15	15	0.0
1000	15	15	0.0
1500	20	25	1.0
2000	30	35	2.5
3000	50	45	4.2
4000	55	55	5.2
6000	30	30	-
8000	20	20	-
Total % BHI			12.9
Less Presbycusis correction			0
Adjusted total % BHI			12.9
Resultant total BHI of 12.9% = 7% WPI (Table 9.2 in the Guidelines)			

**Comment:** The assessor’s opinion is that the tinnitus suffered by the worker is not severe and thus no addition to the binaural hearing impairment was made for tinnitus.

### Example 9.3: Multiple gradual process occupational hearing loss

A 63-year-old male boat builder and printer gave a history of hearing difficulty and tinnitus. There had been marked chronic exposure to both noise and solvents in these occupations for 35 years altogether. The assessor diagnosed bilateral noise-induced hearing loss and bilateral solvent-induced hearing loss with severe tinnitus.

The tinnitus was rated in the lowest range of severity as it interfered with sleep for one or two nights of the week but did not affect him during the day.

The assessor's opinion is that the solvent exposure contributed to the hearing impairment as a gradual process injury. The total noise-induced and solvent-induced BHI was 17.5%. The assessor did not identify any factors in the family or personal health profile of the worker to account for the loss in the 1500 and 2000Hz range so included these ratings in the assessment.

The appropriate presbycusis deduction was applied. Then, the assessor added 2% BHI to the after-presbycusis binaural hearing impairment for severe tinnitus at the lower end of the range with occasional sleep disturbance and no impact on other ADLs.

#### Pure tone audiometry

Frequency (Hz)	Left (dB HL)	Right (dB HL)	Binaural hearing impairment (% BHI)
500	15	15	0.0
1000	15	15	0.0
1500	25	25	1.4
2000	35	40	3.8
3000	60	60	6.3
4000	60	60	6.0
6000	45	50	-
8000	40	40	-
Total noise-induced and solvent-induced % BHI			17.5
Presbycusis correction of 1.7%			-1.7
2% BHI addition for medically assessed severe tinnitus			2
Adjusted total % BHI			17.8
Resultant total BHI of 17.8% = 9% WPI (Table 9.2 in the Guidelines)			

#### Example 9.4: Occupational noise-induced hearing loss from head injury

A 62-year-old male worker sustained a head injury after falling from a ladder. He suffered left hearing loss and tinnitus unaccompanied by vertigo. The assessor assesses his tinnitus as severe as the injury has resulted in severe sleep disturbance and severe interference with ADLs in the day. External auditory canals and tympanic membranes are normal. Rinne test is positive bilaterally and Weber test lateralises to the right. CT scan of the temporal bones shows a fracture on the left. Clinical assessment of hearing is consistent with pure tone audiometry, which shows a flat left sensorineural hearing loss and mild right sensorineural hearing loss. Presbycusis correction does not apply because the worker sustained a head injury. The assessor used all frequencies in the assessment due to the effect of fracture trauma being non-selective for a particular frequency.

#### Pure tone audiometry

Frequency (Hz)	Left (dB HL)	Right (dB HL)	Binaural hearing impairment (% BHI)
500	50	15	2.3
1000	55	15	3.1
1500	60	20	3.4
2000	65	20	2.6
3000	65	25	2.2
4000	65	30	2.1
6000	65	20	-
8000	65	20	-
Total % BHI			15.7
No correction for presbycusis applies			0
Adjusted 5.0% BID for severe tinnitus			5
Adjusted total % BHI			20.7
Resultant total BHI of 20.7% = 11% WPI (Table 9.2 in the Guidelines)			

**Example 9.5: Acute unilateral occupational hearing loss in the presence of pre-existing bilateral noise-induced hearing loss**

A 62-year-old man who has been a production worker for 10 years in a noisy workplace was injured in an explosion that occurred on his left side while at work. He reported immediate post-injury otalgia and acute hearing loss in the left ear. The assessor noted, at examination, hearing loss in the right ear consistent with noise exposure. For the purposes of the impairment assessment, it was clinically determined that this NIHL effect would, more probably than not, have been present in the left ear at the time of the explosion. The hearing loss was greater on the left side, consistent with the explosion. The assessor diagnosed left acoustic trauma in the presence of bilateral occupational noise-induced hearing, as there was no evidence that hearing in the left ear was different to the right, prior to the explosion. Severe tinnitus is present and assessed at the highest range due to major sleep disturbance every night with ADLs impacted during every day. The tinnitus was attributed to the explosion trauma as this is clinically more likely to be the cause rather than the mild chronic noise effect. All the frequencies were used to assess the left ear but only the frequencies of 3000 and 4000HZ were used to calculate the NIHL given its short duration and low exposure.

**Pure tone audiometry**

Frequency (Hz)	Left (dB HL)	Right (dB HL)	Binaural hearing impairment (% BHI)	BHI due to NIHL (% BHI)
500	30	15	1.0	0.0
1000	45	15	2.5	0.0
1500	55	15	2.5	0.0
2000	70	15	2.2	0.0
3000	80	25	2.4	0.7
4000	80	30	2.3	0.8
6000	>80	30	n/a in NIHL	n/a in NIHL
8000	>80	25	n/a in NIHL	n/a in NIHL
Total % BHI			12.9	1.5
Presbycusis correction for NIHL				-1.3
Adjusted NIHL BHI (%)				0.2
Acute acoustic trauma BHI (%)			12.9	
Presbycusis does not apply to acute acoustic trauma			0	
Tinnitus - 5% BHI allocated to the acoustic trauma			5	
Totals			17.9	0.2
Resultant total BHI due to acute acoustic trauma of 17.9% - 0.2 = 17.7% BHI = 9% WPI (Table 9.2 in the Guidelines)				

**Example 9.6: Occupational noise-induced hearing loss in an only hearing ear**

A 66-year-old woman has been a textile worker for 30 years. Childhood mumps had left her with profound hearing loss in the left ear. She gave a history of progressive hearing loss in her only hearing ear unaccompanied by tinnitus or vertigo. External auditory canals and tympanic membranes appeared normal. Rinne test was positive on the right and was false negative (the signal was picked up in the other ear) on the left. Weber test lateralised to the right. Clinical assessment of hearing is consistent with pure tone audiogram showing a profound left sensorineural hearing loss and a partial right sensorineural hearing loss. The assessor diagnosed NIHL in the right ear consistent with noise dose and duration. For the purposes of the assessment of NIHL (column 5), the assessor assumes that the hearing in the left ear is identical to that in the right ear due to the noise exposure at work. The assessor used the frequencies of 1500 and 2000Hz in this assessment due the dose and duration of noise in an only hearing ear.

**Pure tone audiometry**

Frequency (Hz)	Left (dB HL)	Right (dB HL)	Binaural hearing impairment (% BHI)	BHI due to noise-induced hearing loss
500	>95	10	3.4	0
1000	>95	15	4.3	0
1500	>95	20	4.2	0.6
2000	>95	25	3.8	1.1
3000	>95	50	5.4	4.8
4000	>95	70	8.0	7.5
6000	>95	50	n/a in NIHL	n/a in NIHL
8000	>95	40	n/a in NIHL	n/a in NIHL
Total % BHI			29.1	
Total occupational % BHI				14.0
Presbycusis correction does not apply to a 66 year old woman				0
No addition tinnitus				0
Adjusted total occupational % BHI			n/a	14.0
Total occupational BHI of 14% = 7% WPI (Table 9.2 in the Guidelines)				

**Example 9.7: Occupational noise-induced hearing loss where there is a special requirement for ability to hear at frequencies above 4000 Hz**

A 56-year-old female process worker who worked in a noisy factory for 20 years had increasing hearing difficulty. The diagnosis made was bilateral occupational noise-induced hearing loss extending to 6000 Hz or 8000 Hz. The assessor was of the opinion that there was a special requirement for hearing above 4000 Hz as the worker is a musical writer for violins and violas in a recreational opera company, so the extension tables were used as there is a significant effect on her ADLs. There was no conductive hearing loss, or other factor identified to account for this loss at 6000 and 8000Hz.

**Pure tone audiometry**

Binaural hearing impairment (% BHI)				
Frequency (Hz)	Left (dB HL)	Right (dB HL)	Using extension table – 4000, 6000 and 8000 Hz (p28-29 NAL)	Not using extension table
500	10	10	0.0	0.0
1000	15	15	0.0	0.0
1500	20	25	1.0	1.0
2000	30	32	2.5	2.5
3000	45	45	4.1	4.1
4000	45	50	2.2	3.6
6000	60	55	1.6	-
8000	50	20	0.2	-
Total BHI (%) using extension table			11.6	
Total BHI (%) not using extension table				11.2
Presbycusis correction			0	0
The accredited assessor is of the opinion that the binaural hearing impairment in the matter is 11.6% rather than 11.2%				0
Adjusted total % BHI			11.6	
Resultant Total BHI of 11.6% = 6% WPI (Table 9.2 in the Guidelines)				

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# 10 VISUAL SYSTEM

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# 10 VISUAL SYSTEM

Chapter 8, **AMA4** (p209) applies to the assessment of permanent impairment of the visual system, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA4 for the body system they are assessing.

The Guidelines take precedence over AMA4 and AMA5.

## Introduction and approach to assessment

10.1 The visual system must be assessed by an ophthalmologist.

10.2 Chapter 8, AMA4 (pp209–222) is adopted for the Guidelines without significant change.

10.3 AMA4 is used rather than AMA5 for the assessment of whole person impairment of the visual system because:

- there is little emphasis on diplopia in AMA5, yet this is a relatively frequent problem
- many ophthalmologists are familiar with the Royal Australian College of Ophthalmologists' impairment guide, which is similar to AMA4.

10.4 Impairment of vision should be measured with the worker wearing their prescribed corrective spectacles and/or contact lenses, if that was normal for the injured worker before the work injury. If, as a result of the work injury, the injured worker has been prescribed corrective spectacles and/or contact lenses for the first time, or different spectacles and/or contact lenses than those prescribed before injury, the difference should be accounted for in the assessment of permanent impairment.

10.5 An ophthalmologist should assess visual field impairment in all cases.

10.6 The ophthalmologist should perform or review all tests necessary for the assessment of whole person impairment rather than relying on the interpretations of tests done by the orthoptist or optometrist.

10.7 In section 8.5, AMA4 (p222) on other conditions, the 'additional 10% impairment' referred to means 10% WPI, not 10% impairment of the visual system.

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# 11 HAEMATOPOIETIC SYSTEM

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# 11 HAEMATOPOIETIC SYSTEM

Chapter 9, AMA5 (p191) applies to the assessment of permanent impairment of the haematopoietic system, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

11.1 Chapter 9, AMA5 (pp191–210) provides guidelines on the method of assessing whole person impairment of the haematopoietic system. Overall, that chapter should be followed when conducting the assessment, with variations indicated below.

11.2 Impairment of end organ function due to haematopoietic disorder should be assessed separately, using the relevant chapter of the Guidelines. The percentage WPI due to end organ impairment should be combined with any percentage WPI due to haematopoietic disorder, using the Combined Values Table, AMA5 (pp604–606).

## Anaemia

11.3 Table 11.1 (below) replaces Table 9-2, AMA5 (p193).

**Table 11.1: Classes of anaemia and percentage whole person impairment (WPI)**

<b>Class 1: 0–10% WPI</b>	<b>Class 2: 11–30% WPI</b>	<b>Class 3: 31–70% WPI</b>	<b>Class 4: 71–100% WPI</b>
No symptoms and haemoglobin 100–120g/L and no transfusion required	Minimal symptoms and haemoglobin 80–100g/L and no transfusion required	Moderate to marked symptoms and haemoglobin 50–80g/L before transfusion and transfusion of 2 to 3 units required, every 4 to 6 weeks	Moderate to marked symptoms and haemoglobin 50–80g/L before transfusion and transfusion of 2 to 3 units required, every 2 weeks

- 11.4 The assessor should exercise clinical judgement in determining WPI, using the criteria in Table 11.1. For example, if comorbidities exist which preclude transfusion, the assessor may assign Class 3 or Class 4, on the understanding that transfusion would under other circumstances be indicated. Similarly, there may be some workers with Class 2 impairment who, because of comorbidity, may undergo transfusion.
- 11.5 Pre-transfusion haemoglobin levels in Table 11.1 are to be used as indications only. It is acknowledged that, for some workers, it would not be medically advisable to permit the worker's haemoglobin levels to be as low as indicated in the criteria of Table 11.1.
- 11.6 The assessor should indicate a % WPI, as well as the class.

### **Polycythaemia and myelofibrosis**

- 11.7 The level of symptoms (as in Table 11.1) should be used a guide for the assessor in cases where non-anaemic tissue iron deficiency results from venesection.

### **Functional asplenia**

- 11.8 In cases of functional or post traumatic asplenia, the assessor should assign 3% WPI. This should be combined with any other impairment rating, using the Combined Values Table, AMA5 (pp604–606).

### **White blood cell diseases**

- 11.9 Table 9-3, AMA5 (p200) should be used for rating impairment due to HIV infection or auto immune deficiency disease.

### **Haemorrhagic and platelet disorders**

- 11.10 Table 9-4, AMA5 (p203) is to be used as the basis for assessing haemorrhagic and platelet disorders.
- 11.11 For the purposes of the Guidelines, the criteria for inclusion in Class 3 of Table 9-4, AMA5 (p203) are:
- symptoms and signs of haemorrhagic and platelet abnormality
  - requires continuous treatment, and
  - interference with daily activities, with occasional assistance required.
- 11.12 For the purposes of the Guidelines, the criteria for inclusion in Class 4 of Table 9-4, AMA5 (p203) is:
- symptoms and signs of haemorrhagic and platelet abnormality
  - requires continuous treatment, and
  - difficulty performing daily activities, with continuous care required.

### **Deep-vein thrombosis**

- 11.13 A single deep-vein thrombosis should not be assessed under the haematopoietic system. It is assessed under either the cardiovascular system or upper or lower extremity system.

Table 9-4, AMA5 (p203) is used as the basis for determining impairment due to a persistent or recurring thrombotic disorder.

# 12 ENDOCRINE SYSTEM

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# 12 ENDOCRINE SYSTEM

Chapter 10, AMA5 (p211) applies to the assessment of permanent impairment of the endocrine system, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

12.1 Chapter 10, AMA5 provides a useful summary of the methods for assessing whole person impairment arising from disorders of the endocrine system.

12.2 Refer to other appropriate chapters for related structural changes – the visual system (chapter 8 of AMA4), the skin (e.g. pigmentation, chapter 8, AMA5), the central and peripheral nervous system (memory, chapter 13, AMA3), the urinary and reproductive system (infertility, renal impairment, chapter 7, AMA5), the digestive system (dyspepsia, chapter 6, AMA5), the cardiovascular system (chapters 3 and 4, AMA5).

12.3 The clinical findings to support the impairment assessment are to be reported in the units recommended by the Royal College of Pathologists of Australia. Assessors should use the current *RCPA Manual* to assist with interpretation of pathology tests, which can be found at [www.rcpamannual.edu.au](http://www.rcpamannual.edu.au).

## Adrenal cortex

12.4 First paragraph of 10.5, AMA5 (p222): disregard the last sentence: “They also affect inflammatory response, cell membrane permeability, and immunologic responses, and they play a role in the development and maintenance of secondary sexual characteristics.” Replace with: “Immunological and inflammatory responses are reduced by these hormones and they play a role in the development and maintenance of secondary sexual characteristics.”

12.5 Example 10-18, AMA5 (pp224–225): Westergren erythrocyte sedimentation rate (WSR) is equivalent to ESR.

12.6 Example 10-20, AMA5 (p225) – History: For “hypnotic bladder” read “hypotonic bladder”.

## **Diabetes mellitus**

12.7 AMA5 (p231): refer to the current Australian Diabetes Association Guidelines with regard to levels of fasting glucose. For the purposes of Table 10-8 (p231, AMA5), satisfactory control is a haemoglobin A1c level of  $\leq 7\%$ .

## **Criteria for rating permanent impairment due to metabolic bone disease**

12.8 AMA5 (p240): Impairment due to a metabolic bone disease itself is unlikely to be associated with a work injury and would usually represent a pre-existing condition.

12.9 Impairment from fracture, spinal collapse or other complications may arise as a result of a work injury associated with these underlying conditions (as noted in section 10.10c, AMA5) and would be assessed using the other chapters indicated, with the exception of chapter 18 on pain which is excluded from the Guidelines.



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# 13 SKIN

Chapter 8, AMA5 (p173) applies to the assessment of permanent impairment of the skin, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

13.1 Chapter 8, AMA5 (pp173–190) refers to skin diseases generally rather than work-related skin diseases alone. In the Guidelines, this chapter has been adopted for measuring impairment of the skin system, with the variations listed in the subsequent sections of this chapter.

13.2 Disfigurement, scars and skin grafts may be assessed as causing significant permanent impairment when the skin condition causes limitation in the performance of activities of daily living (ADL).

13.3 Table 8-2, AMA5 (p178) provides the method of classification of impairment due to skin disorders. Three components – signs and symptoms of skin disorder, limitations in activities of daily living and requirements for treatment – define five classes of permanent impairment. The assessor should allocate a specific percentage impairment within the range for the class that best describes the clinical status of the worker and provide detailed reasons for their selection in the report.

13.4 The skin is regarded as a single organ and all non-facial scarring is measured together as one overall impairment rather than assessing individual scars separately and combining the results.

13.5 For cases of facial disfigurement (which can include scarring), refer to Table 6.1 in the Ear, Nose and Throat Related Structures chapter of the Guidelines. The face is rated separately and then combined where appropriate.

13.6 In cases of inflammatory conditions involving both the face and the skin of other areas of the body, assessors are advised to assess by both skin (Table 8-2 AMA5) and by face (Table 6.1, Ear, Nose and Throat chapter, p52) and then allocate whichever is the higher impairment.

- 13.7 The Table for the Evaluation of Minor Skin Impairment (TEMSKI – 13.1) is an extension of Table 8-2 in AMA5. The TEMSKI divides Class 1 of permanent impairment (0-9%) due to skin disorders into five groupings of impairment. The TEMSKI may be used by assessors (who are not trained in the skin body system but who are trained in the use of TEMSKI) for determining skin impairment from 0 – 4% WPI associated with the injury which they are rating. Skin impairment from the TEMSKI greater than 4% must be assessed by an assessor who has undertaken the requisite training in the assessment of the skin body system.
- 13.8 The TEMSKI is to be used in accordance with the principle of ‘best fit’. The assessor must be satisfied that the criteria within the chosen category of impairment best reflect the skin disorder being assessed. The assessor must provide detailed reasons as to why this category has been chosen over other categories.
- 13.9 A scar may be present and rated as 0% WPI.
- 13.10 Where there is a range of values in the TEMSKI categories, the assessor must use clinical judgement to determine the specific degree of impairment and provide the rationale for choosing that value in the report.
- 13.11 The case examples provided in chapter 8, AMA5 do not, in most cases, relate to permanent impairment that results from a work injury. The following examples are provided for information.
- 13.12 Work-related case study examples 13.1, 13.2, 13.3, 13.4, 13.5, 13.6 are included below, in addition to AMA5 examples 8.1–8.22 (pp178–187).

**Table 13.1 For The Evaluation of Minor Skin Impairment (TEMSKI)**

Criteria	0% WPI	1% WPI	2% WPI	3 - 4% WPI	5 - 9% WPI
Description of the scar(s) and/or skin condition(s) (shape, texture, colour)	Worker is not conscious of the scar(s) or skin condition	Worker is conscious of the scar(s) or skin condition Some parts of the scar(s) or skin condition colour contrast with the surrounding skin as a result of pigmentary or other changes Worker is able to locate the scar(s) or skin condition	Noticeable colour contrast of scar(s) or skin condition with surrounding skin as a result of pigmentary or other changes Worker is able to easily locate the scar(s) or skin condition Trophic changes evident to touch	Easily identifiable colour contrast of scar(s) or skin condition with surrounding skin as a result of pigmentary or other changes Worker is able to easily locate the scar(s) or skin condition. Trophic changes evident to touch Any staple or suture marks are clearly visible	Worker is conscious of the scar(s) or skin condition Distinct colour contrast of scar(s) or skin condition with surrounding skin as a result of pigmentary or other changes Worker is able to easily locate the scar(s) or skin condition Trophic changes are visible Any staple or suture marks are clearly visible
Location	Anatomic location of the scar(s) or skin condition not clearly visible with usual clothing/hairstyle	Anatomic location of the scar(s) or skin condition is not usually visible with usual clothing/hairstyle	Anatomic location of the scar(s) or skin condition is usually visible with usual clothing/hairstyle	Anatomic location of the scar(s) or skin condition is visible with usual clothing/hairstyle	Anatomic location of the scar(s) or skin condition is usually and clearly visible with usual clothing/hairstyle
Contour	No contour defect	Minor contour defect	Contour defect visible	Contour defect easily visible	Contour defect easily visible
ADL / Treatment	No effect on any ADL No treatment, or intermittent treatment only, required	Negligible effect on any ADL No treatment, or intermittent treatment only, required	Minor limitation in the performance of few ADL No treatment, or intermittent treatment only, required	Minor limitation in the performance of few ADL AND exposure to chemical or physical agents (e.g. sunlight, heat, cold etc.) may temporarily increase limitation No treatment, or intermittent treatment only, required	Limitation in the performance of few ADL (INCLUDING restriction in grooming or dressing) AND exposure to chemical or physical agents (e.g. sunlight, heat, cold etc.) may temporarily increase limitation or restriction No treatment, or intermittent treatment only, required
Adherence to underlying structures	No adherence	No adherence	No adherence	Some adherence	Some adherence
<p><b>This table uses the principle of 'best fit'.</b> You should assess the impairment to the whole skin system against each criteria and then determine which impairment category best fits (or describes) the impairment. A skin impairment will usually meet most, but does not need to meet all, criteria to 'best fit' a particular impairment category. The assessor must provide detailed reasons as to why this category has been chosen over other categories. Refer to 13.7-13.10 regarding application of this table.</p>					

### Example 13.1: Cumulative irritant dermatitis

Subject:	42-year-old man
History:	The worker is a spray painter working on ships in dry dock who has presented with a rash on both hands. Not required to prepare surface but required to mix paints (including epoxy and polyurethane) with 'thinners' (solvents) and spray metal ship's surface. At end of each session, the worker was required to clean equipment with solvents and was not supplied with gloves or other personal protective equipment until after the onset of symptoms. Off work two months leading to clearance of the rash, but frequent recurrence, especially if the worker attempted prolonged work wearing latex or PVC gloves or wet work without gloves. Treatment by GP with topical steroid creams showed improvement.
Current:	Returned to dry duties only at work. Mostly clear of dermatitis now, but flares.
Physical examination:	Varies between no abnormality detected to mild self-limiting dermatitis of the dorsum of hands. On the day of the assessment there was no identifiable skin condition.
Investigations:	Patch test standard + epoxy + isocyanates (polyurethanes). No reactions.
Impairment:	3% WPI as deemed to be at the lower third of the range in Class 1 from Table 8.2 in AMA5 (p178).
Comment:	Intermittently present and minimal interference with activities of daily living (ADL) and occasional intermittent treatment, perhaps once per year.

### Example 13.2 Burns

Subject:	32 year old man
History:	The worker is an electrician. Twelve months ago he was involved in an accident in which a meter board suddenly exploded and his face was burnt. He was taken to the hospital and a second degree burn to his forehead was diagnosed.
Treatment:	He was treated in hospital. He remained for 2 days and, following discharge, he attended Outpatients for several weeks until the burn eventually healed leaving a rather poorly defined, abnormally pigmented linear keloid scar across his forehead. The scar measured approximately 6cm in length and 5cm in width.

Current:	This is currently being treated with a silicone gel which he is applying once daily. The scar is painful when touched and when exposed to temperature. If he wears a hat, this irritates the scar. He also complains of pruritus in the scar which is present most of the time.
Investigation:	Clinical examination reveals a prominent erythematous keloidal scar with the above dimensions. The scar is visible from 3 metres. He is unable to wear a hat or cap because of the irritation that this causes the scar. He is extremely embarrassed by the cosmetic appearance of this scar and has become somewhat socially withdrawn. Frowning or laughing will also cause irritation in the scar.
Impairment:	10% WPI from Table 8-2 Class 2 (p178, AMA5) at the lower end of the range.
Comment:	There is a skin disorder and signs and symptoms are consistently present. There is limited performance of some of the activities of daily living (mainly social) because of his embarrassment regarding this problem. Itching is a problem and pain frequently occurs within the scar. He is always conscious of the problem and requires constant treatment in an effort to soothe this scar. The assessor was guided by the comment in Table 6.1 to refer to chapter 8 in AMA5 for skin disorders that involve hypertrophic or abnormally pigmented scars.

### Example 13.3: 'Cement dermatitis' due to chromate in cement

Subject:	43 year-old man
History:	Concreter since age 16. Eighteen-month history of increasing hand dermatitis eventually on dorsal and palmar surface of hands and fingers. Off work and treatment led to limited improvement only. Referred to Dermatologist and prescribed strong steroid ointment and cleansing lotion in lieu of soap.
Physical examination:	Fissured skin, hyperkeratotic chronic dermatitis.
Investigation:	Patch test. Positive reaction to dichromate.
Current:	Intractable, chronic, fissured dermatitis.
Impairment:	Mid-range from Class 2 in Table 8.2 (p178, AMA5) selected at 17% WPI.
Comment:	Unable to obtain any employment because has chronic dermatitis and on disability support pension. Difficulty gripping items including steering wheel, hammer and other tools. Unable to do any wet work, (e.g. painting). Former home handyman, now calls in tradesman to do any repairs and maintenance. Limited performance in some ADLs and requires intermittent treatment.

**Example 13.4: Latex contact urticaria/angioedema with cross reactions**

**Subject:** Female nurse, age 40

**History:** Six-month history of itchy hands minutes after applying latex gloves at work. Later swelling and redness associated with itchy hands and wrists and subsequently widespread urticaria. One week off led to immediate clearance. On return to work wearing PVC gloves developed anaphylaxis on first day back.

**Physical examination:** No abnormality detected or generalised urticaria/angioedema.

**Investigation:** Latex radioallergosorbent test, strong positive response.

**Current:** The subject experiences urticaria and anaphylaxis if she enters a hospital, some supermarkets or other stores (especially if latex items are stocked), at children's parties or in other situations where balloons are present, or on inadvertent contact with latex items including sports goods handles, some clothing, and many shoes (latex based glues). Also has restricted diet (must avoid bananas, avocados and kiwi fruit).

**Impairment:** 22% WPI. At the higher end of the range within Class 2 selected from Table 8.2 (p178, AMA5).

**Comment:** Severe limitation in some ADLs and uncertainty of when she could next experience an anaphylactic reaction.

**Example 13.5: Non-melanoma skin cancer**

**Subject:** 53-year-old married man

**History:** 'Road worker' since 17 years of age. Has had a basal cell carcinoma on the left forehead, squamous cell carcinoma on the right forehead (graft), basal cell carcinoma on the left ear (wedge resection) and squamous cell carcinoma on the lower lip (wedge resection) excised since 45 years of age. No history of loco-regional recurrences. Multiple actinic keratoses treated with cryotherapy or Efudix (fluorouracil) cream over 20 years (forearms, dorsum of hands, head and neck).

**Current:** New lesion right preauricular area. Concerned over appearance "I look a mess."

Physical examination: Multiple actinic keratoses forearms, dorsum of hands, head and neck. Five millimetre diameter nodular basal cell carcinoma right preauricular area, hypertrophic red scar 3cm length left forehead, 2cm diameter graft site (hypopigmented with 2mm contour deformity) right temple, non-hypertrophic scar left lower lip (vermilion) with slight step deformity and non-hypertrophic pale wedge resection scar left pinna leading to 30% reduction in size of the pinna. Graft sites taken from right post auricular area. No regional lymphadenopathy.

Impairment rating: 9% WPI

Comment: 6% WPI for facial disfigurement. This facial disfigurement was selected at the lowest range within this Class 2 (Table 6.1 in these Guidelines) and combined with 3% WPI for non-facial scarring of the upper extremities from Table 8.2 in AMA5. This non-facial scarring was clinically determined to be in the lower third percentile within Class 1 from Table 8-2. Total is 6% WPI combined with 3% WPI.

#### Example 13.6: Non-melanoma skin cancer

Subject: 35-year-old single female professional surf life-saver

History: Occupational outdoor exposure since 19 years of age. Basal cell carcinoma on tip of nose excised three years ago with full thickness graft following failed intralesional interferon treatment.

Current: Poor self-esteem because of cosmetic result of surgery and facial disfigurement.

Physical examination: 1cm diameter graft site on the tip of nose (hypopigmented with 2mm depth contour deformity, cartilage not involved). Graft site taken from right post-auricular area.

Impairment rating: 10% WPI was selected at the highest range in Class 2 (Table 6.1 in these Guidelines) as it involved structural change in the nose and impact on her hair-line around the right ear.

Comment: Refer to Table 6.1 (facial disfigurement).

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# 14 CARDIOVASCULAR SYSTEM

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# 14 CARDIOVASCULAR SYSTEM

Chapters 3 and 4, AMA5 (p25 and p65) apply to the assessment of permanent impairment of the cardiovascular system, subject to the modifications set out below.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following:**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

14.1 The cardiovascular system is discussed in chapter 3, AMA5 (Heart and Aorta) and 4, AMA5 (Systemic and Pulmonary Arteries) (pp25–85). These chapters can be used to assess whole person impairment of the cardiovascular system with the following minor modifications.

14.2 It is noted that in this chapter there are wide ranges for the impairment values in each category. When conducting a whole person impairment assessment, assessors should use their clinical judgement to express a specific percentage within the range suggested and provide justification for their choice in the report.

## Exercise stress testing

14.3 As with any other investigations not provided, it is not the role of an assessor to order exercise stress tests purely for the purpose of evaluating the extent of whole person impairment.

14.4 If the result of exercise stress testing is available, then it is a useful piece of information in arriving at the overall percentage impairment.

14.5 If investigations provided are inadequate for a proper assessment to be made, the assessor must consider the value of proceeding with the evaluation of whole person impairment without the adequate investigations and data (see chapter 1 in the Guidelines, Information required for assessment (p8) and ordering of additional investigations (p11).

## Vascular diseases affecting the extremities

14.6 Note that in this section, Table 4-4 and Table 4-5, AMA5 (p74 and p76) **refer to percentage impairment of the upper or lower extremity**. Therefore, an assessment of impairment concerning vascular impairment of the arm or leg requires that the percentages identified in Tables 4-4 and 4-5 be converted to whole person impairment. The table for conversion of the upper extremity is Table 16-3, AMA5 (p439) and the table for conversion of the lower extremity is Table 17-3, AMA5 (p527).

## Thoracic outlet syndrome

14.7 Impairment due to thoracic outlet syndrome is assessed according to chapter 16, AMA5 on the upper extremities, and chapter 2 of the Guidelines.

## Pulmonary embolism

14.8 Pulmonary embolism is assessed as per section 4.4, AMA5 (pp79-81).

## Effect of medical treatment

14.9 If the worker has been offered, but refused, additional or alternative medical treatment which the assessor considers is likely to improve the worker's condition, the assessor should evaluate the current condition, without consideration for potential changes associated with the proposed treatment. The assessor may note the potential for improvement in the worker's condition in the evaluation report, and the reason for refusal by the worker, but should not adjust the degree of impairment on the basis of the worker's decision (chapter 1, Permanent impairment – maximum medical improvement).

## Pre-existing condition

14.10 If the assessor is unable to find any objective evidence of pre-existing functionally significant coronary disease, no rating can be applied for pre-existing disease and the assessor should explain this in the report.

# 15 DIGESTIVE SYSTEM

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# 15 DIGESTIVE SYSTEM

Chapter 6, AMA5 (p117) applies to the management of permanent impairment of the digestive system.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5
- the appropriate chapter/s of the Guidelines for the body system they are assessing, and
- the appropriate chapter/s of AMA5 for the body system they are assessing.

The Guidelines take precedence over AMA5.

## Introduction

15.1 The digestive system is discussed in chapter 6, AMA5 (pp117-142). This chapter can be used to assess whole person impairment of the digestive system.

15.2 Table 6-3 AMA5 (p121) Class 1 is to be amended to read 'there are symptoms **and** signs of upper digestive tract disease'. In the absence of clinical signs or other objective evidence of impairment, a 0% WPI is to be assessed.

15.3 Splenectomy: In cases of functional or post traumatic asplenia following abdominal trauma, the assessor should assign 3% WPI (refer 11.8 in the Guidelines, p82).

15.4 Abdominal adhesions: In addition to the information in Table 6-3 (AMA5, p121):

- adhesions post laparotomy for abdominal trauma can give rise to intermittent symptoms including change in bowel habit and can be assessed as a 3% WPI, and
- intra-abdominal adhesions following trauma requiring further surgery should be assessed under Table 6-3 (p121) or 6-4 (p128), AMA5.

## Inguinal hernias

15.5 Section 6.6, AMA5 (p136) deals with hernias. This section may be used by assessors not trained in the digestive body system, but trained in the upper limb, lower limb or spine, for determining impairment from 0 to 5% WPI. Impairments greater than 5% must be assessed by an assessor who has undertaken the requisite training in the assessment of the digestive body system.

- 15.6 A diagnosis of a hernia should not be made on the findings of an ultrasound examination alone - there must be a palpable defect in the supporting structures of the abdominal wall and either a palpable lump or a history of a lump when straining. The first two criteria in Table 6-9 (AMA5, p136) need to be met (within each class) and the third point regarding ADL will assist the assessor in finding a percentage within the class. Explanation for how the assessor arrived at the selection within that range must be provided in the report.
- 15.7 A divarication of the rectus muscles in the upper abdomen is not considered to be a hernia.
- 15.8 Occasionally, with regard to inguinal hernias, there is damage to the ilio-inguinal nerve following surgical repair. Refer to Table 15.1 below.

**Table 15.1 Table for the assessment of the ilio-inguinal nerve following hernia surgery**

Whole person impairment rating						
Ilio-inguinal nerve	0% No neurogenic pain No sensory loss	1% Sensory loss only in an anatomic distribution	2% Mild neurogenic pain* in an anatomic distribution	3% Moderate neurogenic pain* in an anatomic distribution	4% Severe neurogenic pain* in an anatomic distribution without dysaesthesia**	5% Severe neurogenic pain* in an anatomic distribution with dysaesthesia**

\* Sensory loss must be present in order to confirm the presence of neurogenic pain.

\*\* Dysaesthesia is a painful sensation of prickling, tingling or creeping on the skin associated with injury or irritation of a sensory nerve or nerve root (painful paraesthesiae).

- 15.9 Where a work related hernia at the same site has recurred and the worker has a limitation of ADLs (e.g. lifting) this should be assessed as herniation class 1 (Table 6-9, AMA5, p136).

# 16 PSYCHIATRIC DISORDERS

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# 16 PSYCHIATRIC DISORDERS

AMA5 chapter 14 is excluded and replaced by this chapter. This chapter is based on the *Guide to the Evaluation of Psychiatric Impairment for Clinicians* (GEPIC) written by Dr Michael Epstein, Dr George Mendelson and Dr Nigel Strauss assisted by members of the Victorian Medical Panel.

**Before undertaking an impairment assessment, users of the Guidelines must be familiar with the following (in this order):**

- the Introduction in the Guidelines
- chapters 1 and 2 of AMA5, and
- the appropriate chapter/s of the Guidelines for the body system they are assessing.

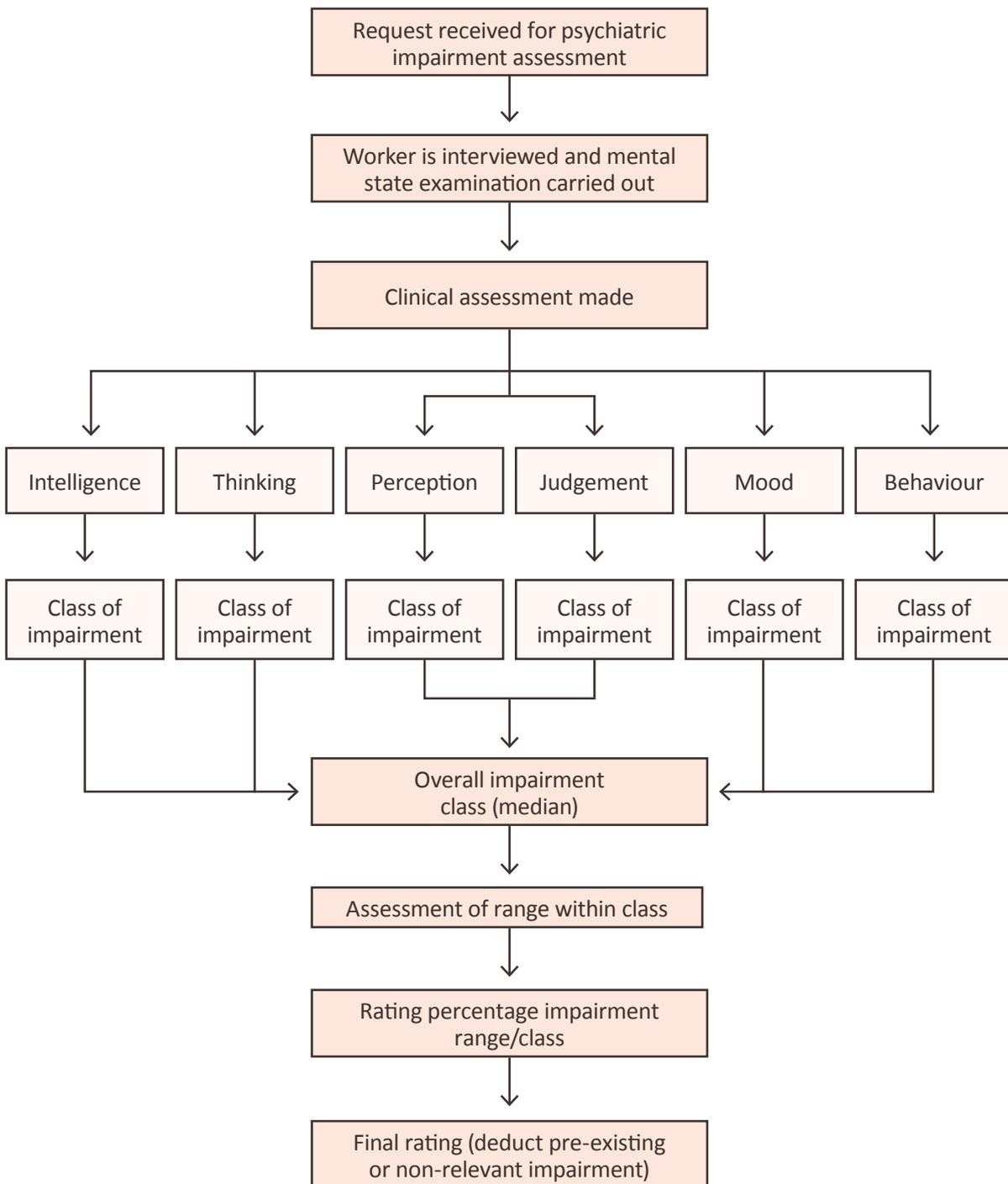
## Introduction

- 16.1 This chapter sets out the method for assessing psychiatric impairment. The evaluation of impairment requires a medical examination.
- 16.2 Evaluation of psychiatric impairment is conducted by a psychiatrist who has undergone appropriate training in the assessment method and is accredited under the Act.
- 16.3 A psychiatric disorder (the term is synonymous with a mental disorder or a psychological disorder) is a syndrome characterised by clinically significant disturbance in an individual's cognition, emotion regulation or behavior that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress in social, occupational or other important activities. An expected or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g. political, religious, or sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above (adapted from DSM5).
- 16.4 Prior to assessment, the worker must have had a psychiatric diagnosis, made by the treating psychiatrist, based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and the condition must have reached maximum medical improvement (MMI - refer introduction 1.13-1.14).
- 16.5 Permanent impairment assessments for psychiatric disorders are only required where the primary injury is a psychiatric one. The psychiatrist needs to confirm that the psychiatric diagnosis is the injured worker's primary diagnosis.
- 16.6 Impairment resulting from physical injury is to be assessed separately from impairment relating to psychiatric injury.

16.7 In assessing the degree of impairment resulting from physical injury or psychiatric injury, no regard is to be had to impairment that results from consequential mental harm.

16.8 In making a determination of impairment for each domain of mental function, it must be referenced to the description in the Guidelines.

The following flowchart sets out the assessment framework:



## Introduction and background to the Scale

16.9 The *Guide to the Evaluation of Psychiatric Impairment for Clinicians* (GEPIC) and its precursor were developed from the *American Medical Association Guides to the evaluation of permanent impairment 2nd Edition*. Subsequent editions of the AMA Guides have failed to provide a workable method of rating psychiatric impairment. The GEPIC and its precursor have been in use since 1997 and have been used to evaluate more than 100 000 claimants and have a good degree of reliability.

The GEPIC method involves evaluation of 6 mental functions (that is, Intelligence, Thinking, Perception, Judgement, Mood, and Behaviour) into 5 classes of increasing severity and provides a method of combining these. Descriptors associated with each class for a particular mental function are intended to be indicative of the type of symptoms one could expect to see in that class range. The list of descriptors is not intended to be all-encompassing, as the GEPIC is designed to be used only by qualified psychiatrists who have completed the required training. To provide an exhaustive list of descriptors would be an impossible and ultimately unnecessary task. Furthermore, such a document would be so voluminous as to be practically useless as a handy guide for the clinician, and would amount to a textbook of psychiatry.

The GEPIC must be considered in the context of the philosophy and principles of AMA5 (Chapters 1 and 2), and any explanatory or other information provided in that edition of the AMA Guides is applicable to the GEPIC.

## Use of the Guide

16.10 The presence and extent of impairment is a medical issue, and is assessed by medical means.

The GEPIC has been designed for use by medical practitioners. In evaluating psychiatric impairment in accordance with this chapter, clinical information has to be obtained and assessed, together with an examination of the individual's mental state.

16.11 The evaluation of psychiatric impairment in accordance with the GEPIC is meant to be informed by clinical judgement, based on appropriate training and experience, and the specific rating criteria are not meant to be used in a 'recipe book' fashion.

16.12 The descriptors associated with particular classes for each mental function are intended to be indicative only. They are intended to provide an overview of the type and severity of symptoms expected for each particular class. It would be futile to attempt to list all relevant symptoms and would be onerous for the assessor. The absence of a particular symptom in the list of descriptors does not mean that that symptom is to be disregarded. The assessor is required to justify why that/those symptom(s) is/are associated with a particular class of severity.

16.13 It is ultimately for the clinician, and no one else, to make the **clinical judgement** whether a specific rating criterion is present. If the clinician doubts that a particular symptom or abnormality of mental function is present, even after hearing the patient describe it, the item should be rated as not present. This convention is advocated in the Structured Clinical Interview for DSM-5 Personality Disorders (SCID-5), and it is important to emphasise that the evaluation of psychiatric impairment, like diagnosis, is based on 'ratings of criterion items, not of answers to questions'.

## Psychiatric impairment evaluation

16.14 The assessment of psychiatric impairment is based on the systematic application of empirical criteria, and takes into consideration both the diagnosis and other factors unique to the individual.

It is also relevant to consider motivation, and to review the history of the illness, as well as the treatment and rehabilitation methods. These considerations can be summarised in the following five principles:

### **Principle 1:**

In assessing the impairment that results from any psychiatric or physical disorder, readily observable empirical criteria must be applied accurately. The mental state examination, as used by consultant psychiatrists, is the prime method of evaluating psychiatric impairment.

### **Principle 2:**

Diagnosis is among the factors to be considered in assessing the severity and possible duration of the impairment, but is by no means the sole criterion.

### **Principle 3:**

The evaluation of psychiatric impairment requires that consideration be also given to a number of other factors including, but not limited to, level of functioning, educational, financial, social and family situation.

### **Principle 4:**

The underlying character and value system of the individual is of considerable importance in the outcome of the disorder, be it mental or physical. Motivation for improvement is a key factor in the outcome.

### **Principle 5:**

A careful review must be made of the treatment and rehabilitation methods that have been applied or are being used. No final judgement can be made until the whole history of the illness, the treatment, the rehabilitation phase, and the individual's current mental and physical status and behaviour have been considered.

## The procedure for assessing whole person impairment

16.15 The following process should be used to arrive at the whole person impairment related to the work injury:

1. Take a comprehensive history.
2. Do a mental state examination. This must be consistent with your scores in the table.
3. Write your opinion, incorporating a summary of the data leading to a diagnosis or diagnoses. Relate the diagnosis or diagnoses to the workplace injury or incident and comment on any diagnoses for which the employment was not the significant contributing cause.
4. Write a brief impairment formulation, explaining your rationale for your impairment scores.
5. Complete **Worksheet Table 1** (the GEPIC table) including scoring both for the class and severity within the class.
6. Follow the instructions for determining the median class and median level of severity.
7. Use **Worksheet Table 2** to refine the percentage range within the median class.
8. Determine the whole person impairment as a percentage.
9. Determine pre-existing and continuing impairments and unrelated impairments. Exclude those from consideration.
10. Determine impairment due to consequential mental harm, exclude that.
11. The final figure is the impairment due to pure mental harm relevant to the work injury.

A copy of the GEPIC Worksheet can be found at Appendix 5 and on the ReturnToWorkSA website.

**Table 16.1 Evaluation of Psychiatric Impairment**

Class of impairment	1	2	4	4	5
Percentage of impairment	0 - 5%	10 - 20%	25 – 50%	55 – 75%	Over 75%
<b>MENTAL FUNCTION</b>					
<b>Intelligence</b> (Capacity for understanding)	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Thinking</b> (The ability to form or conceive in the mind)	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Perception</b> (The brain's interpretation of internal and external stimuli)	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Judgement</b> (Ability to assess a given situation and act appropriately)	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Mood</b> (Emotional tone underlying all behaviours)	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Behaviour</b> (Behaviour that is disruptive, distressing or aggressive)	Normal to Slight	Mild	Moderate	Moderately Severe	Severe

## Whole person psychiatric impairment

16.16 The second edition of the *American Medical Association Guides to the evaluation of permanent impairment* stated that “the overall rating of a patient [is] based upon the mental status and upon the current condition as observed by the evaluator. The rating is based upon observed attributes and phenomena that are somewhat interrelated, and it necessarily must be considered to be somewhat subjective”.

In developing the GEPIC, the authors have taken this comment into consideration.

The authors considered that the median method is the most appropriate and fairest of the three statistical methods available by which the overall level of the whole person psychiatric impairment can be calculated, based on each of the six items reflecting mental functions. The three methods are the 'mean' (or average), the 'median', and the 'mode'. The advantage of using the median is that it is not influenced by extreme scores (as is the 'mean' or averaging method), yet it is significantly more sensitive to variability of scores than the mode, especially with the modification implemented in the GEPIC.

Because each of the six aspects of mental functioning that constitute the GEPIC is rated on what is essentially an ordinal scale, the median method is technically the most appropriate method of determining the overall rating. For that reason, the determination of the 'class' of the overall collective whole person psychiatric impairment assessed in accordance with the GEPIC is to be undertaken in accordance with the median method. The median is the middle number of a series; for example, a typical result of scores for the six individual aspects of mental function may be 112233, and thus the middle number is 2.

'Class 2' is therefore the correct class for the 'whole person psychiatric impairment' in this example.

The overall collective percentage impairment is within the percentage range of the median class.

The final figure is determined by taking into account the person's level of functioning, on the basis of clinical judgement.

Each median class includes descriptors which indicate a range of symptoms within that class.

Each class has a low range, a mid-range, and a high range.

**The indicative ranges for each class are as follows:**

	Low range	Mid-range	High range
<b>Class 1</b>	0 – 1%	2 – 3%	4 – 5%
<b>Class 2</b>	10 – 12%	14 – 16%	18 – 20%
<b>Class 3</b>	25 – 30%	35 – 40%	45 – 50%
<b>Class 4</b>	55 – 60%	65 – 70%	70 – 75%
<b>Class 5</b>	75 – 80%	85 – 90%	95 – 100%

In coming to the final rating of the whole person psychiatric impairment, the assessor should consider the range of descriptors and/or equivalent symptoms that emerged during the interview, as well as the findings on mental state examination.

The assessor should consider both the descriptors for each class and equivalent symptoms that might not be listed amongst the descriptors. The assessor should assess the severity of each symptom or descriptor and/or the number of symptoms or descriptors present. As a result of this clinical assessment the assessor should use clinical judgment to determine where the final figure lies.

The assessor should consider in which part of the median class these descriptors and/or equivalent symptoms would fall, e.g. if the individual assessed has symptoms which lie within Median Class 2, and these symptoms were relatively minimal in severity or there were only a few symptoms, this indicates a final value in the low range for Class 2 (10–12%). If the descriptors and/or equivalent symptoms were more numerous and/or more severe, the final value is likely to be mid-range (14–16%). If the individual has most of the descriptors and/or equivalent symptoms for median class 2 or fewer but more severe descriptors and/or equivalent symptoms, the final value would be in the upper range (18–20%). These indicative ranges are to provide guidance to clinicians and do not preclude the use of final values lying between them (e.g. 13%).

It may be the case that the median of a series is not a whole number (e.g. 111233: the median of this series is 1.5); similarly, a series such as 222334 has a median of 2.5. There are problems of legality, equity and simplicity with a number of proposed solutions to this dilemma.

An appropriate and simple solution is to promote the median figure to the next highest class and allow, except in unusual circumstances, only the lowest percentage in that class. This practice should be followed when using this Guide.

Using the examples given therefore:

- Series 111233, median 1.5 becomes 2, and therefore the whole person psychiatric impairment is 10% (Class 2 range 10–20%).
- Series 222334, median 2.5 becomes 3, and therefore the whole person psychiatric impairment is 25% (Class 3 range 25–30%).

If the distribution of scores is skewed, with four or more scores in the Class 1 range and one or two significantly higher scores, the highest possible whole person psychiatric impairment rating is 10%.

## Rating Intelligence

16.17 This relates to the individual's capacity for understanding and for other forms of adaptive behaviour. Impairments of intelligence are a consequence of brain injury or disease. Generally, before impairment of intelligence is confirmed neuropsychological assessment should be undertaken. (Care has to be exercised to ensure that there is no overlap between an assessment of impairment of intelligence made during a psychiatric evaluation and an assessment of impairment of higher cerebral functions made by an assessor in accordance with chapter 13 of AMA5).

**Table 16.2: Guide for the rating of impairment of intelligence**

Class	Impairment	Description
1	0 – 5%	<p><b>Normal to Slight</b></p> <ul style="list-style-type: none"> <li>• There is no evidence of cognitive impairment on mental state examination, and the individual does not report any difficulties in everyday functioning that can be attributed to cognitive difficulties.</li> </ul>
2	10 – 20%	<p><b>Mild</b></p> <ul style="list-style-type: none"> <li>• Some interference with everyday functioning.</li> </ul>
3	25 – 50%	<p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>• A reduction in intelligence that significantly interferes with everyday functioning.</li> </ul>
4	55 – 75%	<p><b>Moderately Severe</b></p> <ul style="list-style-type: none"> <li>• A reduction in intelligence which makes independent living impossible.</li> </ul>
5	Over 75%	<p><b>Severe</b></p> <ul style="list-style-type: none"> <li>• Needs constant supervision and care.</li> </ul>

## Rating Thinking

16.18 This relates to the ability to form thoughts and conceptualise. Impairment is both a matter of degree and type of disturbance, which may involve stream, form and content.

**Table 16.3: Guide for the rating of impairment of thinking**

Class	Impairment	Description
1	0 – 5%	<p><b>Normal to Slight</b></p> <ul style="list-style-type: none"> <li>• Includes mild transient disturbances that are not disruptive and are not noticed by others.</li> </ul>
2	10 – 20%	<p><b>Mild</b></p> <p>Mild symptoms that usually cause subjective distress, for example:</p> <ul style="list-style-type: none"> <li>• thinking may be muddled or slow;</li> <li>• may be unable to think clearly;</li> <li>• mild disruption of the stream of thought due to some forgetfulness or diminished concentration;</li> <li>• may have some obsessional thinking which is mildly disruptive;</li> <li>• may be preoccupied with distressing fears, worries or experiences, and by inability to stop ruminating;</li> <li>• an increased sense of self-awareness or a persistent sense of guilt;</li> <li>• some other thought disorder that is minimally disruptive, such as overvalued ideas or delusions;</li> <li>• some formal thought disorder that does not interfere with effective communication.</li> </ul>
3	25 – 50%	<p><b>Moderate</b></p> <p>Manifestations of thought disorder, to the extent that most clinicians would consider psychiatric treatment indicated, for example:</p> <ul style="list-style-type: none"> <li>• severe problems with concentration due to intrusive thoughts or obsessional ruminations;</li> <li>• marked disruption of the stream of thought due to significant memory problems or diminished concentration;</li> <li>• persistent delusional ideas interfering with capacity to cope with everyday activities (e.g. severe pathological guilt);</li> <li>• formal thought disorder that interferes with verbal and other forms of communication.</li> </ul>
4	55 – 75%	<p><b>Moderately Severe</b></p> <ul style="list-style-type: none"> <li>• Disorders of thinking that cause difficulty in functioning independently and usually require some external assistance.</li> </ul>
5	Over 75%	<p><b>Severe</b></p> <ul style="list-style-type: none"> <li>• Disorders of thinking that cause such a severe disturbance that independent living is impossible.</li> </ul>

## Rating Perception

16.19 This relates to the individual's interpretation of internal and external experience received through the senses.

Stimuli arise from the five senses – the form is relevant, not necessarily the content (refer to discussion above of the concept of perception in clinical psychiatry).

Definitions:

**Hallucinations:** Abnormalities of sensory perception in the absence of external stimuli.

**Illusions:** Distortions of real sensory stimuli – illusions can be a normal phenomenon as well as indicating psychopathology.

**Pseudohallucinations:** Hallucinations that are recognised by the person as being imaginary (not real, lacking an external source or stimulus).

**Table 16.4: Guide to the rating of impairment of perception**

Class	Impairment	Description
1	0 – 5%	<p><b>Normal to Slight</b></p> <ul style="list-style-type: none"> <li>• Transient heightened, dulled or blunted perceptions of the internal and external world, but with no or little interference with function.</li> </ul>
2	10 – 20%	<p><b>Mild</b></p> <ul style="list-style-type: none"> <li>• Persistent heightened, dulled or blunted perceptions of the internal and external world, with mild but noticeable interference with function;</li> <li>• Pseudohallucinations.</li> </ul>
3	25 – 50%	<p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>• Presence of hallucinations (other than hypnagogic or hypnopompic) that cannot be attributed to a transitory drug-induced state;</li> <li>• Obvious illusions (when associated with a diagnosable mental disorder).</li> </ul>
4	55 – 75%	<p><b>Moderately Severe</b></p> <ul style="list-style-type: none"> <li>• Hallucinations and/or illusions (as above) cause subjective distress and disturbed behaviour.</li> </ul>
5	Over 75%	<p><b>Severe</b></p> <ul style="list-style-type: none"> <li>• Hallucinations and/or illusions (as above) cause disturbed behaviour to the extent that constant supervision is required.</li> </ul>

## Rating Judgement

16.20 This relates to the individual's ability to evaluate and assess information and situations, together with the ability to formulate appropriate conclusions and decisions. This mental function may be impaired due to brain injury or to conditions such as schizophrenia, major depression, anxiety, dissociative states or other mental disorders.

**Table 16.5: Guide to the rating of impairment of judgement**

Class	Impairment	Description
1	0 – 5%	<p><b>Normal to Slight</b></p> <ul style="list-style-type: none"> <li>• May lack some insight and misconstrue situations but with little interference with function.</li> </ul>
2	10 – 20%	<p><b>Mild</b></p> <ul style="list-style-type: none"> <li>• Persistently misjudges situations in relationships, occupational settings, driving and with finances. The misjudgements are noticed by others but are accommodated.</li> </ul>
3	25 – 50%	<p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>• Misjudging social, work and family situations repeatedly leading to some disruption in relationships, occupational settings, living circumstances and financial reliability;</li> <li>• Inappropriate spending of money or gambling.</li> </ul>
4	55 – 75%	<p><b>Moderately Severe</b></p> <ul style="list-style-type: none"> <li>• Moderately severe misjudgement with regular failure to evaluate situations or implications, causing actual risk or harm to self or others;</li> <li>• Failure to respond to any regular guidance and requirement for constant supervision.</li> </ul>
5	Over 75%	<p><b>Severe</b></p> <ul style="list-style-type: none"> <li>• Persistently assaultive due to misinterpretation of the behaviour or motives of others;</li> <li>• Sexually disinhibited (may occur following a head injury).</li> </ul>

## Rating Mood

16.21 Mood is a pervasive lasting emotional state. Affect is the prevailing and conscious emotional feeling during the period of the mental state examination.

Affect observed during the mental state examination is a reflection of the subject's mood, and has a number of features, including:

**Range:** Variability of emotional expression over a period of time, i.e. if only one mood is expressed over a period of time, the affective range is restricted.

**Amplitude:** Amount of energy expended in expressing a mood, i.e. a mild amplitude of anger is manifested by annoyance and irritability.

**Stability:** Slow shifts of mood are normal. Rapid shifts (affective lability) may be pathological.

**Appropriateness:** The 'fit' (or congruency) between the affect and the situation.

**Quality of Affect:** Suspicious, sad, happy, anxious, angry, apathetic.

**Relatedness:** Ability to express warmth, to interact emotionally and to establish rapport.

**Table 16.6: Guide for the rating of impairment of mood**

Class	Impairment	Description
1	0 – 5%	<p><b>Normal to Slight</b></p> <ul style="list-style-type: none"> <li>• Relatively transient expressions of sadness, happiness, anxiety, anger and apathy;</li> <li>• Normal variation of mood associated with upsetting life events.</li> </ul>
2	10 – 20%	<p><b>Mild</b></p> <p>Mild symptoms: some or all of the below:</p> <ul style="list-style-type: none"> <li>• mild depression;</li> <li>• subjective distress leading to some mild interference with function;</li> <li>• reduced interest in usual activities;</li> <li>• some days off;</li> <li>• reduced social activities;</li> <li>• fleeting suicidal thoughts;</li> <li>• some panic attacks;</li> <li>• heightened mood;</li> <li>• may experience feelings of derealisation or depersonalisation.</li> </ul>
3	25 – 50%	<p><b>Moderate Impairment</b></p> <p>Moderate symptoms: some or all of the below:</p> <ul style="list-style-type: none"> <li>• frequent anxiety attacks with somatic concomitants;</li> <li>• inappropriate self-blame and/or guilt;</li> <li>• persistent suicidal ideation or suicide attempts;</li> <li>• marked lability of affect;</li> <li>• significant lethargy;</li> <li>• social withdrawal leading to major problems in interpersonal relationships;</li> <li>• anhedonia;</li> <li>• appetite disturbance with significant weight change;</li> <li>• psychomotor retardation/agitation;</li> <li>• hypomania;</li> <li>• severe depersonalisation.</li> </ul>
4	55 – 75%	<p><b>Moderately Severe</b></p> <p>Cannot function in most areas:</p> <ul style="list-style-type: none"> <li>• constant agitation;</li> <li>• violent manic excitement;</li> <li>• repeated suicide attempts;</li> <li>• remains in bed all day;</li> <li>• extreme self-neglect;</li> <li>• extreme anger/hypersensitivity;</li> <li>• requires supervision to prevent injury to self or others.</li> </ul>
5	Over 75%	<p><b>Severe</b></p> <ul style="list-style-type: none"> <li>• Severe depression, with regression requiring attention and assistance in all aspects of self-care;</li> <li>• Constantly suicidal;</li> <li>• Manic excitement requiring restraint.</li> </ul>

## Rating Behaviour

16.22 Behaviour is one's manner of acting. It is considered with regard to its appropriateness in the overall situation. Disturbances vary in kind and degree. Behaviour may be destructive either to self and/or others and may lead to withdrawal and isolation. Behaviour may be odd or eccentric. Particular mental disorders may be manifested by particular forms of behaviour (e.g. compulsive rituals associated with Obsessive Compulsive Disorder).

**Table 16.7: Guide for the rating of impairment of behaviour**

Class	Impairment	Description
1	0 – 5%	<p><b>Normal to Slight</b></p> <ul style="list-style-type: none"> <li>• Transient disturbances in behaviour that are understandable in the context of this person's situation, excessive fatigue, intoxication, family or work disruption.</li> </ul>
2	10 – 20%	<p><b>Mild</b></p> <ul style="list-style-type: none"> <li>• Persons who generally function well, but regularly manifest disturbed behaviour under little extra pressure that nevertheless is able to be accommodated by others;</li> <li>• Persistent behaviour that has some adverse effect on relationships or employment.</li> </ul>
3	25 – 50%	<p><b>Moderate</b></p> <ul style="list-style-type: none"> <li>• Occasional aggressive, disruptive or withdrawn behaviour requiring attention or treatment;</li> <li>• Obsessional rituals interfering with but not preventing goal-directed activity;</li> <li>• Repeated antisocial behaviour leading to conflict with authority.</li> </ul>
4	55 – 75%	<p><b>Moderately Severe</b></p> <ul style="list-style-type: none"> <li>• Persistently aggressive, disruptive or withdrawn behaviour requiring attention or treatment;</li> <li>• Behaviour significantly influenced by delusions or hallucinations;</li> <li>• Behaviour associated with risk of self harm outside the hospital setting, but not requiring constant supervision;</li> <li>• Manic overactivity associated with inappropriate behaviour;</li> <li>• Significantly regressed behaviour (e.g. extreme neglect of hygiene, inability to attend to own bodily needs).</li> </ul>
5	Over 75%	<p><b>Severe</b></p> <ul style="list-style-type: none"> <li>• Requiring constant supervision to prevent harming self or others (repeated suicide attempts, frequently violent, manic excitement);</li> <li>• Catatonic excitement or rigidity;</li> <li>• Incessant rituals or compulsive behaviour preventing goal-directed activity.</li> </ul>

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# 17 ASSESSOR SELECTION PROCESS

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# 17 ASSESSOR SELECTION PROCESS

17.1 The Act requires assessments to be “*made by an accredited medical practitioner selected in accordance with the Impairment Assessment Guidelines*” (subsection 22(7)(c)).

17.2 For the purposes of the Guidelines:

- an assessor is a medical practitioner who is accredited to perform permanent impairment assessments under the accreditation scheme provided for in subsection 22(17) of the Act
- the ‘selection process’ referred to in subsection 22(7)(c) of the Act refers to the selection of an assessor to perform the whole person impairment assessment and is outlined in this chapter.

17.3 Once there is medical evidence (e.g. from the treating doctor(s) or specialist(s)) that the work injury has stabilised/reached MMI and a permanent impairment assessment is required, the worker must be given the opportunity to choose the assessor who will assess their whole person impairment caused by their work injury<sup>1</sup>. The worker must undertake that selection process in consultation with the requestor (claims agent, self-insured employer or ReturnToWorkSA, as relevant), considering the following factors:

- the body system to which the injury/assessment relates – the assessor selected must be accredited for the relevant body system(s)
- nature and complexity of the injury
- possible conflicts of interest
- availability of assessors, and
- whether multiple assessors are required.

The requestor must ensure the worker is aware of all the assessors that satisfy the above factors.

The worker must inform the requestor of their choice of assessor as soon as practicable after they have finalised their choice.

17.4 If the worker does not wish to select the assessor, then the claims agent, self-insured employer or ReturnToWorkSA should select the assessor, in consultation with the worker, taking into consideration the factors outlined in 17.3 – informing the worker of the chosen assessor(s) as soon as is practicable after the selection is made.

Notes for the requestor can be found at Appendix 1 of the Guidelines.

<sup>1</sup>Unless the relevant permanent impairment assessment is requested by the South Australian Employment Tribunal

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# NOTE

## EVALUATION OF PERMANENT IMPAIRMENT ARISING FROM CHRONIC PAIN

(exclusion of chapter 18, AMA5)

The international Association for the Study of Pain (IASP) has defined pain as:

‘An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage’.

For chronic pain assessment using AMA5 and the Guidelines, chapter 18 of AMA5, Pain (pp565-591) is excluded.

The reasons for excluding chronic pain as a separate condition from the Guidelines are:

- It is subjective experience and is therefore open to exaggeration and fabrication in the compensation setting. Assessment depends on the credibility of the subject being assessed. In order to provide reliability, workers undergoing pain assessments require more than one examiner at different times, concordance with the established conditions, consistency over time, anatomical and physiological consistency, agreement between the examiners and exclusion of inappropriate illness behaviour.
- Tools to measure pain are based on self-reports and may be inherently unreliable.
- Some impairment ratings take symptoms into account and some of the ranges of impairment (e.g. WPI spine, may reflect the effect of injury and pain on ADL). This is not so for impairment assessment of the upper and lower limb, which is based on range of motion and diagnosis-based estimates, other than for peripheral nerve injury and diagnosed complex regional pain.

Where there is a peripheral nerve injury and there is sensory loss, some of the sensory nerve impairment categories permit pain to be included (Categories 1-5, Table 16-10, p482, AMA5).

The section 17.2m (AMA5, p553), ‘Causalgia and complex regional pain syndrome (reflex sympathetic dystrophy)’ should not be used. Refer to paragraph 1.11 in the Introduction of the Guidelines for information regarding Complex Regional Pain Syndrome.

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# APPENDICES

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# APPENDIX 1

## NOTES FOR THE REQUESTOR

It is the responsibility of the person requesting the report (the ‘requestor’) to advise the assessor what injuries to assess, what not to assess and what pre-existing injuries may need to be assessed and deducted in accordance with subsection 22(8) (g) of the Act. If a monetary reduction of the compensation payable is required in accordance with subsection 58(7) or subsection 56(6) of the Act, that monetary reduction will be made by the requestor, making use of the information contained in the whole person impairment assessment report.

The requestor must provide clear guidance to the assessor regarding the injuries to be included in the assessment. The Act requires specific assessment approaches, such as:

- “impairments from unrelated injuries or causes are to be disregarded in making an assessment” (subsection 22(8)(b) of the Act).
- “impairments from the same injury or cause are to be assessed together or combined to determine the degree of impairment of the worker” (subsection 22(8)(c) of the Act)
- “impairment resulting from physical injury is to be assessed separately from impairment resulting from psychiatric injury” (subsection 22(8)(d) of the Act)
- “in assessing the degree of permanent impairment resulting from physical injury, no regard is to be had to impairment that results from a psychiatric injury or consequential mental harm” (subsection 22(8)(f) of the Act)
- “any portion of an impairment that is due to a previous injury (whether or not a work injury or whether because of a pre-existing condition) that caused the worker to suffer an impairment before the relevant work injury is to be deducted for the purposes of an assessment” (subsection 22(8)(g) of the Act).

‘Disregarded’ means that the permanent impairment attributable to the injury which is to be disregarded should be calculated and deducted in the assessment.

‘Assessed together or combined’ means a number of injuries should be included in the final whole person impairment assessment.

‘Assessed separately’ means that separate and independent whole person impairment assessments should be made.

‘No regard’ means the impairment should not be included in assessing whole person impairment.

‘Deducted’ means that one assessment is subtracted from another assessment. This may occur, depending on the facts of a particular matter, where the work injury being assessed is an aggravation, acceleration, exacerbation, deterioration or recurrence of a previous injury.

‘Unrelated injury’ means any injury or cause that is not the work injury or relevant to that injury.

If known, the requestor must provide instruction to the assessor identifying:

- which injury impairment(s) should not be included in the assessment
  - which injury impairment(s) should be combined in a whole person impairment
  - which injury impairment(s) should be assessed separately, and
  - which injury impairment(s) should be included in the assessment and then deducted
- and provide any information from previous assessments of relevance to calculating the % WPI.

If any of the injuries are previous work injuries and a previous whole person impairment assessment needs to be deducted, the requestor should provide the assessment information to the assessor, so that the deduction can be applied to the whole person impairment in the report.

In some cases the requestor will need to request a whole person impairment assessment for all relevant injuries as well as a whole person impairment assessment for the work injury (after identified injuries are deducted). This is done to satisfy different requirements of the Act (e.g. determining dollar amounts for the purpose of subsection 58(7) and subsection 56(6) of the Act, determining access to statutory lump sums, serious injury support and common law).

The requestor must identify if the worker has had any pre-existing or subsequent injuries (e.g. from previous medical or claims records) relevant to the work injury or injuries to be assessed. They must ensure that they have liaised with the worker or the worker’s representative to ensure that all the appropriate information is included.

The requestor should advise whether the injury is part of an accepted claim or whether it is in dispute.

As a condition of their accreditation by the Minister, the assessor is unable to offer any opinion regarding the determination of a claim or any legal comment about the claim.

Clear instructions must be provided to the assessor before the assessment is undertaken or it is expected that the assessor will come back to the requestor for additional information.

The assessment of permanent impairment and % WPI in respect of noise induced hearing loss needs to be assessed consistently with the particular impact of subsections 188(2) and (3) of the Act.

The requestor is responsible for providing clear guidelines to an assessor regarding the assessment of impairment in such cases.

Claims agents must ensure workers are provided with the report request prior to it being sent to the assessor. The claims agent must give the worker at least ten days to consider the request and have an opportunity to raise any issues, errors or omissions before the request is sent to the assessor.

### **Unrelated injury**

An unrelated injury means any injury or cause that is not the work injury or relevant to that injury.

Impairments from injuries or causes unrelated to the work injury are not to be included in calculating the degree of whole person impairment. When the assessor makes their assessment, the % impairment may include impairments from unrelated injuries or causes but the degree of permanent impairment attributable to these unrelated injuries or causes must be disregarded (i.e. deducted) and not included in the whole person impairment assessment.

If there are known unrelated injuries or causes that are relevant to the work injury or injuries to be assessed, the requestor must advise the assessor by identifying the relevant injuries and requesting that the unrelated injuries or causes be disregarded (i.e. deducted).

### **Pre-existing condition or injury**

A pre-existing condition or injury means a condition or injury that is not medically related to the work injury.

The value of the % impairment attributable to these pre-existing conditions or injuries must be deducted in the summary table before giving the final WPI rating.

If there are known pre-existing conditions or injuries, the requestor must advise the assessor by identifying the relevant injuries and requesting that any impairments arising from such injuries be deducted.

### **Prior non-economic loss compensation for same body part**

If the work injury consists of an aggravation, acceleration, exacerbation, deterioration or recurrence of a prior work injury and the worker has been paid compensation by way of a lump sum under section 58 of the Act (or a corresponding previous enactment), a reduction must be made of any lump sum payable pursuant to section 58 by the amount of the previous payment.

In this circumstance, the requestor must request that the whole person assessment include the impairment caused by both the current work injury and previous work injury – as this is required to appropriately calculate the amount payable.

The requestor should also provide relevant documentation to the assessor regarding the previous permanent impairment assessment, including the % WPI if available.

## **Prior economic loss compensation for same body part**

The worker will have a reduction made from the lump sum payable pursuant to subsection 56(6), if the current work injury consists of:

- an aggravation, acceleration, exacerbation, deterioration or recurrence of a prior work injury or a new work injury,  
and
- the worker is entitled to an economic loss lump sum payment (e.g. where the % WPI is 5% to 29% inclusive).

In this circumstance, the requestor must request that the whole person assessment include both the current work injury and previous work injury – as this is required to appropriately calculate the dollar amount payable.

The requestor should also provide relevant documentation to the assessor including the previous permanent impairment assessment showing the % WPI.

## **Prior compensation payment under another jurisdiction for same body part**

If the current work injury consists of an aggravation, acceleration, exacerbation, deterioration or recurrence of a prior work injury and the worker has been paid compensation by way of a lump sum in another jurisdiction, subsection 58(7) does not apply but the prior injury is to be treated as an unrelated injury or cause.

If there are known prior work injuries compensated in another jurisdiction, the requestor must advise the assessor by identifying the relevant injuries and requesting that the impairment arising from such injuries to be deducted.

The requestor must ask the assessor to provide a % WPI of the total impairment (which includes the effects of the unrelated injury or cause), calculate the component caused by the unrelated injury or cause, and then deduct that from the impairment before arriving at the % WPI.

## **Prior work injury with no prior payment**

Where a worker has suffered a prior work injury and suffers a subsequent work injury (an aggravation, acceleration, exacerbation, deterioration or recurrence of the prior work injury) and no payments have been made under section 58 of the Act (or a corresponding prior enactment), the requestor must ask for an assessment of permanent impairment to be made for each work injury. Lump sum payments will be based on the degree of impairment and relevant prescribed sum(s) for the relevant year of each work injury.

## Subsequent work injury to different body part

Sometimes a worker who has suffered a work injury and is about to undergo a whole person impairment assessment, then suffers a subsequent work injury. The subsequent work injury should be disregarded for the purposes of the whole person impairment assessment (as the subsequent work injury should be assessed at a later date when the injury has stabilised).

The requestor must advise the assessor by identifying any subsequent injuries and requesting that they be disregarded.

## Clinical studies and other tests

The requestor should ensure that, prior to requesting an assessment, any relevant clinical studies, radiological investigations and tests have been completed and the results forwarded to the assessor with the request for assessment and report. For example:

### *Sleep apnoea*

For sleep apnoea assessment, the worker must have been examined by an ear, nose and throat specialist and a sleep study must have been conducted by a respiratory specialist.

### *Asthma*

Before requesting an assessment for asthma, ensure that a diagnosis has been made for asthma and the diagnosis has been confirmed over time with repeated testing. At least one lung function test must have been conducted by a laboratory accredited by The Thoracic Society of Australia and NZ and it would be expected that spirometry has been conducted within the previous six months.

### *Other respiratory disorders*

These require an appropriate set of respiratory function tests conducted by a laboratory accredited by The Thoracic Society of Australia and NZ.

### *Hearing impairment*

Standards apply to the required tests for audiology assessment. The requestor needs to ensure that all available audiograms are sent to the assessor, who will establish whether the tests have been performed according to the required standards.

### *Traumatic head injury*

The requestor should ensure that any emergency or first responder notes, hospital clinical notes and all relevant radiology are forwarded to the assessor.

### *Arthritis*

Arthritis can only be assessed with the appropriate x-rays provided. If you are unsure what is required, contact the assessor prior to sending the request to clarify.

## Operation notes

When surgery has occurred, it is important that the requestor sends all relevant operation notes and imaging.

## Bladder impairment

If a bladder impairment is caused by an injury to the brain or spinal cord, the request should be made to an assessor accredited in the relevant body system (e.g. spine or nervous system).

A request to an assessor accredited in the urinary and reproductive system would usually only be made where the bladder impairment is due to an injury directly to the bladder or reproductive system.

## Epicondylitis

A request for assessment of epicondylitis should not be made unless symptoms have been present for at least 18 months.

## Psychiatric disorders

The worker must have a psychiatric disorder with a diagnosis made by a psychiatrist or psychologist using the *Diagnostic and Statistical Manual of Mental Disorders*, Fifth Edition (DSM-5) in order to be assessed for whole person impairment.

## Dental

Assessment for dental injuries and conditions is conducted by an assessor accredited in the Ear, Nose and Throat system.

## Complex regional pain syndrome

The diagnosis of complex regional pain syndrome (CRPS) must have been present for at least one year to ensure accuracy of the diagnosis and to permit adequate time to achieve MMI. There should be agreement on the diagnosis by at least two examiners.

# APPENDIX 2

## EXPLANATORY NOTES

### Medical assessors

An assessor is a medical practitioner who is accredited by the Minister to provide permanent impairment assessment services with respect to the relevant body system being assessed, according to the Accreditation Scheme. Accredited assessors are listed on ReturnToWorkSA's website, [www.rtwsa.com](http://www.rtwsa.com)

### Other terms used in the Impairment Assessment Guidelines:

Allodynia	A painful response to what would be considered non-painful skin stimulation.
Assessor	A medical practitioner currently accredited by the Minister in South Australia in relation to the relevant body system being assessed.
Distal	That furthest from the torso. Opposite of proximal.
Dysaesthesia	A painful sensation of prickling, tingling or creeping on the skin, associated with injury or irritation of a sensory nerve or nerve root (painful paraesthesiae).
Extension lag	Loss of full <i>active</i> extension in the presence of <i>passive</i> extension. Usually due to a defective extensor mechanism.
Extension loss	Active incomplete extension from a flexed position towards the neutral starting point.
Flexion contracture	Loss of full <i>active</i> and <i>passive</i> extension. Usually due to either a soft tissue contracture or a mechanical block.
Hypoaesthesia	Decreased sensory perception.
Injury	Section 4 of the Act* defines 'injury' as follows. <b><i>injury, in relation to a worker means-</i></b> <ul style="list-style-type: none"> <li><i>(a) any physical or mental injury including -</i> <ul style="list-style-type: none"> <li><i>(i) loss, deterioration or impairment of a limb, organ or part of the body, or of a physical, mental or sensory faculty; or</i></li> <li><i>(ii) a disease; or</i></li> <li><i>(iii) disfigurement; or</i></li> </ul> </li> <li><i>(b) where the context admits - the death of a worker,</i></li> </ul> <i>and includes an injury that is, or results from, the aggravation, acceleration, exacerbation, deterioration or recurrence of a prior injury.</i>
Impairment	A loss, loss of use or derangement of any body part, organ system or organ function (AMA5).
Neurogenic pain	Pain originating as a result of injury or disease of the central or peripheral nervous system.
Pantalar	All joints involving the talus.
Permanent	The meaning given to the word 'permanent' in various decisions of the courts includes: <ul style="list-style-type: none"> <li>a) for a long and indeterminate time but not necessarily forever</li> <li>b) more likely than not to persist in the foreseeable future.</li> </ul>
Varus	The deformed joint is deviated distally towards the body midline.
Valgus	The deformed joint is deviated distally away from the body midline.

\*where a change is made to a definition under section 4 of the Return to Work Act, that change is also effective here.

## APPENDIX 3

### GLOSSARY

The Act	The <i>Return to Work Act 2014</i>
ADL	Activities of Daily Living
The Guidelines	The Impairment Assessment Guidelines (Return to Work Scheme, SA)
AMA2	<i>American Medical Association Guides to the evaluation of permanent impairment, Second Edition</i>
AMA4	<i>American Medical Association Guides to the evaluation of permanent impairment, Fourth Edition</i>
AMA5	<i>American Medical Association Guides to the evaluation of permanent impairment, Fifth Edition</i>
DBE	Diagnosis-Based Estimates (AMA5)
DRE	Diagnosis-Related Estimates (AMA5)
MMI	Maximum Medical Improvement
NAL	National Acoustics Laboratory
GEPIC	<i>Guide to the Evaluation of Psychiatric Impairment for Clinicians</i>
TEMSKI	Table for the Evaluation of Minor Skin Impairments (Skin chapter)
TSANZ	The Thoracic Society of Australia and New Zealand

# APPENDIX 4

## DEVELOPMENT OF THE GUIDELINES

### Development of the Impairment Assessment Guidelines

The 2008 edition of the *WorkCover Guidelines for the Evaluation of Permanent Impairment* was developed to support the requirements for whole person impairment under the *Workers Rehabilitation and Compensation Act 1986* (based on amendments introduced in 2008).

On 1 July 2015, a new Return to Work Scheme will commence and *the Impairment Assessment Guidelines* support the requirements of the *Return to Work Act 2014*.

Key changes to the 2008 edition include:

- updates to reflect learning and feedback from the medical profession and other users regarding the use of the Guidelines
- inclusion of psychiatric assessment as a result of the requirements of the *Return to Work Act 2014*. This chapter is based on the *Guide to the evaluation of psychiatric impairment* (GEPIC) prepared by M.W.N. Epstein, G. Mendelson and N.H.M. Strauss.
- other updates to reflect the *Return to Work Act 2014*, and
- inclusion of a selection of assessor process required by subsection 22(7) of the *Return to Work Act 2014*.

ReturnToWorkSA established a working group of specialist assessors to assist with a review of the *WorkCover Guidelines for the Evaluation of Permanent Impairment* and development of the *Impairment Assessment Guidelines*. Their work is acknowledged and recorded below.

The *Impairment Assessment Guidelines* may be reviewed and updated from time to time. The *Impairment Assessment Guidelines* will also be reviewed if anomalies or difficulties in their use become apparent.

## Working Group, Impairment Assessment Guidelines, 2014

<b>Core Working Group (all chapters)</b>
Dr Beata Byok
A/Prof. David Cherry
Dr John Cross
Dr Peter Jezukaitis
Dr Andrew Sutherland
E/Prof. Lindon Wing
Mr David Caulfield
Ms Kirsten O'Callaghan
<b>Specific chapter involvement</b>
<b><i>Skin</i></b> Dr Ivan Simmons
<b><i>Respiratory system and Ear, Nose and Throat system</i></b> E/Prof. Richard Ruffin Dr John Tomich
<b><i>Psychiatric and psychological disorders</i></b> Dr Michael Epstein Prof. George Mendelson Dr Nigel HM Strauss
<b>Independent Medical Reviewers</b>
Dr Roger Pillemer Dr Dwight Dowda

ReturntoWorkSA also acknowledges the work of the WorkCover NSW Permanent Impairment Coordinating Committee for their work developing the changes contained in the Draft Fourth Edition of the *NSW WorkCover Guidelines for the evaluation of permanent impairment*, upon which some of our Guidelines were based.

# APPENDIX 5

## GEPIC WORKSHEET

This worksheet must be used in conjunction with Impairment Assessment Guidelines chapter 16 – Psychiatric and psychological disorders. The worksheet can be downloaded from ReturnToWorkSA’s website.

**Worksheet Table 1**

Class of impairment	1	2	3	4	5
<b>Percentage of impairment</b>	0 – 5%	10 – 20%	25 – 50%	55 – 75%	Over 75%
<b>MENTAL FUNCTION</b>					
<b>Intelligence</b> <i>(Capacity for understanding)</i>	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Thinking</b> <i>(The ability to form or conceive in the mind)</i>	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Perception</b> <i>(The brain’s interpretation of internal and external stimuli)</i>	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Judgement</b> <i>(Ability to assess a given situation and act appropriately)</i>	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Mood</b> <i>(Emotional tone underlying all behaviours)</i>	Normal to Slight	Mild	Moderate	Moderately Severe	Severe
<b>Behaviour</b> <i>(Behaviour that is disruptive, distressing or aggressive)</i>	Normal to Slight	Mild	Moderate	Moderately Severe	Severe

### Reasons for selection of classes

Assessors must write a brief paragraph justifying their selection of each class that is consistent with the findings of the Mental State Examination. This paragraph should be intelligible to an intelligent lay person (see 16.12).

The indicative ranges for each class are as follows:

	Low range	Mid-range	High range
<b>Class 1</b>	0 – 1%	2 – 3%	4 – 5%
<b>Class 2</b>	10 – 12%	14 – 16%	18 – 20%
<b>Class 3</b>	25 – 30%	35 – 40%	45 – 50%
<b>Class 4</b>	55 – 60%	65 – 70%	70 – 75%
<b>Class 5</b>	75 – 80%	85 – 90%	95 – 100%

## Worksheet Table 1

### Determining compensable psychiatric impairment

Determine the median class (the median number is the middle number in a series e.g. 12345, the middle number is 3).

Classes .....  
Classes in order .....  
Median Class .....

### Assessment Outcome

1. The Median Class is .....
2. The Median Severity Rating is .....
3. The Total Psychiatric Impairment is ..... %
4. Impairments not related to the work injury = ..... %
5. Impairment from consequential mental harm = ..... %
6. The compensable psychiatric impairment is the total psychiatric impairment – unrelated impairment and impairment from consequential mental harm = ..... %

Equals: Compensable impairment from 'pure mental harm' (i.e. impairment that is not secondary to a physical work injury)	%
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## **RETURN TO WORK SCHEME**

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### **Enquiries: 13 18 55**

400 King William Street, Adelaide  
South Australia 5000  
pia@rtwsa.com  
**www.rtwsa.com**

### **Free information support services:**

TTY (deaf or have hearing / speech impairment):  
Phone 13 36 77 then ask for 13 18 55

Speak & Listen (speech-to-speech):  
Phone 1300 555 727 then ask for 13 18 55

Languages other than English:  
Please ring the Interpreting and Translating Centre  
on 1800 280 203 and ask them to contact us on 13 18 55

Braille, audio, or e-text:  
Call 13 18 55 and ask for required format.

